

 4LEAF, INC.
Building
10/22/2025
**Reviewed For
Code Compliance**

**EQUIPMENT CUT SHEETS
AND
PRODUCT DATA SHEETS**

FOR

**CITY OF ROHNERT PARK
PUBLIC WORKS UTILITIES
ADMINISTRATION BUILDING**

ROHNERT PARK, CALIFORNIA



09/05/2025

100% CONSTRUCTION DRAWING

Prepared By:
COAR Design Group
200 'E' Street
Santa Rosa, CA 95404



**BUILDING
APPROVED**

10/28/2025

**REVIEWED FOR
CODE COMPLIANCE**

coar
DESIGN GROUP

**CITY OF ROHNERT PARK
PUBLIC WORKS UTILITIES ADMINISTRATION BUILDING
EQUIPMENT CUT SHEETS AND PRODUCT DATA SHEETS**

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INSPIRED BY
**NATURE'S
CANVAS**

Corian® Solid Surface Calacatta Greige (countertop and routed sides and backsplash) and Corian® Solid Surface Cameo White (integrated sink)

**THE NEW AESTHETICS OF
CORIAN® SOLID SURFACE
AND CORIAN® QUARTZ**

NORTH AMERICA

CORIAN®
DESIGN



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Introducing the New Aesthetics of **Corian® Solid Surface**

Inspired by the timeless, majestic, and awe-inspiring beauty of nature, the latest colors from Corian® Solid Surface bring captivating style to any environment. Just as a skilled painter or sculptor meticulously crafts their masterpieces on canvas or clay, designers utilize Corian® Solid Surface to create their visions, shaping spaces with a touch of natural elegance and creativity.

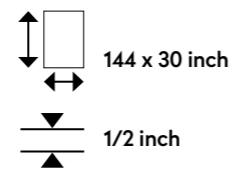
Many of the new colors of Corian® Solid Surface contain recycled content, which means you can make a positive impact on your designs and the environment.

The Nature's Canvas portfolio includes the landscape-inspired Terrain Collection; calming and fluid aesthetics from the Artista Collection; iconic stone looks from the Geologic Collection; Terrazzo looks with contemporary, classic colors set in light, neutral backgrounds; and woodgrain-inspired Nuwoods that flawlessly bridge nature and design.

Influenced by land, water, and air, the new colors from Corian® Design capture the best of nature to create fresh and modern looks in every space.

CALACATTA GREIGE

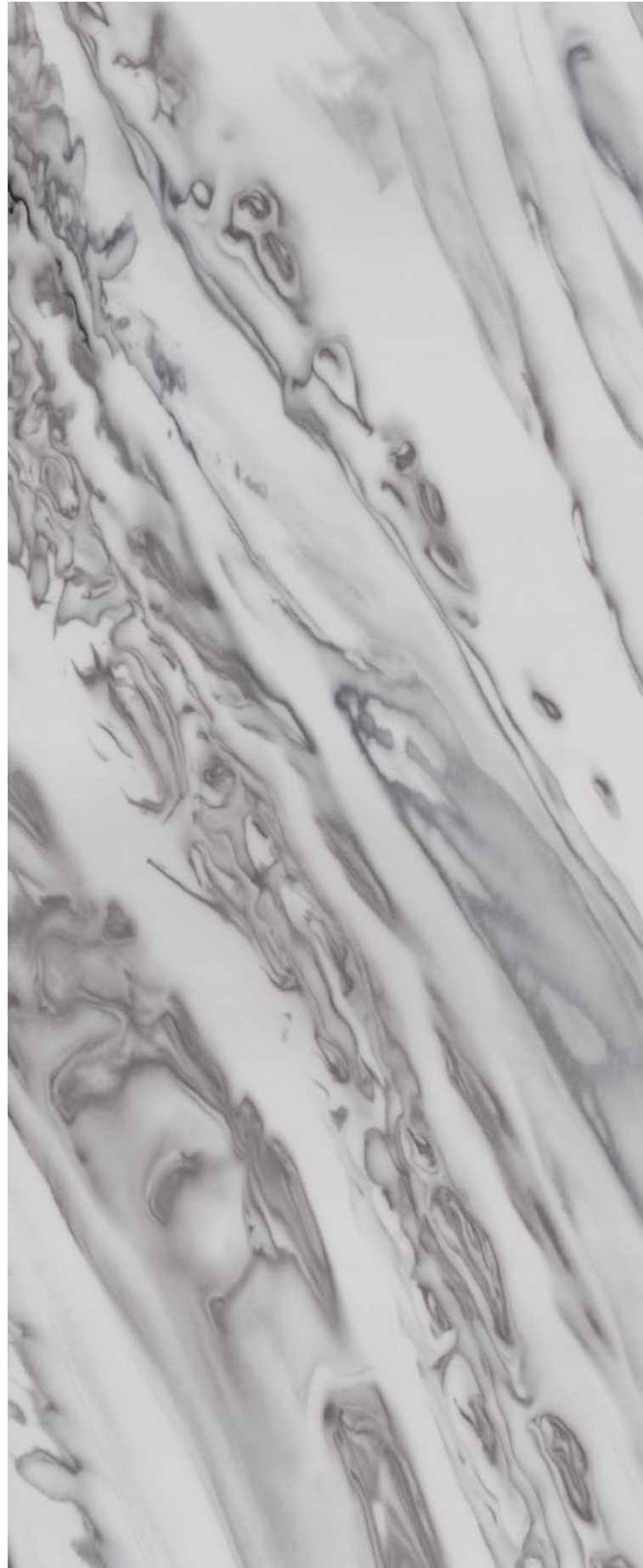
A beautiful synthesis of classic Calacatta and stone aesthetics with the quiet power of flowing beige and gray veins on a warm white background for a timeless look.



The sample shown is true to scale.

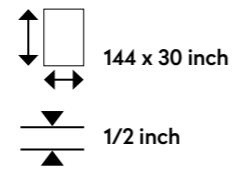
Corian® Solid Surface Calacatta Greige (countertop and routed sides and backsplash) and Corian® Solid Surface Cameo White (integrated sink)





STONECREST SMOKE

This marble- and stone-inspired aesthetic is bursting with deep and light grays in a cool white background. It symbolizes the intensity of both land and sea, exuding nature at its most daring.



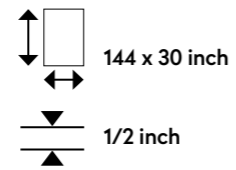
The sample shown is true to scale.

Corian® Solid Surface Stonecrest Smoke (counter),
Corian® Solid Surface Deep Nocturne (routed feature
wall and columns)



ARTISTA MIST

As though appearing from a soothing vapor, cloudlike white veins and particles complement a neutral blue-gray background to envelop any space with a sense of ease and calm.



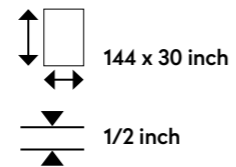
The sample shown is true to scale.

Corian® Solid Surface Artista Mist (bathroom vanity, integrated sinks, and walls)



ARTISTA SAGE

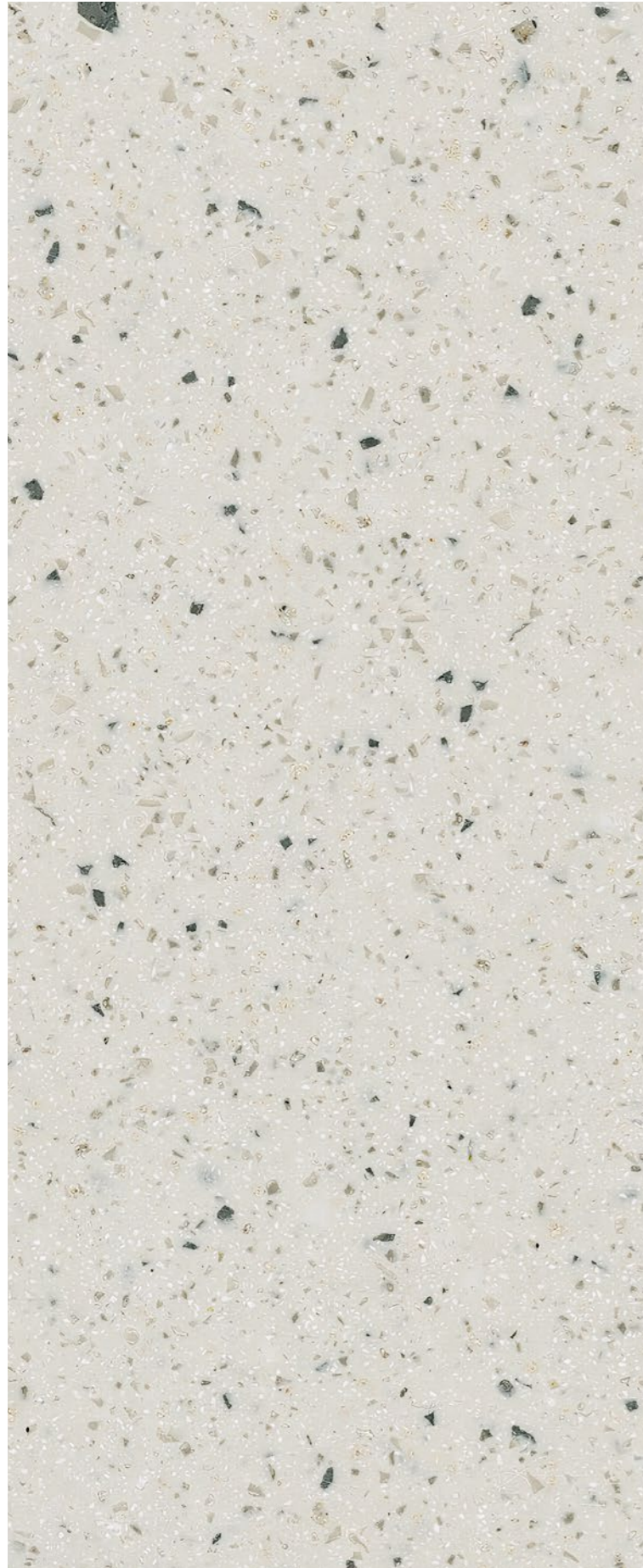
Inspired by herbs, a soft and neutral sage green background is accented with gray veining and particles, inviting a sense of nature at its most soothing into interior spaces.



The sample shown is true to scale.

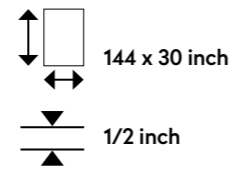
Corian® Solid Surface Artista Sage
(elevator door surround, planter, and routed side wall)





EXCAVAGE

Geologic in inspiration, various-sized particles of charcoal, warm gray, and warm white are scattered within the light gray background to create a look that is natural in appeal and visually enticing.



The sample shown is true to scale.

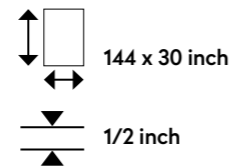
Corian® Solid Surface Excavage (table)





STONIQUE

A classic white background supports warm-hued and subtly translucent particles for an aesthetic that is similar to stone glistening in the light.



The sample shown is true to scale.

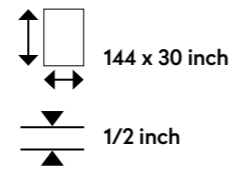
Corian® Solid Surface Stonique (walls and table)





PEBBLE LANE

Muted and warm, a tan background with subtle particulates suggests a stroll along a country path.



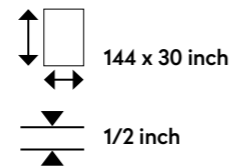
The sample shown is true to scale.

Corian® Solid Surface Pebble Lane (countertop) and Corian Solid Surface Bleached Nuwood (column)



ARCHEOLOGIC

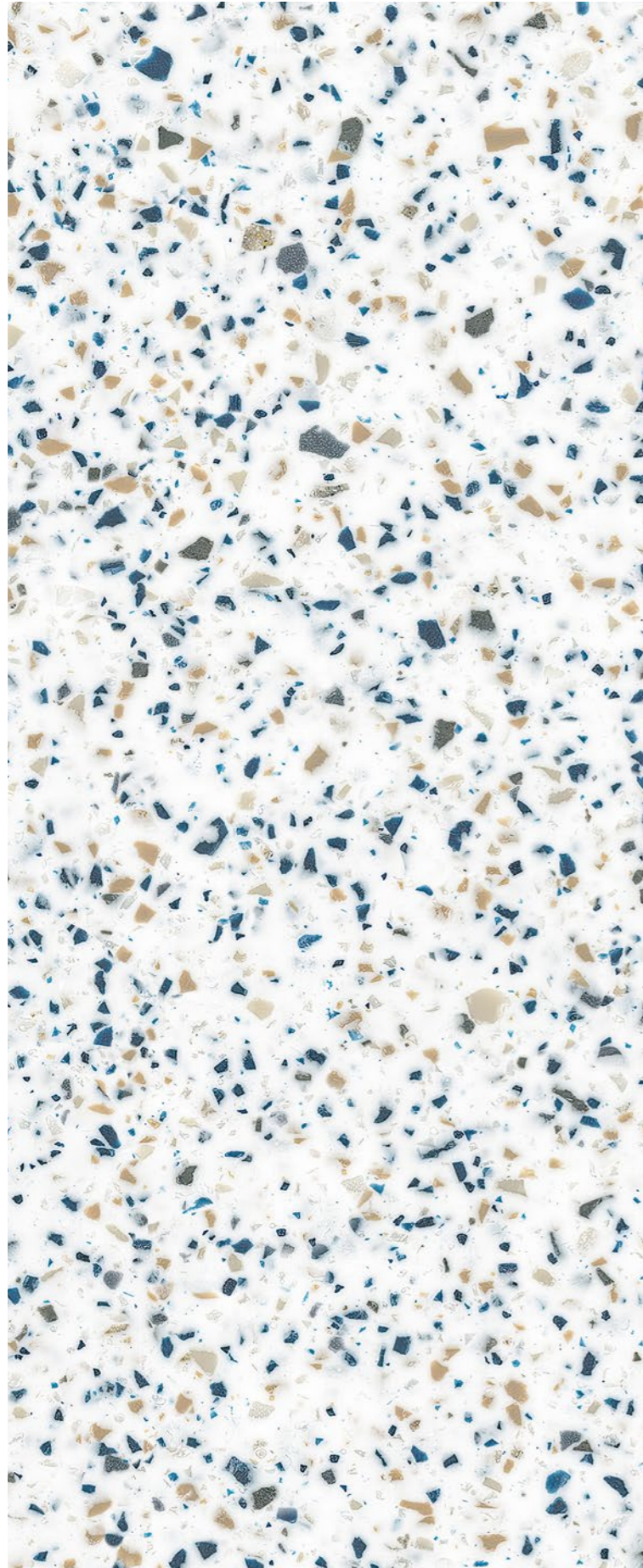
Light and medium neutral-colored particles suggest a moment of discovery. As when sifting through the earth, the colors emerge from the beige background for an effect that is both intriguing and calming.



The sample shown is true to scale.

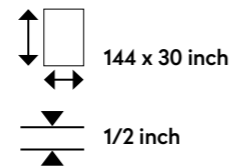
Corian® Solid Surface Archeologic (desk)





LAGUNA TERRAZZO

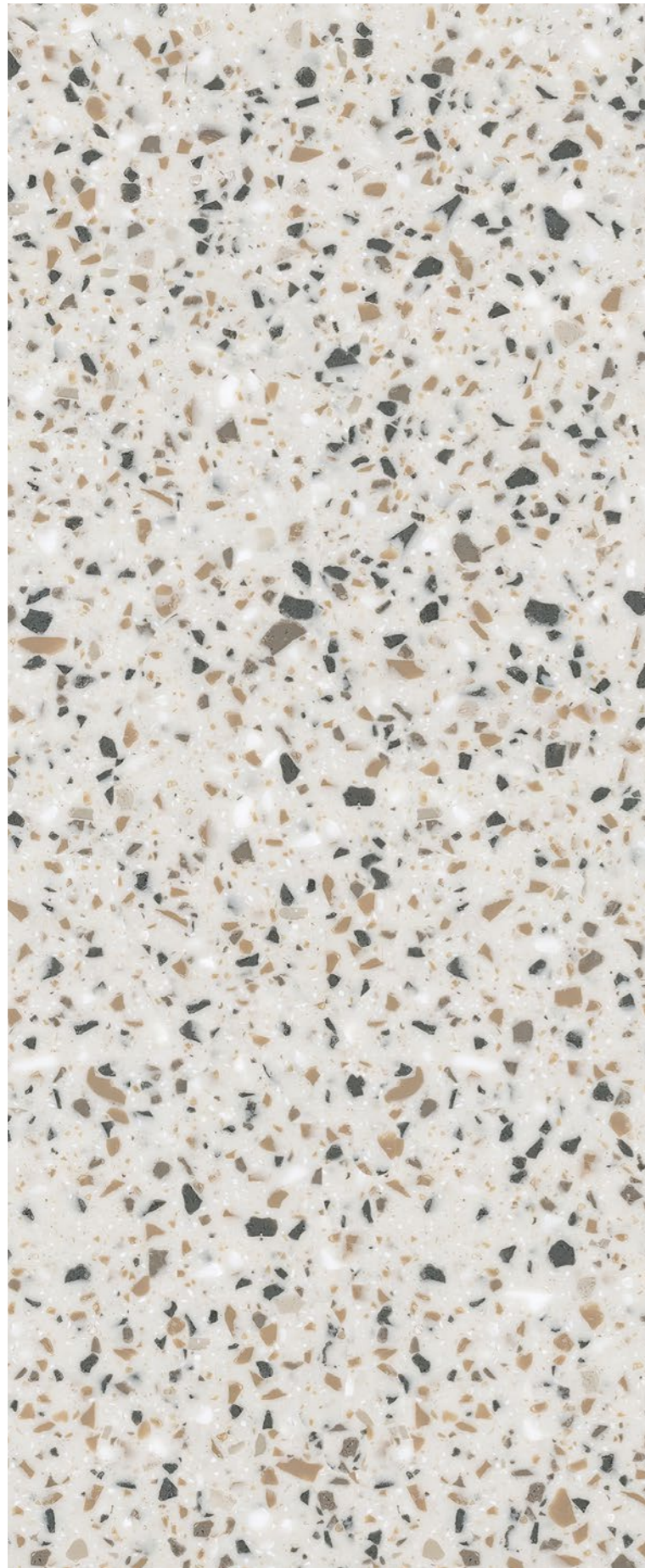
Cool and modern, Laguna Terrazzo comes alive with warm blue particles in a light-colored background for a contemporary vibe. Designed as both a standalone color and to coordinate beautifully with Corian® Solid Surface Laguna.



The sample shown is true to scale.

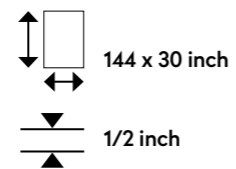
Corian® Solid Surface Laguna Terrazzo (shower walls and vanity), Corian® Solid Surface Laguna (wall behind vanity), and Corian® Solid Surface Glacier White (integrated sinks)





PEPPERED TERRAZZO

An exciting aesthetic with black, gray, and tan particulates that elevate the look of the neutral colors. Peppered Terrazzo traverses classic and contemporary design styles.



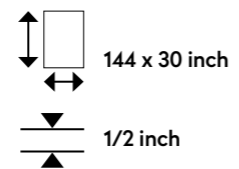
The sample shown is true to scale.

Corian® Solid Surface Peppered Terrazzo (bench and column) and Corian® Solid Surface Provence Nuwood (bench base and back wall)



PROVENCE NUWOOD

Deep, lush brown suggests the quality of hand-carved furnishing, the craft of cabinetry, and the beauty of the primeval forest.



The sample shown is true to scale.

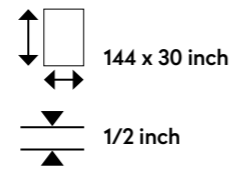
Corian® Solid Surface Provence Nuwood (feature wall)





BLEACHED NUWOOD

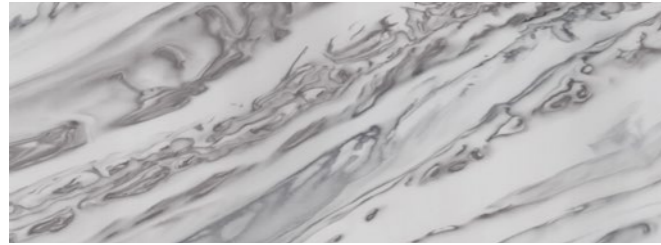
As if caressed by the sun and washed over by waves, Bleached Nuwood's light tan coloring suggests wood's variations and evolution in the natural world.



The sample shown is true to scale.

Corian® Solid Surface Bleached Nuwood (bar)





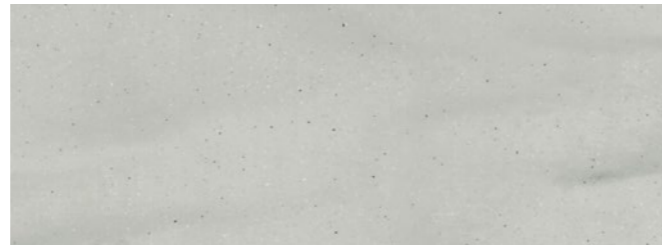
STONECREST SMOKE



CALACATTA GREIGE



ARTISTA MIST



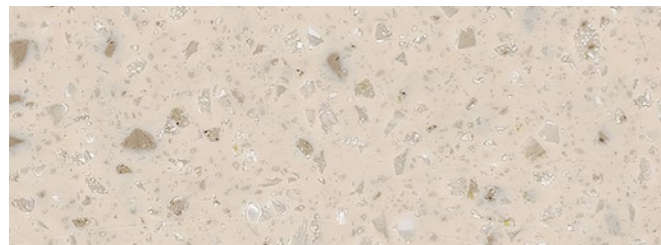
ARTISTA SAGE



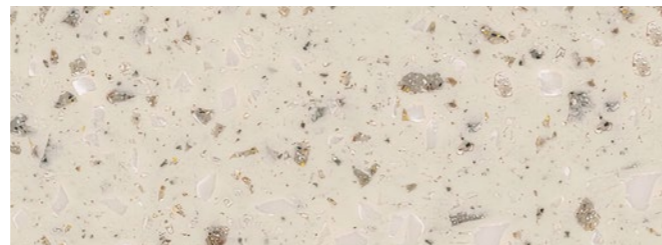
EXCAVAGE



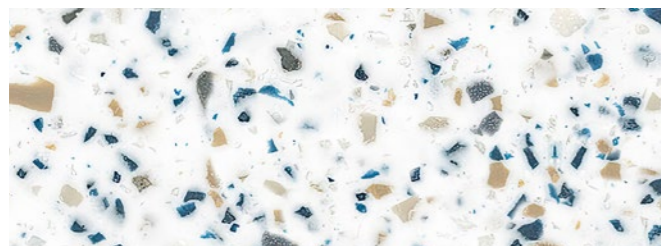
STONIQUE



PEBBLE LANE



ARCHEOLOGIC



LAGUNA TERRAZZO



PEPPERED TERRAZZO



BLEACHED NUWOOD



PROVENCE NUWOOD



NEW AESTHETICS

The new colors of Corian® Solid Surface are more than beautiful aesthetics. They embody a surface that removes the limit between design dreams and design realities. With the ability to heat and mold the surface into new shapes, drill and cut into the surface to display beautiful designs, backlight, and dye-sub-print, endless design capabilities are permitted. If you can dream it, you can create it with Corian® Solid Surface.

INSPIRED BY NATURE'S CANVAS

KEY FEATURES OF CORIAN® SOLID SURFACE

 SEAMLESS	 HYGIENIC & EASY TO CLEAN	 REPAIRABLE & RENEWABLE
 DESIGN FREEDOM	 AESTHETICALLY STRIKING	 SUSTAINABLE





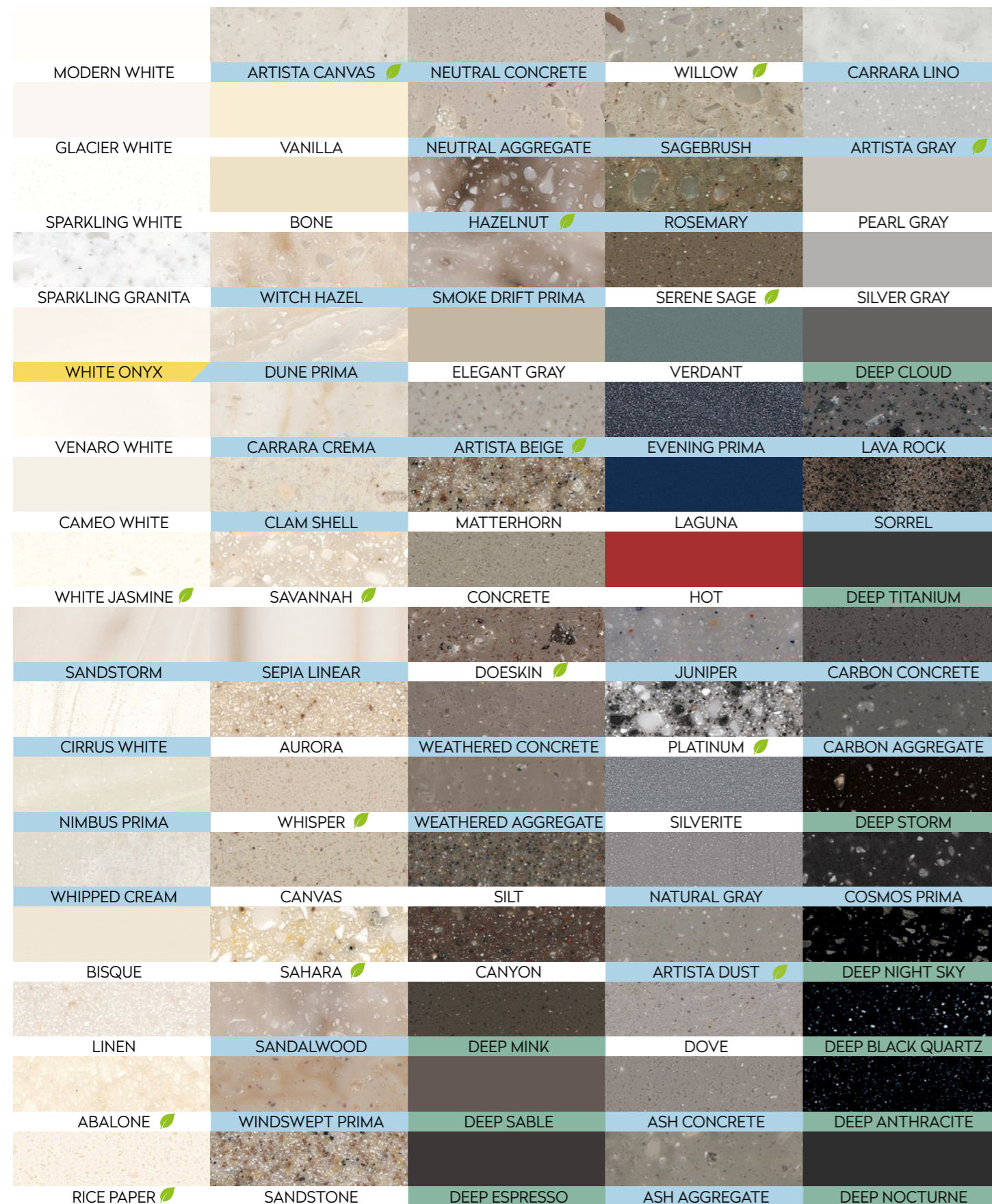









These colors have been certified by SCS Global Services to have one of three minimum levels of pre-consumer recycled material: 6%, 10%, or 14%.



NORTH AMERICA

CORIAN® SOLID SURFACE COLOR PORTFOLIO

NEW COLORS

Check out our latest aesthetics.

PRIVATE COLLECTION

- Inspired by nature, random veining, varied patterns, and natural palettes create depth and visual interest that range from understated to spectacular.

TRANSLUCENT COLORS

- Explore different light possibilities from warm to cool, fluorescent to LED, and by varying the thickness of the material.
- Backlight your designs to create a dramatic or subtle effect.

THE COLORS OF CORIAN® DEEPCOLOR™ TECHNOLOGY

- Go deeper with a darker, richer color appearance made possible by DeepColor™ Technology.



Corian® Quartz Smoked Quartzite (vanity and backwall) and Corian® Solid Surface Glacier White (integrated sinks)

Corian® Quartz

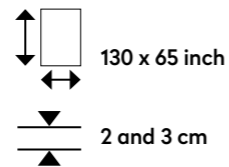
Inspired by the raw beauty of nature, the latest aesthetics of Corian® Quartz exhibit extremes ranging from soft stretches of sand to bold strokes of color and pattern. From minimal particle elements and quiet movements that encourage calm and contemplation, to striking, multi-directional veins that project excitement and energy, there are options to fulfill any design desire. The new colors of Corian® Quartz introduce a canvas of looks that embrace varied interior design styles and suggest the many inspirations found in nature, from calm to daring. Just as a skilled artist crafts their masterpiece, designers utilize Corian® Quartz to create their design visions, with a touch of nature's inspiration.

The Nature's Canvas portfolio includes the Quartzite collection, which feature stunning quartzite looks with omni-directional veins that are breathtaking in their movement and depth. The Elegant Neutral collection offers perfect, tranquil backgrounds that coordinate well with a variety of design styles and cabinetry and are both affordable and beautiful. Finally, the Iconic Stone looks are inspired by nature's timeless and majestic look of Calacatta and stone that are both noble and classic while ready for the modern age. Influenced by the extremes of nature, the new colors of Corian® Quartz are beautiful, durable, and perfect for hardworking spaces.



SMOKED QUARTZITE

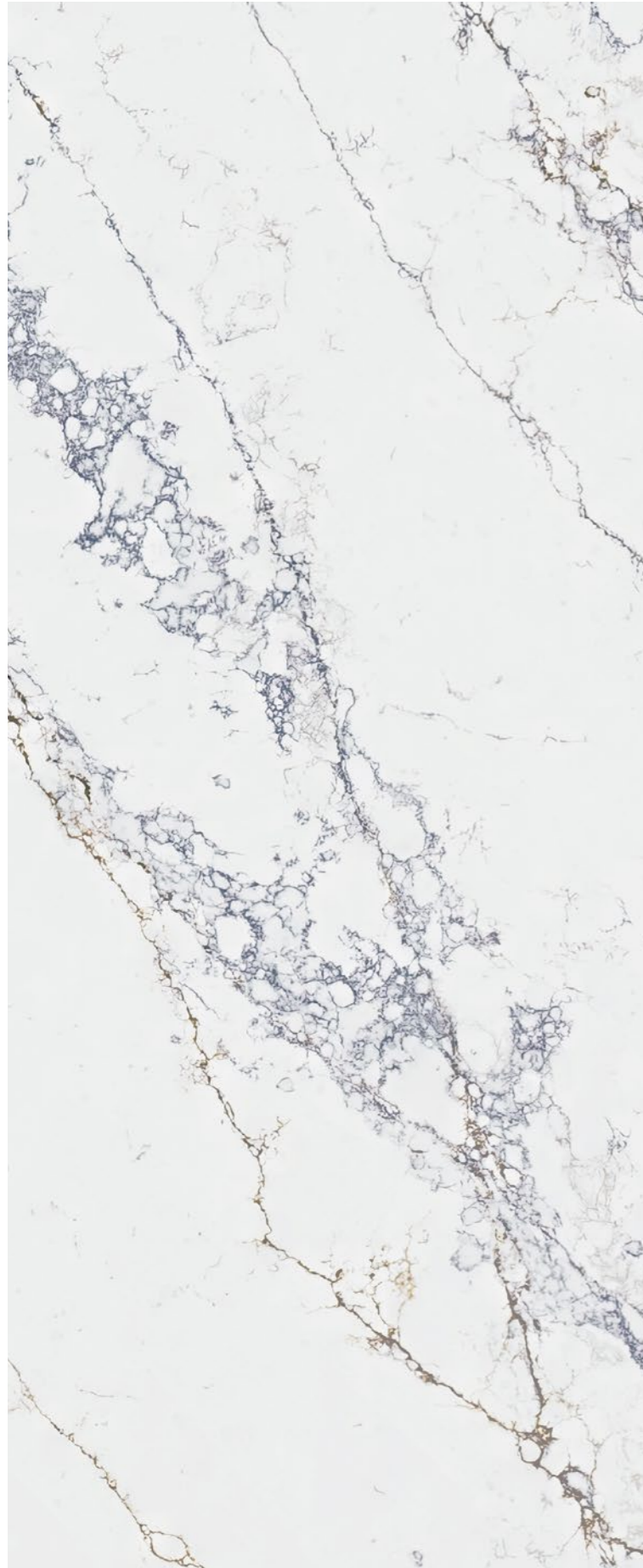
The unique composition of Smoked Quartzite allows it to naturally embrace various light sources and applications. Moody and sultry, the gray background is uniquely multi-faceted for depth, and the omni-directional veining adds energy. The quartzite look is distinctive and sophisticated, and adds to gray's classic appeal.



The sample shown is true to scale.

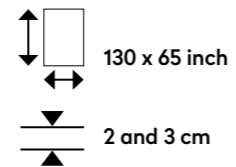
Corian® Quartz Smoked Quartzite (counter and bar backsplash) and Corian® Solid Surface Deep Cloud (bar surround)





ESTATE QUARTZITE

Enhanced with toned blue and gray veins, the white background serves as a crisp counterpoint to the aesthetic. Multi-directional veins create a dynamic, inspired contrast of earth and sea within the quiet surface.



The sample shown is true to scale.

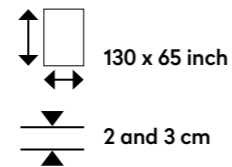
Corian® Quartz Estate Quartzite (countertop and backsplash)
and Corian® Solid Surface Glacier White (integrated sinks)





CALACATTA MEDALLION

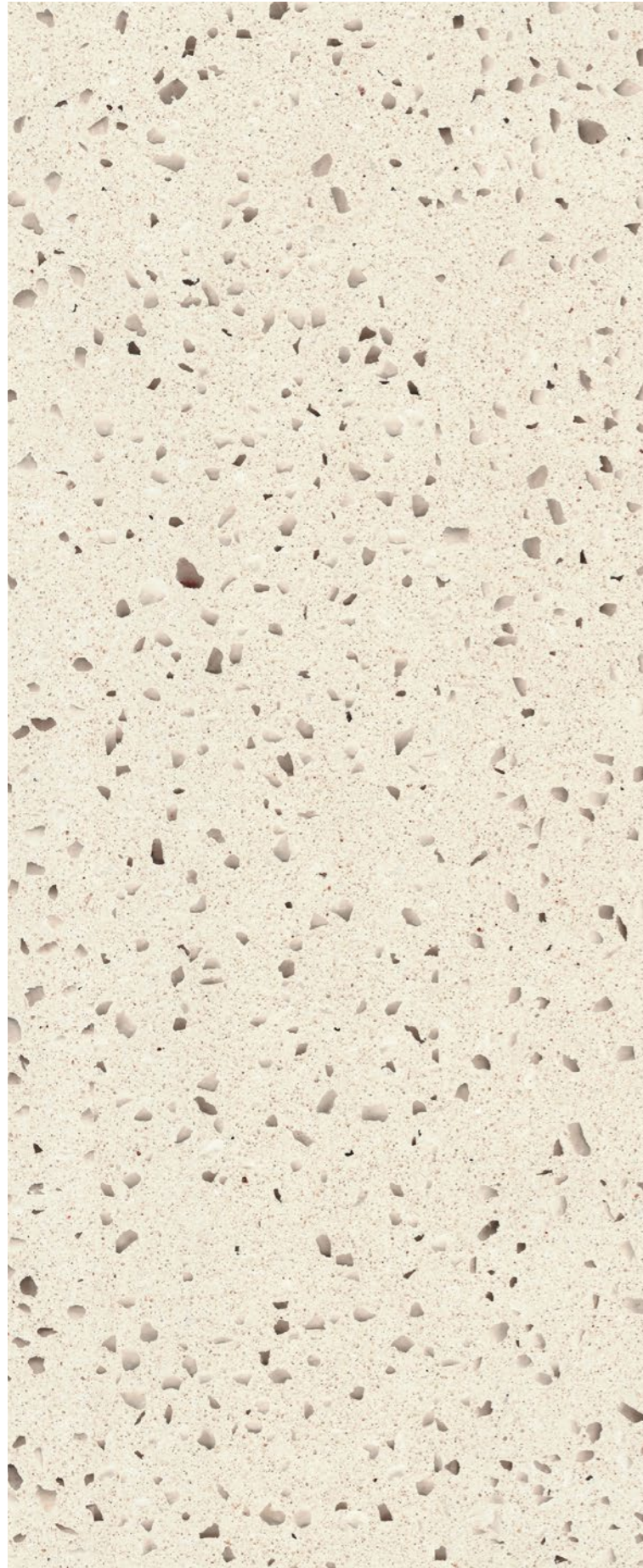
Calacatta with the Midas touch. Rich, gold-toned veins enhance a classic aesthetic with an elegant, timeless appeal. Perfect in any application.



The sample shown is true to scale.

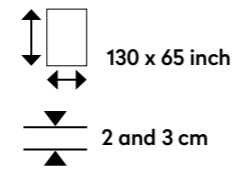
Corian® Quartz Calacatta Medallion (counter),
and Corian® Solid Surface Provence Nuwood
(face of back cabinet)





QUIET WHITE

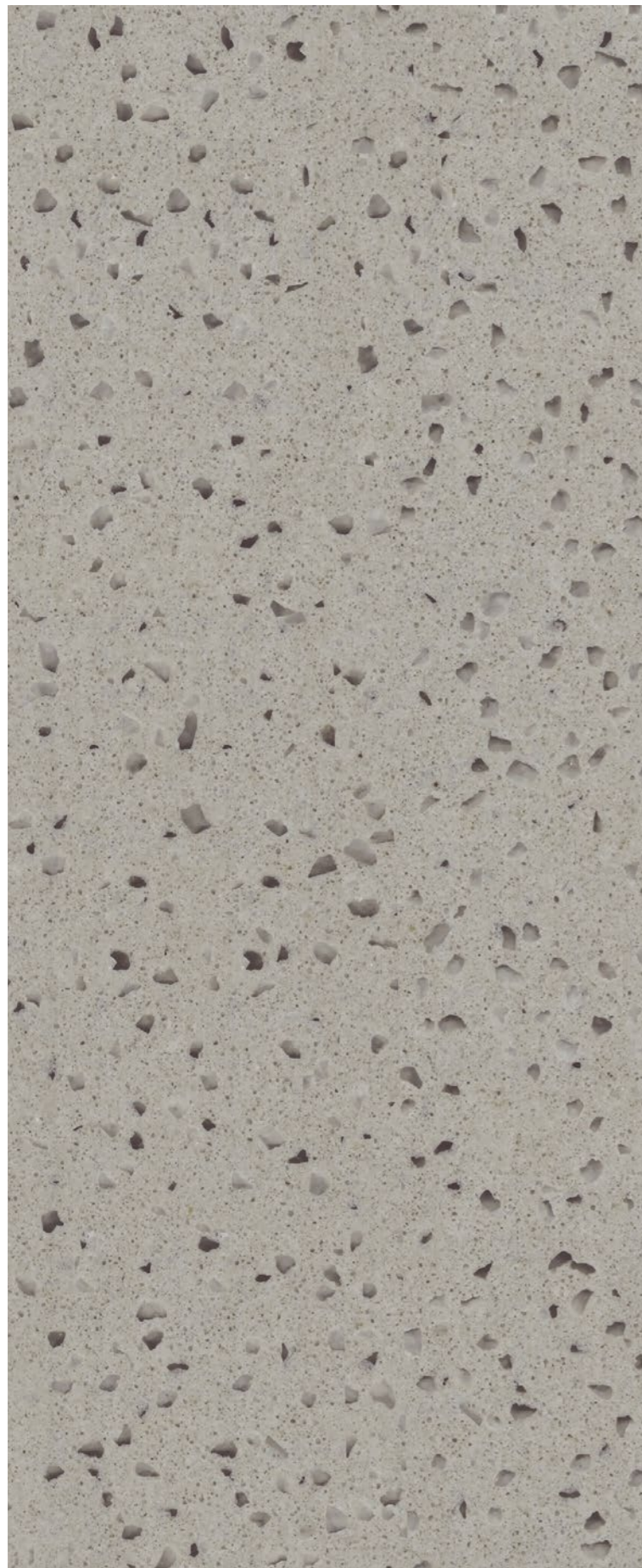
A subtle, off-white color with slight warmth and light particulates that complement a range of colors and wood stains.



The sample shown is true to scale.

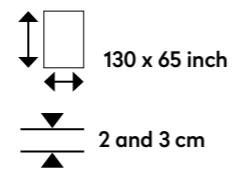
Corian® Quartz Quiet White (table)





HUSHED GRAY

A light gray color with small particulates that's not too light and not too dark to provide a neutral bridge for designed spaces.



The sample shown is true to scale.

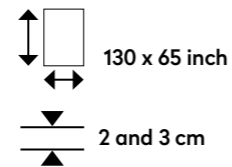
Corian® Quartz Hushed Gray (counter), Corian® Solid Surface Cameo White (sink), and Corian® Solid Surface Natural Gray (routed backsplash)





LONDON ROYAL

A subtle gray background with tone-on-tone coloring and a mix of light and dark swirls. It's a beautiful aesthetic for any space that requires an elegant and timeless look.



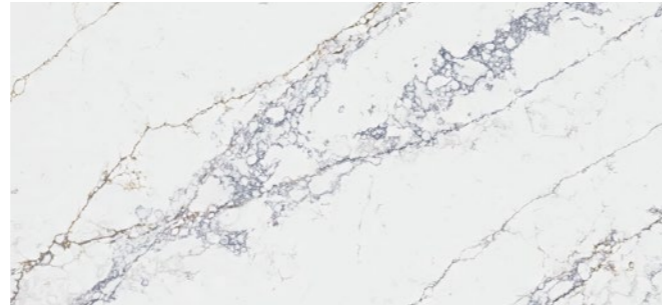
The sample shown is true to scale.

Corian® Quartz London Royal (countertop)





SMOKED QUARTZITE



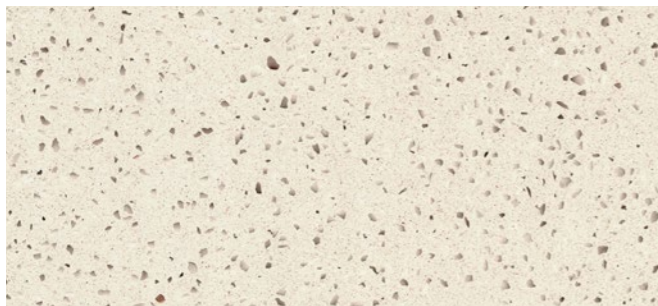
ESTATE QUARTZITE



CALACATTA MEDALLION



HUSHED GRAY



QUIET WHITE



LONDON ROYAL



NEW AESTHETICS

Corian® Quartz presents aesthetics of warmth, depth, and character to unleash unique personalities in any space.

Durable, scratch-resistant, and easy to maintain, Corian® Quartz can stand up to even the toughest demands of daily use. Whether you're looking to create a bold feature wall, an elegant countertop, or a stunning backsplash, Corian® Quartz offers the endless possibilities you need to bring your creative vision to life.

INSPIRED BY NATURE'S CANVAS

KEY FEATURES OF CORIAN® QUARTZ



DURABLE



TRUSTWORTHY



CAREFREE



NONPOROUS

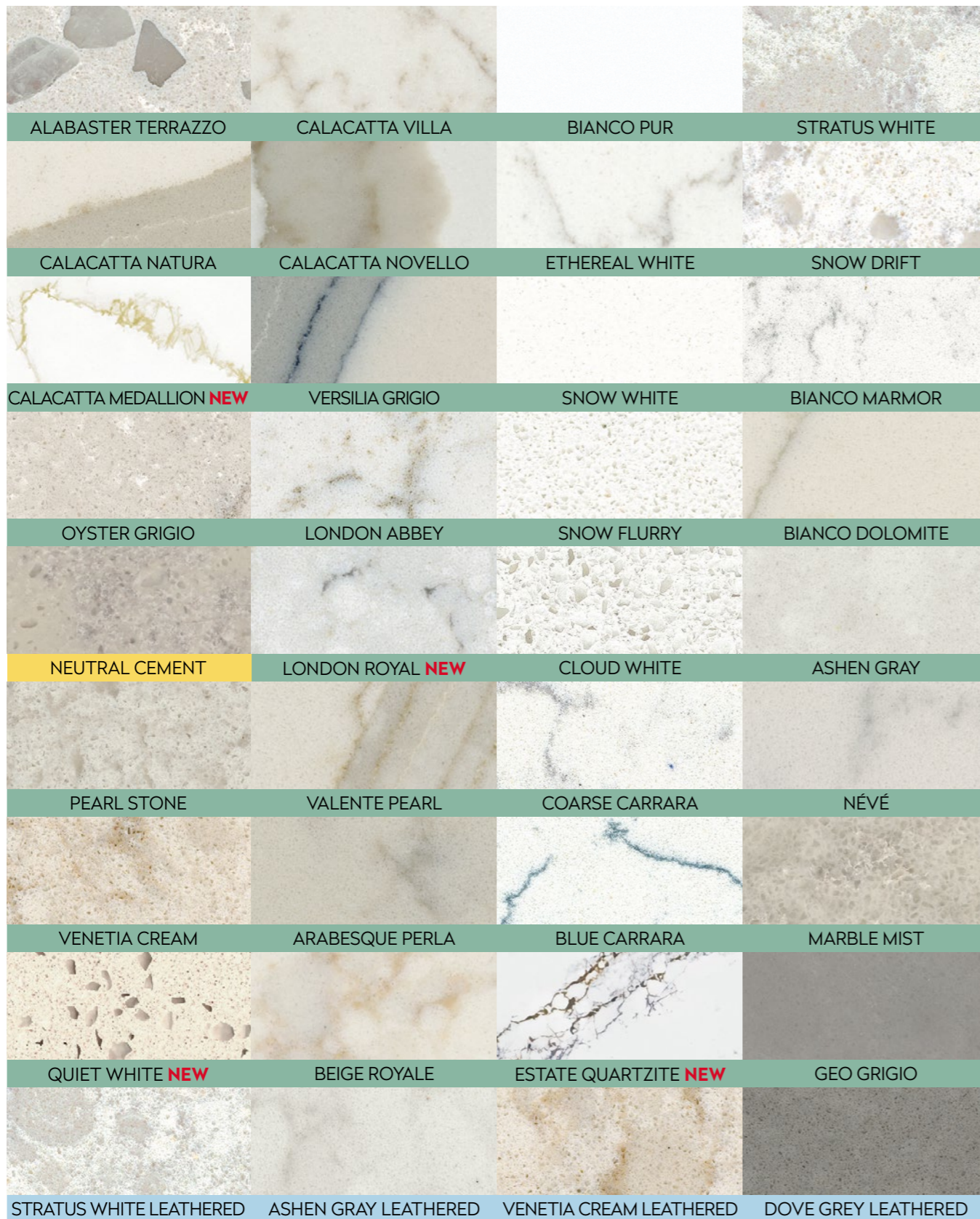


HEAT-RESISTANT



STAIN-RESISTANT





NORTH AMERICA
CORIAN®
QUARTZ
COLOR
PORTFOLIO

NEW COLORS
 Introducing our latest aesthetics

LEATHERED TEXTURES OF CORIAN® QUARTZ
 These colors feature a low sheen, light texture finish.

MATTE TEXTURES OF CORIAN® QUARTZ
 These colors feature a low sheen, smooth finish.

POLISHED TEXTURES OF CORIAN® QUARTZ
 These colors feature a high sheen, smooth finish.

The colors will vary by region.



Corian® Quartz Quiet White (Countertop) and Corian® Solid Surface Cameo White (Backsplash) and Corian® Solid Surface Glacier White (Integrated Sinks)



For Every Space in the Home

The varied aesthetics of Corian® Design exemplify style for any home, from high tech to traditional, from minimalist to warm and cozy. Corian® Solid Surface and Corian® Quartz offer extraordinary design flexibility in a wide range of patterns and colors, for any space from kitchen to bathroom to home office.

MR Walls designed with Corian® Solid Surface Glacier White (routed shower surround and backwall)



The Future Look of Healthcare

Perfectly suited to healthcare and wellness spaces, Corian® Solid Surface provides a highly practical and stylish solution for hygiene-critical environments. The new looks, designed to offer subtle and calming aesthetics, ensure that your spaces are not just functional but also inviting and soothing. From nonporous, seamless bedside installations to colorful additions to children's wards, Corian® Solid Surface can enhance the overall design of your healthcare space, creating a positive space for patients and staff alike.

Corian® Solid Surface Artista Mist (desk) and Corian® Solid Surface Bleached Nuwood (back wall)

Inspire Your Students with Innovative Surfaces

Corian® Solid Surface and Corian® Quartz provide low-maintenance solutions that can stand up to the rigors of student life while enhancing overall design and state of mind. These surfaces come in a variety of colors and finishes, allowing you to create a customized look that matches the unique style of your campus. Whether you need to create a waterfall edge on your bookshelves or an impressive service area for your dining hall, Corian® Solid Surface and Corian® Quartz offer endless design possibilities that can inspire and encourage students to reach their full potential.



Corian® Solid Surface Cirrus White (feature wall) and Corian® Solid Surface Peppered Terrazzo (tabletops)

Elevating the Hospitality Experience

Whether it's a plush hotel lobby or an upscale restaurant, the hospitality industry's success depends greatly on creating an aesthetically pleasing environment. Fortunately, Corian® Design offers exceptional materials that combine beauty and functionality to offer stunning designs that entice the senses while also remaining easy to clean and durable, even in high-traffic spaces.



Corian® Quartz London Royal (counter)



Where Food Service Meets Style

Designed to ignite appetites and stimulate the senses, the new aesthetics of Corian® Design blend seamlessly into your environment.

Whether creating an upscale bistro, a trendy cocktail bar, or a fine dining establishment, Corian® Solid Surface and Corian® Quartz are designed to create unforgettable dining experiences for your guests.

Corian® Solid Surface Artista Beige (counter)



Corian® Quartz Estate Quartzite

Not sure which color to choose?
Visualize your space with our augmented reality app, Corian® Design Visualizer.



Corian® Design, a division of the DuPont company, is a global organization that creates, manufactures, and markets advanced materials, products, and solutions for interior design and architecture, originating from a foundation of world-class technologies and expertise.

Marketed under the Corian® brand and the Make Your Space™ mantra, its materials, products, and solutions address the most demanding requirements in terms of beauty, functionality, and durability.

The Corian® Design global portfolio is continuously evolving and currently includes Corian® Solid Surface and Corian® Quartz are part of the Corian® Design portfolio.



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Printed representation of colors may vary from actual samples. Please view actual sample before purchasing.




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DESIGN

Make Your Space™

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Corian® Quartz Smoked Quartzite



TRINSEO™

AVONITE™ WET WALL™

Acrylic Solid Surface

Connecting ideas with solutions

aristechsurfaces.com trinseo.com

The need for a clean environment does not mean having to compromise on design

Hygiene Counts

Wellness, Hospitality, Healthcare, Education, Military and more – There is no material that allows for greater cleanliness. AVONITE™ WET WALL™ 100% Acrylic Solid Surface 6 mm sheets do not absorb bacteria, prevent mold and mildew, can be cleaned using common household products, are seamlessly assembled, and the material malleability makes it possible to design curved, rather than angular, corners, for more efficient cleaning.

Impervious

AVONITE™ WET WALL™ 6 mm sheets have been designed to resist a long list of chemical products, including chloric acid. This material for architectural designs and utilitarian surfaces is exceptionally weatherable, strong, non-porous, scratch and stain resistant.

Easy Install

AVONITE™ WET WALL™ 100% Acrylic Solid Surface 6 mm sheets come in various standard and custom sizes to meet the marketplace needs. Standard width options include 36 in., 48 in., and 60 in. wide in a 96 in. length (914 mm, 1219 mm, 1524 mm, and 2438 mm). Singular solid surface panels create incredible time savings and cost efficiencies. Fundamentals of installation include plumb walls, measuring twice, cut, shim and attach to backboard with silicone and hot melt (see our AVONITE™ Fabrication Guide for details).

Aesthetic You Need

AVONITE™ WET WALL™ 6 mm sheets are available in our most sought-after colors as well as custom colors (minimums required).



Standard Colors



White 8016



Super White 8026



Ivory 8106



Haze 8514



Mist 8512



Oxbow 8510

Made-to-Order Colors



Bone 8010



Dove Grey 8231



Galactic Ice 7790



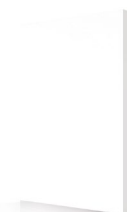
Kokoura 9117



Polaris 8256



Sandstorm 9036



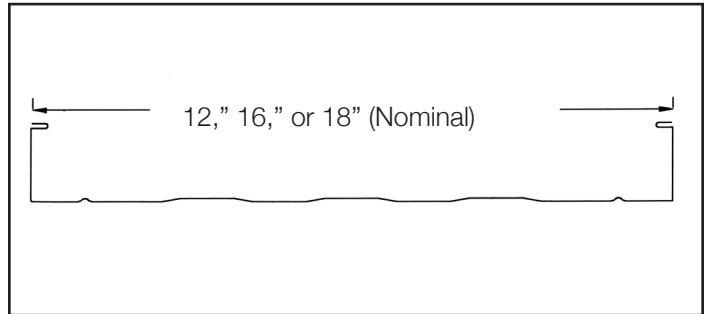
Snowfall 8090

AVONITE™ WET WALL™ 6 mm made-to-order and additional colors or sizes are available with minimum order quantities. Contact your representative for details.

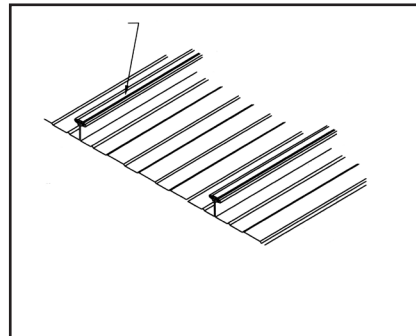
OVERVIEW & FEATURES

R-Mer Span is a structural standing seam roof system. R-Mer Span consists of a unique profile containing mesas throughout the panel to minimize "oil canning." The 2 3/8" high vertical seam makes R-Mer Span aesthetically pleasing and also the ideal roof system to withstand the most severe weather conditions. The heavy-duty continuous clip allows for unlimited expansion and contraction. R-Mer Span can be used on slopes down to 1/4" per foot for both retrofit and/or new construction.

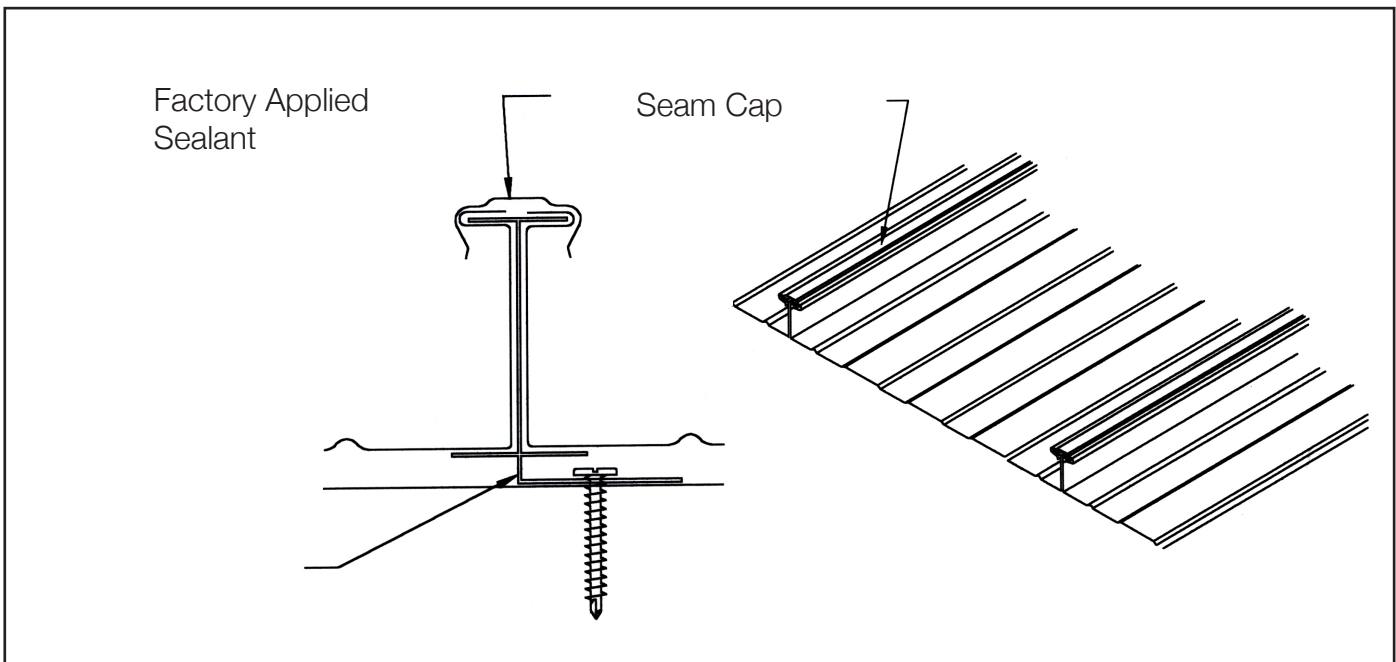
PANEL PROFILE



STANDARD CLIP



SEAM DETAIL AND ASSEMBLY





DESIGN CHARACTERISTICS

- Heavy-duty, 16-gauge, one-piece clip design provides for unlimited thermal movement
- Symmetrically designed panel/cap configuration contains four (4) layers of steel
- Double bead of factory applied hot melt sealant (water barrier) is completely isolated from clip
- 2-3/8" High vertical seam
- Tightest curving capability in industry for structural panel (Steel - 20 ft. radius; Aluminum - 10 ft. radius)
- Available for tapered panel applications
- Profile contains unique mesas or striations to minimize appearance of "oil canning"
- Spanning capability over open purlins on slopes down to 1/4:12
- 3/8" high clearance between panel and substrate helps ventilation and reduces possibility of condensation
- Ideal for retrofits over existing single plies, BUR's, modified bitumens or other metal roofs
- 20 and 30 year warranty available
- Available in 12", 16" or 18" wide panels
- Available in 20, 22 or 24 gauge G-90 Galvanized steel; .032, .040, or .050 aluminum, copper, stainless steel and zinc
- Available in a wide choice of colors

TEST CLASSIFICATIONS

- FM Class 1-195 in accordance with 4471 test procedure (12" widepanel; 22 gauge steel)
- UL 90 classification in accordance with UL 580 test procedure
- Class A fire rating in accordance with UL 790
- UL 263 fire assembly tested
- Roof system compliance with ASTM E 1592
- Air infiltration test in accordance with ASTM E 283 and E 1680
- Water penetration test in accordance with ASTM E 331 and E 1646

COLORS

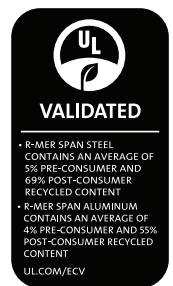
Please contact your local Garland Representative for the available colors including those that are CRRC® qualified*.

For specific application recommendations and coverage rates, please contact your local Garland Representative or Garland Technical Service Department.



0700-0028

*based on qualified colors



The Continuous Clip product used with R-Mer Span is protected by U.S. Patent # 6,354,045 and Canada Patent # 2,334,538

For more information, visit us at: www.garlandco.com

The Garland Company, Inc.
 3800 East 91st Street
 Cleveland, OH 44105
 FAX: 216-641-0633
 Phone: 216-641-7500
 Toll Free: 800-321-9336

Garland Canada Inc.
 209 Carrier Drive
 Toronto, Ontario
 Canada, M9W 5Y8
 FAX: 416-747-1980
 Phone: 416-747-7995
 Toll Free: 800-387-5991
 (Only in Canada)

Tests verified by independent laboratories. Actual roof performance specifications will vary depending on test speed and temperature. Data reflects samples randomly collected. A ± 10% variation may be experienced. The above data supersedes all previously published information. Consult your local Garland Representative or Garland Corporate Office for more information.

R-Mer is a trademark of The Garland Company, Inc. and Garland Canada Inc.
 Kynar is a registered trademark of Elf Atochem North America Inc.
 The CRRC mark is a registered trademark of the Cool Roof Rating Council.

PANEL SIDING





Versatility that spans traditional to contemporary.

Designed for everything from sidewalls to overhead accents, Allura Panel Siding adds beautifully versatile – and exceedingly durable – distinction to your next project.

TECHNICAL SPECIFICATIONS

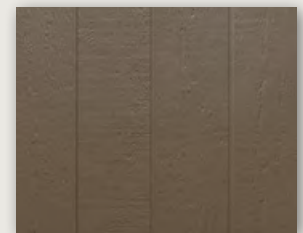
Thickness	Width	Length
5/16"	4'	8'
5/16"	4'	9'
5/16"	4'	10'
5/16"	4'	12'

* Check market availability, as products may vary.

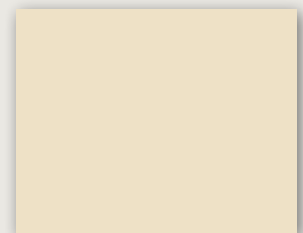
AVAILABLE TEXTURES*



Traditional Cedar



8" OC Groove



Smooth

TRIM



Tie it all together.

Thanks to our special fiber cement formulation, Allura Trim has all the advantages of wood and none of the hassles. It looks like wood yet is incredibly durable. It won't rot, warp or splinter and is designed to significantly outperform wood in every way. Best of all, there is no need for special tools on the job site. Our Trim can be cut with the same saw blades and installed with the same tools normally used for wood products. Why bother with wood? Trim provides the look and long-lasting protection you need to bring your home that all-important finishing touch.



TRIM FEATURES

- Available in reversible Cedar/Smooth board for added versatility
- 15-year limited warranty

DESIGNER'S CORNER

Nothing brings the look of your home together quite like Allura Trim. Its clean lines, exceptional durability and paintability provide the ultimate in beauty and versatility. Allura Trim is the perfect finishing touch.

Size	Thickness	Nominal Width*							
		2"	3"	4"	5"	6"	8"	10"	12"
7/16"	7/16"			●		●	●		●
4/4	3/4"	●	●	●		●	●	●	●
5/4	1"	●	●	●	●	●	●	●	●
8/4	1 1/2"			●		●			

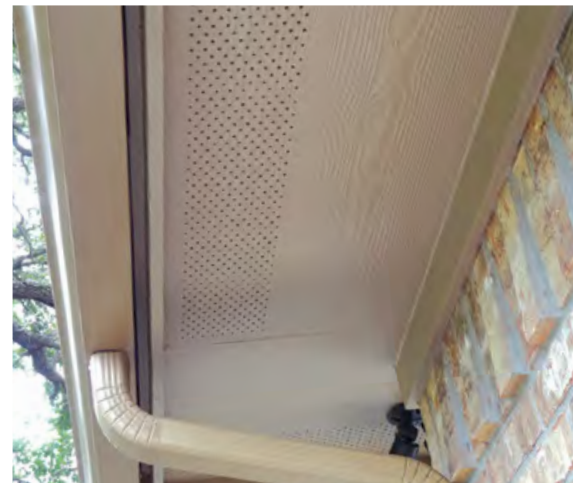
All available in 12-ft. lengths

*Check market availability, as products may vary.



Industry-leading
15-year Transferable Trim
Limited Warranty

SOFFIT



Elevate the look and performance.

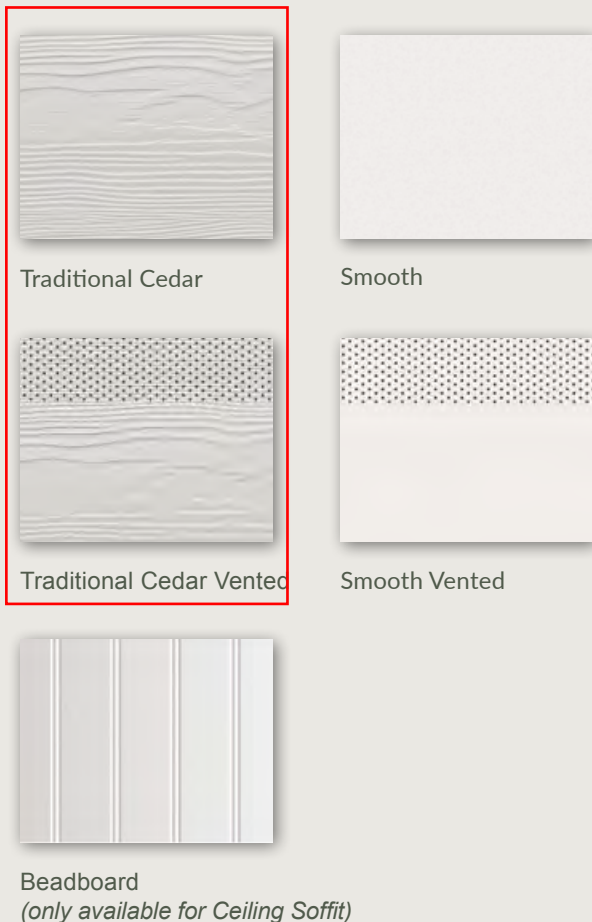
Available in both vented and non-vented styles, Allura Soffit Panels will neither warp nor rot. Unlike traditional wood, they are engineered to repel moisture, withstand any climate, and provide extensive protection around the home. Soffit helps equalize the roof temperature from top to bottom by supplying a consistent airflow along the entire underside of the roof deck.

For outdoor ceiling applications, including porches and gazebos. Allura Fiber Cement Beadboard is perfect. Best of all, it's weather-, rot- and fire-resistant. Raise your expectations for any outdoor ceiling with the aesthetics and durability of Allura Beadboard.

DESIGNER'S CORNER

Whether you prefer Smooth or Cedar texture, Allura Soffit options allow you to ensure your home's design style is consistent from every angle.

AVAILABLE TEXTURES*



EAVES SPECIFICATIONS

Type	Thickness	Width	Length
Vented/Non-Vented	¼"	24"	8'
Vented/Non-Vented	¼"	24"	12'
Vented/Non-Vented	¼"	16"	12'
Vented/Non-Vented	¼"	12"	12'

CEILING SPECIFICATIONS

Type	Thickness	Width	Length
Non-Vented	¼"	4'	8'
Beadboard	5/16"	4'	8'

* Check market availability, as products may vary.

We don't just promise world-class service. We guarantee it.

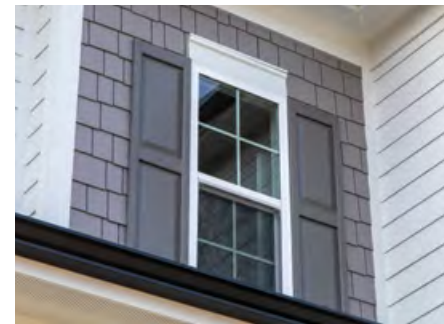
At Allura, we believe the building industry is first and foremost a service industry. We understand time is money and you deserve respectful, courteous and knowledgeable customer service. So you can always count on us for helpful technical support, customer service reps and managers who are eager to assist you with all your Allura fiber cement needs.

ON-TIME SHIPMENTS

We take pride in delivering full and on-time shipments. If for any reason your direct Allura order does not ship on your promised ship date, please contact Allura's Customer Support immediately, so we can assist you.

QUALITY PRODUCTS & PROTECTED INVESTMENT

With over 75 years of experience, Allura provides a top-line fiber cement product using our advanced formulation and quality-control monitoring. Every piece of fiber cement product delivered from Allura will be palletized and wrapped to protect your investment.



BACKED BY CONFIDENCE.

Allura fiber cement siding products are backed by our
30-year Transferable Limited Product Warranty*.

*Please review our Limited Transferable Warranty for specific details. Use of the product subjects you to a Limited Warranty and Arbitration Agreement. For a copy and further details, visit Allurausa.com/warranties.



MILGARD

A250 Thermally Improved Aluminum

ALUMINUM WINDOWS AND SLIDING PATIO DOORS

CONTEMPORARY STYLE
STRONG AND DURABLE
NARROW SIGHTLINES

By MITER Brands™

A250

Framing home in a new light.

The path to perfect windows and doors has never been more clear. From tranquil mornings to family dinners, MILGARD seamlessly connects you to what matters most: windows and doors that frame life's most meaningful moments.

As a trusted brand for more than half a century, MILGARD offers products that promise long-lasting comfort, protection, and exceptional quality day after day, year after year.

EXPERIENCE IS EVERYTHING

Our experts match you with attractive, reliable windows and patio doors that best fit your home, your needs, and your price point.

CONFIDENCE TO CREATE

We deliver the highest-quality windows and patio doors through our passion for craftsmanship and a relentless pursuit of 100%.

EVERY DETAIL, EVERY DAY

From robust testing and precision manufacturing processes to the innovations we develop for your comfort, every detail matters.

WHY WE'RE THE RIGHT CHOICE.

MILGARD offers beautiful, worry-free windows and patio doors to frame each of life's little moments. Our exacting manufacturing processes and the innovations we develop mean you get reliable windows and doors that perform year after year. With MILGARD, you'll receive a level of service and quality others simply can't match, backed with an industry-leading warranty.

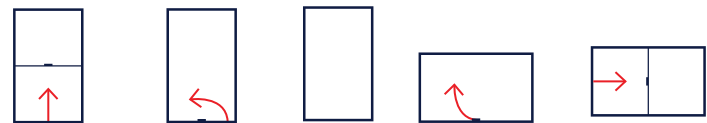


Bring your home to life

Exhibiting strength and durability without sacrificing aesthetic details, A250 Thermally Improved Aluminum windows and patio doors can be configured to provide expansive views. What's more, they beautifully accentuate the clean, thin lines sought after in contemporary homes, making them a popular choice for architects and builders who embrace modern home design.

SERIES OPTIONS

WINDOWS



Single-Hung Casement Picture Awning Horizontal Slider

PATIO DOORS



2-Panel Slider 3-Panel Slider 4-Panel Slider

See our entire A250 Series offering online!



STYLISH DESIGN

Contemporary look

The clean lines convey a contemporary look and can help enhance your home's modern architectural style.

VIEWING AREA

Slim frames

The slim frame profile offers an increased viewing area and allows more natural daylight to flood the room.

Innovations that endure

A250 Thermally Improved Aluminum windows and doors are designed for performance and a long-lasting life. Crafted with high-quality components that start with the rollers and go all the way to the frame itself, A250 windows and doors help your home maintain a comfortable temperature with their improved insulating ability.

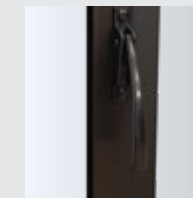
HARDWARE



Spring Action Lock
 • Single-Hung
 • Horizontal Slider



Push Out Operator
 • Casement
 • Awning



Sash Lock
 • Casement
 • Awning

HARDWARE FINISHES



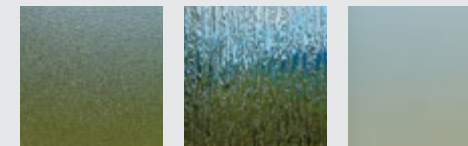
Clear Anodized



Bronze Anodized

GLASS

Select clear glass or choose from an assortment of obscure options for privacy. We also have tinted glass for additional shading from direct sunlight.



GRIDS

Enhance your home's spaces with a variety of grid configurations. Select grids placed inside our insulated glass units for easy cleaning.



Flat Grid



Sculptured Grid

Hardware will match frame color. On-screen and printed color representations may vary from actual finish colors. Anodized coatings help to prevent against rusting, pitting, and corroding.

See our entire A250 Series window offering online!

“THE WINDOWS LOOK ABSOLUTELY ELEGANT. I’M VERY IMPRESSED.”

- Palm Desert, CA



“LOVE MY NEW WINDOWS!
THEY MAKE MY HOUSE
LOOK GREAT”
- Chandler, AZ

Create seamless transitions

Enjoy a flawless transition with the A250 Thermally Improved Aluminum sliding patio door. Exceptionally strong, the A250 patio door provides greater views to the outside and ushers even more light into your home.

HARDWARE



Interior Sliding Door Handle



Exterior Sliding Door Handle

HARDWARE FINISHES



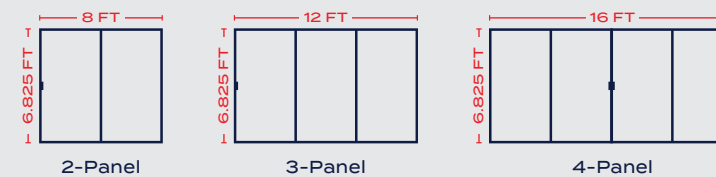
Black

THERMAL BARRIERS

The use of thermal barriers in aluminum-framed windows and doors produces greater energy efficiency. Polyurethane is placed between the frame to create a thermal barrier and reduce the flow of heat.



MAXIMUM DOOR SIZING



See our entire A250 Series patio door offering online!

OUR COMMITMENT TO YOU

We have a dedication to quality and build our windows and patio doors to last. With the A250 Thermally Improved Aluminum, you're covered for as long as you own your home with our Lifetime Limited Warranty.

See complete details at milgard.com/warranty

**OUR GOAL IS
100% TROUBLE-FREE**

With a goal of 100% trouble-free, our teams work tirelessly to help ensure your project stays on track. From regular inspections and quality audits throughout the manufacturing process, we strive to ensure that the final product you receive meets our high standards.



100%



A250 THERMALLY IMPROVED ALUMINUM

MILGARD[®]
WINDOWS and DOORS

Success means getting it right
in every detail, every time.
Build boldly with MILGARD.

milgard.com

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By MITER Brands™

A family of leading window and door
brands, united by our passion for
quality and relentless pursuit of 100%.

miterbrands.com

A250-0423

ASPIRO® SERIES

Global Product Lines



	Authentic Stile & Rail	Select Wood Veneer	Premium Painted	Laminates
Price	\$\$\$-\$\$\$\$	\$\$-\$\$\$\$	\$\$-\$\$\$	\$\$-\$\$\$
Aesthetics				
Surface Material/Type	Domestic and Exotic Veneer High-Density Fiberboard (HDF)	Domestic and Exotic Veneer Reconstituted Veneer	Medium-Density Overlay (MDO)	High-Pressure Decorative Laminate (HPDL)
Face Grade	AA, A	AA, A		
Surface Matching/Assembly	Book, Slip, or Random Running Balance, or Center	Book, Slip, or Random Running Balance, or Center		
Default Edges*	Lumber Outer	Veneer Edge Band over Structural Composite Lumber (SCL)	Hardwood	HPDL Edge Band over SCL
Solutions				
Aspiro® Defendr™ Door	●	●	●	●
Lead		●	●	●
Bullet-Resistant		●	●	●
STC	●	●	● >35 STC	● >35 STC
Fire-Rated	●	●	●	●
High-Impact Edges		●	●	●
Warranty	Interior: Lifetime warranty with factory finish Exterior: 3-year warranty with factory finish	Interior: Lifetime warranty with factory finish Exterior: 3-year warranty with factory finish	Interior: Lifetime warranty with factory finish Exterior: 3-year warranty with factory finish	Interior: Lifetime warranty with factory finish Exterior: 3-year warranty with factory finish

CENDURA® SERIES

Global Product Lines



Standard Wood Veneer



Standard Painted



Everyday Laminates

	Standard Wood Veneer	Standard Painted	Everyday Laminates
Price	\$\$-\$\$\$	\$\$-\$	\$\$-\$\$\$
Aesthetics			
Surface Material/Type	Natural/White Birch White/Red Oak White Maple	Hardboard (HDF) Paint Grade Birch Molded Panel	High-Pressure Decorative Laminate (HPDL)
Face Grade	A		
Surface Matching/Assembly	Book and Running only		
Default Edges*	Full-Length Mill Option Softwood**	Finger Jointed Softwood	HPDL Edge Band over SCL
Solutions			
Lead			
Bullet-Resistant			
STC	● Up to 35 STC	● Up to 35 STC	● Up to 35 STC
Fire-Rated	●	●	●
Warranty	Limited Lifetime***	Limited Lifetime***	Limited Lifetime***

* Fire-rated doors constructed per label service listing.

** May vary by manufacturing facility.

*** Additional exceptions for some core or surface types.

RESTROOM KIT

FOR SINGLE OCCUPANCY NORMALLY LOCKED / UNLOCKED RESTROOMS



PRIMARY APPLICATIONS



DESCRIPTION

BEA's Restroom Kit is designed for both normally locked and normally unlocked single occupancy restrooms.

The kit's control center is the Br3-X, a programmable 3-relay advanced logic module featuring restroom control functionality.

FEATURES & BENEFITS

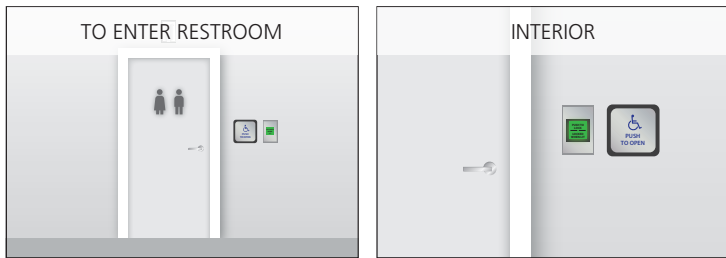
- Br3-X 13 function advanced logic module with restroom control functionality
- Occupied Indicator with LED and selectable sounder signals when restroom is in use
- Push to Lock Button with LED provides a visual confirmation of lock status upon successful locking
- Door position switch ensures proper positioning of door before allowing door to be locked and resets the system upon manual exit



BEA, Inc.
RIDC Park West
100 Enterprise Drive
Pittsburgh, PA 15275-1213

Customer Service: 800.523.2462
Technical Support: 800.407.4545
www.BEAinc.com

APPLICATIONS



TECHNICAL SPECIFICATIONS

BR3-X

Supply Voltage	12 – 24 VAC / VDC ±10%
Power Consumption	30 – 130 mA; DRY Output
Temperature Range	-15 °F – 150 °F* *If powered by AC voltage and using WET output to convert to DC voltage and current draw of device is greater than 0.9 A, the upper temperature range is 130 °F
Relay Hold Time	Up to 60 seconds per relay
Delay Between Relays	Up to 60 seconds with ¼, ½ and ¾ second options
Housing Material	ABS Plastic

Input Specification

Inputs 1, 2, 3, 4	DRY contact
WET Input	5 – 24 VAC / VDC ±10%

Contact Rating

Relay 1 (DRY)	3 A @ 24 VAC / 30 VDC
Relay 1 (WET)	1 A
Relay 2	3 A @ 24 VAC / 30 VDC
Relay 3	1 A @ 24 VAC / 30 VDC

Dimensions	5.2 in (W) × 2.2 in (H) × 1.0 in (D)
-------------------	--------------------------------------

10LEDSOUNDER

Voltage	12 – 24 VAC / VDC ±10%
Indication	Audible buzzer (selectable on / off) and visual LED
Text Inserts	10
Material	Stainless steel & PC
Certifications	FCC

10PTLBUTTON

Switch	SPST
Voltage Max.	125 / 250 VAC
Current Max.	10 A
Power Max.	373 W
Electrical Configuration	SPDT
High Volt Bulb	
Input Voltage	15 – 24 VAC / VDC
Current	0.06 A
Low Volt Bulb	
Input Voltage	12 – 14 VAC / VDC
Current	0.19 A
Dimensions	2.76 in (W) × 4.52 in (H) × 0.75 in (D)

10SWITCH1084

Switching Voltage Max.	30 VAC / VDC
Switching Current Max.	0.25 A
Power Max.	3.0 W
Electrical Configuration	SPDT
Loop Type	Open or Close
Gap Distance Max.	2 in

RELATED PRODUCTS



10RESTROOMKIT
RESTROOM
KIT



10BR3X
3-RELAY
LOGIC MODULE



10EMERGENCYKIT
EMERGENCY
ADD-ON KIT



10LEDSOUNDER
OCCUPIED
INDICATOR



10PTLBUTTON
"PUSH TO LOCK"
BUTTON



10SWITCH1084
DOOR POSITION
SWITCH



10STRIKERE
RIM EXIT
ELECTRIC STRIKE



10STRIKECU
UNIVERSAL CYLINDRICAL
ELECTRIC STRIKE



10PS12-24
UL / ULC LISTED
12 / 24 VDC
POWER SUPPLY



1012VAC
12 VAC (20 VA)
TRANSFORMER



1024VAC
24 VAC (40 VA)
TRANSFORMER

www.BEAinc.com

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RESTROOM KIT FOR SINGLE OCCUPANCY NORMALLY LOCKED / UNLOCKED RESTROOMS

BEA, Inc.
RIDC Park West
100 Enterprise Drive
Pittsburgh, PA 15275-1213

Customer Service: 800.523.2462
Technical Support: 800.407.4545



ULTIMA®
ULTIMA® High NRC

Tegular
fine texture



CAD/Revit® drawings at:
armstrongceilings.com/cadrevit



DESIGNFLEX®
A New World of Choice
for Ceiling Systems

NEW A ceiling that
saves energy!
Learn more



Ultima Beveled Tegular panels with Silhouette 1/4" reveal 9/16" suspension system

Smooth-texture panels that are washable, impact- and scratch-resistant with a non-directional visual. Offer both Sustain® and Total Acoustics® panel performance for flexible spaces.

KEY SELECTION ATTRIBUTES

- DesignFlex® options include shapes and made-to-order sizes available to ship in 3 weeks
- Get total noise control and floor plan versatility with Total Acoustics® ceiling panels: NRC + CAC = Total Acoustics performance
- Ultima® panels are part of the Sustain® portfolio, and meet the most stringent industry sustainability compliance standards today
- new* • High sound absorption options available up to 0.85 NRC
- CleanAssure™ family of products – includes disinfectable panels, suspension systems, and trim

COLOR



- Mold- and mildew-resistant surface
- Smooth, clean, durable finish – Washable, Impact-resistant, Scratch-resistant, Soil-resistant
- Ceiling-2-Ceiling™ Post-consumer Recycled Content options: items 1911HRC, 1912HRC, 1914HRC, 1915HRC. 71% Pre-consumer; 15% Post-consumer
- USDA-Certified Biobased Product – 95%
- Items available with AirGuard® coating which actively removes formaldehyde from indoor air
- Item 1912 available with Create!™ printed images and patterns
- Non-directional visual reduces scrap and installation time
- Compatible with the TechZone® Ceiling Systems

- 30-Year Limited System Warranty against visible sag (excludes items 1905 and 1929), mold, and mildew
- 10-Year replacement panel available for items 1911, 1912, 1914, 1915
- Available with factory-cut holes for USAI® trimless downlight fixture integration.
- Made in the U.S.A. of domestic and global content
- Build America, Buy America (BABA) Act compliant



TYPICAL APPLICATIONS

- Offices – closed spaces for privacy and confidentiality; open spaces for focus, collaboration, and teaming
- Healthcare – assists in addressing HIPAA, HCAHPS, and FGI acoustical requirements
- Classrooms
- Corridors
- Lobbies/reception areas
- Department stores/retail

DETAILS (Other Suspension Systems compatible. Refer to listing on next page.)



1. Ultima® Beveled Tegular
2. Ultima® with Suprafine® 9/16" suspension system
3. Ultima® with Silhouette® XL® 9/16" suspension system with 1/4" reveal



*Ultima Templok
Energy Saving
Ceilings*

ULTIMA® ULTIMA® High NRC

Tegular
fine texture



Declare.

LEED® WELL | LBC

UP TO 87% RECYCLED CONTENT

Calculate sustainability with Ecomedes
armstrongceilings.com/ecomedes

- energy management
- construction waste mgmt
- regional materials
- design for flexibility
- EPD
- recyclable/ bio-based producer resp.
- biobased materials
- recycled content
- sourcing of raw materials
- material ingredient reporting
- low emitting/ materials
- lighting quality
- acoustics

LOCATION DEPENDENT

VISUAL SELECTION

PERFORMANCE SELECTION

Dots represent high level of performance.

\$\$\$

armstrongceilings.com/suspdwgs

Susp. Dwg.

ULTIMA® High NRC
15/16" Beveled Tegular

HRC items not included in made-to-order panels.

Item No.	Dimensions (Inches)	NRC	CAC	Total Acoustics ¹	Articulation Class	Fire Performance	Light Reflect	Anti-Mold/Mildew	Sag Resistant	Certified Low VOC Emissions	CleanAssure™ Disinfectable Panels	DURABILITY	Recycle Program
2081	24 x 24 x 1"	0.85	35	BEST	170	Class A	0.85	*	*	*	*	*	*
2084	24 x 48 x 1"	0.85	35	BEST	170	Class A	0.85	*	*	*	*	*	*
1941	24 x 24 x 7/8"	0.80	35	BEST	170	Class A	0.87	*	*	*	*	*	*
1944	24 x 48 x 7/8"	0.80	35	BEST	170	Class A	0.87	*	*	*	*	*	*
1433	24 x 60 x 7/8"	0.80	35	BEST	170	Class A	0.87	*	*	*	*	*	*
1436	24 x 72 x 7/8"	0.80	35	BEST	170	Class A	0.87	*	*	*	*	*	*
2082	24 x 24 x 1"	0.85	35	BEST	170	Class A	0.85	*	*	*	*	*	*
2085	24 x 48 x 1"	0.85	35	BEST	170	Class A	0.85	*	*	*	*	*	*
1942	24 x 24 x 7/8"	0.80	35	BEST	170	Class A	0.87	*	*	*	*	*	*
1942HRC	24 x 24 x 3/4"	0.75	35	BEST	170	Class A	0.87	*	*	*	*	*	*
1945	24 x 48 x 7/8"	0.80	35	BEST	170	Class A	0.87	*	*	*	*	*	*
1431	30 x 30 x 7/8"	0.80	35	BEST	170	Class A	0.87	*	*	*	*	*	*
1434	24 x 60 x 7/8"	0.80	35	BEST	170	Class A	0.87	*	*	*	*	*	*
1437	24 x 72 x 7/8"	0.80	35	BEST	170	Class A	0.87	*	*	*	*	*	*
Made-to-Order Sizes	Width (short side) 4" - 30"	Length (long side) 12" - 72"	N/A	N/A	N/A	N/A	Class 0.87 A	*	*	*	*	*	*

1 Ctn Min
FASTSIZE
3 WEEKS
order to ship

Visit the product page online and see "Configure an Item" to verify capabilities. Questions? email Techline@armstrongceilings.com

MORE ITEMS ▶

¹ Total Acoustics® ceiling panels have an ideal combination of sound absorption and sound blocking in one product. GOOD (NRC 0.60-0.65; CAC 35+) BETTER (NRC 0.70-0.75; CAC 35+) BEST (NRC 0.80+; CAC 35+)



MINERAL FIBER - Standard



NOD TO NATURE™

LVT *Rewilding™ Individuality™* RIGID CORE *Visionary™*
LVT *Rewilding^{MC} Individuality^{MC}* ÂME RIGIDE *et Visionary^{MC}*



COMMERCIAL FLOORING *SIMPLIFIED*

LE REVÊTEMENT DE SOL COMMERCIAL *SIMPLIFIÉ*

Now it's easier than ever to find the right commercial solution. All designs are available in a range of structures, allowing you to specify for challenging spaces without sacrificing style. To get started, simply choose your structure-specific collection (**Rewilding, Individuality or Visionary**) and then select your design.

Il est maintenant plus facile que jamais de trouver la bonne solution commerciale. Tous les modèles sont disponibles dans une gamme de structures, vous permettant de spécifier des espaces difficiles sans sacrifier le style. Pour commencer, choisissez simplement votre collection spécifique à la structure (**Rewilding, Individuality or Visionary**) puis sélectionnez votre motif.



REWILDING

- Dry Back Traditional LVT
- 2.5 mm thick
- Glue-down application
- Excellent durability (rolling loads & heavy traffic)
- Large area installations (no transition strips)
- LVT traditionnel à endos sec
- 2,5 mm d'épaisseur
- Application collée
- Excellente durabilité (charges roulantes et passage intense)
- Installations sur de grandes surfaces (pas de bandes de transition)



INDIVIDUALITY

- Loose Lay Thick LVT
- 5.0 mm thick
- Versatile Installation (glue-down or loose lay)
- Superior sound & comfort
- Seamless transition to carpet tile
- LVT épais à pose libre
- 5,0 mm d'épaisseur
- Installation polyvalente (collée ou pose libre)
- Son et confort supérieurs
- Transition uniforme vers les carreaux de tapis



VISIONARY

- Rigid Core
- 5.2 mm thick
- Superior dent resistance
- Fast & easy locking installation
- 100% waterproof
- Âme rigide
- 5,2 mm d'épaisseur
- Résistance aux bosses supérieure
- Installation emboîtable rapide et facile
- 100 % étanche à l'eau

NOD TO NATURE™

Nod to Nature is a mindfully crafted collection that is inspired by the wondrous beauty found in nature. Serene, mineral-toned stone and warm, inviting wood visuals are effortlessly combined with our innovative coating technology, resulting in a floor that is beautiful and built to last.

HartGuard™ ultrashield with *Cleantivity*™ antimicrobial technology



Our breakthrough coating system provides best-in-class protection. Our special formulation is infused with an integrated technology to not only provide superior resistance to scratches and stains, but also offers easy cleanability and inhibits the growth of bacteria, mold and mildew – lowering maintenance efforts and costs.

Nod to Nature est une collection soigneusement conçue qui s'inspire de la beauté merveilleuse de la nature. La pierre sereine aux tons minéraux et les visuels de bois chaleureux et invitants sont combinés sans effort à notre technologie d'enduit innovant, ce qui donne un sol magnifique et construit pour durer.

HartGuard^{MC} ultrashield avec technologie antimicrobienne *Cleantivity*^{MC}



Notre système d'enduit révolutionnaire offre la meilleure protection de sa catégorie. Notre formulation spéciale est imprégnée d'une technologie intégrée pour fournir non seulement une résistance supérieure aux rayures et aux taches, mais offre également une facilité de nettoyage et empêche la croissance des bactéries, des moisissures et du mildiou, ce qui réduit les efforts et les coûts d'entretien.

		Diamond Coating Enduit en diamant	Aluminum Oxide Oxyde d'aluminium	Traditional Urethane Uréthane traditionnel	HartGuard™
SCRATCH ÉGRATIGNURE	Micro-Scratch Micro-égratignure	●●●●	●●●	●●	♥♥♥♥ EN 16094 Gloss Change EN 16094 Modification de lustre
	Scratch Égratignure	●●●●	●●●	●●	♥♥♥♥ EN 16094 Scratch EN 16094 Égratignure
STAIN TACHE	Stain Tache	●●●●	●●●	●●●	♥♥♥♥ ASTM F925
CLEANABILITY FACILITÉ DE NETTOYAGE POLISSAGE	Polish Polissage	●	●●●●	●●●●	♥♥♥♥ Traditional Polish Method Méthode de polissage habituelle
	Coating Color/ Clarity Impact Couleur/ Clarté enduit Impact	●●	●●●●	●●●●	♥♥♥♥ Low Raking Light Conditions Conditions de faible éclairage balayant
ANTIMICROBIAL ANTIMICROBIEN	Antimicrobial Antimicrobien	N/A	N/A	N/A	♥♥♥♥ ASTM G21

DURABILITY & PERFORMANCE

- All offer a 20 mil commercial wear layer
- Multiple thicknesses provide solutions for heavy traffic and even rolling loads
- Excellent scuff and slip resistance
- Extremely resistant to iodine stains

DESIGN FLEXIBILITY

- All designs are available in multiple structures and ideal for a variety of commercial interiors
- Available in three quick and easy installation methods

ENVIRONMENTALLY RESPONSIBLE

- No ortho-phthalates or heavy metals
- FloorScore® certified
- Declared
- Health Product Declaration (HPD) available

LOW MAINTENANCE

- No waxing, buffing, sealers or finishes required
- Floor should be swept regularly to remove excess dirt and grit
- Regular maintenance by damp mopping or auto-scrub minimizes maintenance costs

Ideal for use in Healthcare, Assisted Living, Education, Corporate, Hospitality, Retail and Institutional interiors.

DURABILITÉ ET PERFORMANCE

- Tous offrent une couche d'usure commerciale de 20 mil
- Plusieurs épaisseurs offrent une variété de solutions pour le passage lourd et même les charges roulantes
- Excellente résistance aux éraflures et au glissement
- Extrêmement résistant aux taches d'iode

FLEXIBILITÉ DE CONCEPTION

- Tous les motifs sont disponibles en plusieurs structures et sont parfaits pour une variété d'intérieurs commerciaux
- Disponible en trois méthodes d'installation rapides et faciles

SANS DANGER POUR L'ENVIRONNEMENT

- Ne contient pas de ortho-phthalates ou de métaux lourds
- Certifié FloorScore^{MD}
- Conforme
- Déclaration de produit environnemental (HPD) disponible

FAIBLE ENTRETIEN

- Aucun cirage, polissage, scellant ou finition requis
- Le sol doit être balayé régulièrement pour enlever l'excès de saleté et de gravier
- L'entretien régulier par vadrouille humide ou récurage automatique minimise les coûts d'entretien

Idéal pour une utilisation dans les intérieurs de soins de santé, de vie assistée, d'éducation, d'entreprise, d'hôtellerie, de vente au détail et institutionnels.

STANDARD RECTANGULAR TILE
CARREAU RECTANGULAIRE
STANDARD

12" x 24"
305 mm x 610 mm
(12 po x 24 po)



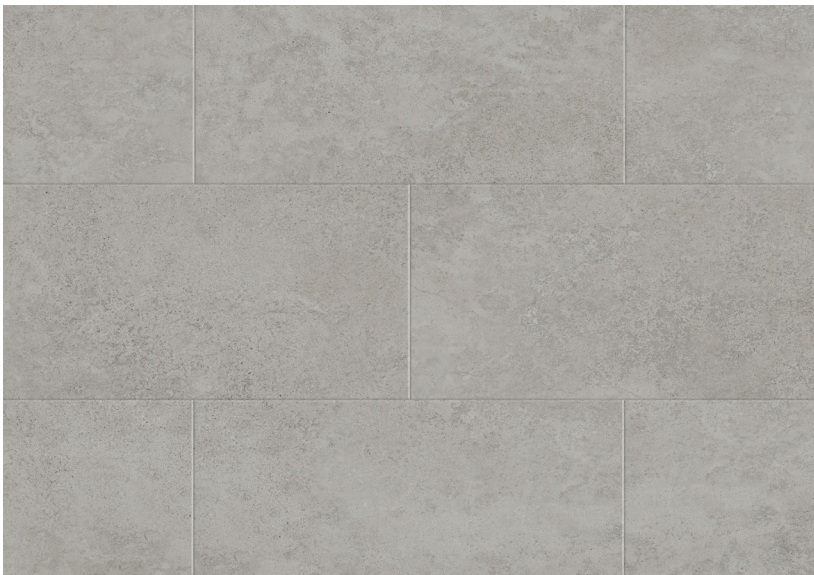
12401 — STARDUST | POUSSIÈRE D'ÉTOILES

LARGE FORMAT
RECTANGULAR TILE
CARREAU RECTANGULAIRE
GRAND FORMAT

16" x 32"
406 mm x 812 mm
(16 po x 32 po)



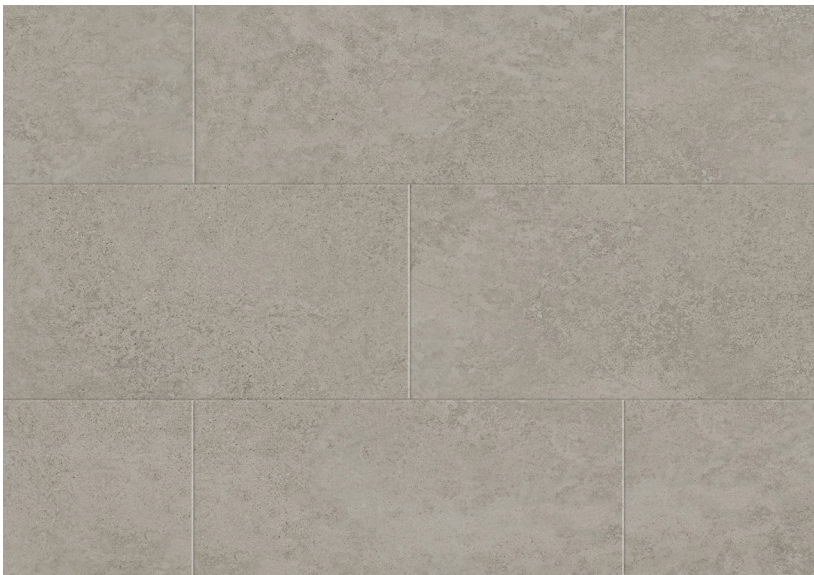
16601 — CLOUD LIKE | NUAGE COMME



12402 — FORECAST RAIN | PRÉVISIONS DE PLUIE



16602 — FOGGY WISP | FEUILLARD BRUME



12403 — ROCKS & MINERALS | ROCHES ET MINÉRAUX



16603 — MISTY BEIGE | BEIGE BRUMEUX

STANDARD WOOD PLANK
PLANCHE DE BOIS STANDARD

7" x 48"
180 mm x 1210 mm (7 po x 48 po)



07001 — SERENE STYLE | STYLE SEREIN



07002 — WARM FEELINGS | SENTIMENTS CHAUDS



07003 — PREDICTABLE BROWN | MARRON PRÉVISIBLE



07004 — SOUL WARMING | RÉCHAUFFEMENT DE L'ÂME



07005 — INFINITE BEAUTY | BEAUTÉ INFINIE



07006 — QUIET WINTER | HIVER CALME



07007 — BEACHY FLAVOR | SAVEUR DE PLAGE



07008 — REIMAGINED TAUPE | TAUPE RÉIMAGINÉ



07009 — OLD TREASURE | ANCIEN TRÉSOR

LARGE FORMAT WOOD PLANK
PLANCHE DE BOIS GRAND FORMAT

9" x 60"
220 mm x 1510 mm (9 po x 60 po)



09201 — HONEY RIDGE | CRÊTE MIEL



09202 — GARDEN PARTY | GARDEN-PARTY



09203 — WOODED TRAIL | SENTIER BOISÉ



09204 — MISTY MAGICAL | BRUMEUX MAGIQUE



09205 — PASTORAL BROWN | BRUN PASTORAL



09206 — EFFORTLESS GRAY | GRIS SANS EFFORT



09207 — DRIFTLAND | TERRE À LA DÉRIVE



09208 — NATURE CONCEPT | CONCEPT NATURE



09209 — BUCOLIC FOREST | FORET BUCOLIQUE

PRODUCT SPECIFICATIONS

		STANDARD WOOD PLANK	LARGE FORMAT WOOD PLANK	STANDARD RECTANGULAR TILE	LARGE FORMAT RECTANGULAR TILE
SIZE	Rewilding (Dry Back)	7" x 48"	9" x 60"	12" x 24"	16" x 32"
	Individuality (Loose Lay)				
	Visionary (Rigid Core)	7.08" x 47.64"	8.66" x 59.45"		
THICKNESS	Rewilding (Dry Back)	2.5 mm			
	Individuality (Loose Lay)	5.0 mm			
	Visionary (Rigid Core)	5.2 mm (4.2 mm structure + 1.0 mm HDPE attached pad)			
SQ FT / CARTON	Rewilding (Dry Back)	37.33	37.50	36.00	35.56
	Individuality (Loose Lay)	18.67	15.00	16.00	14.22
	Visionary (Rigid Core)	23.42	21.45	20.00	21.33
PCS / CARTON	Rewilding (Dry Back)	16	10	18	10
	Individuality (Loose Lay)	8	4	8	4
	Visionary (Rigid Core)	10	6	10	6
WEAR LAYER		20 mil			
FINISH		HartGuard™ ultrashield with Cleantivity™ antimicrobial technology			
INSTALLATION	Rewilding (Dry Back)	Glue-Down			
	Individuality (Loose Lay)	Loose Lay or Glue-Down			
	Visionary (Rigid Core)	Locking / Floating			
LIMITED WARRANTY		15-Year Limited Commercial			

PRODUCT SKU MATRIX

	DESIGN NAME	REWILDING (DRY BACK)	INDIVIDUALITY (LOOSE LAY)	VISIONARY (RIGID CORE)
STANDARD WOOD PLANK	SERENE STYLE	1LV07001	1LL07001	1SP07001
	WARM FEELINGS	1LV07002	1LL07002	1SP07002
	PREDICTABLE BROWN	1LV07003	1LL07003	1SP07003
	SOUL WARMING	1LV07004	1LL07004	1SP07004
	INFINITE BEAUTY	1LV07005	1LL07005	1SP07005
	QUIET WINTER	1LV07006	1LL07006	1SP07006
	BEACHY FLAVOR	1LV07007	1LL07007	1SP07007
	REIMAGINED TAUPE	1LV07008	1LL07008	1SP07008
	OLD TREASURE	1LV07009	1LL07009	1SP07009
STANDARD RECTANGULAR TILE	STARDUST	1LV12401	1LL12401	1SP12401
	FORECAST RAIN	1LV12402	1LL12402	1SP12402
	ROCKS & MINERALS	1LV12403	1LL12403	1SP12403

	DESIGN NAME	REWILDING (DRY BACK)	INDIVIDUALITY (LOOSE LAY)	VISIONARY (RIGID CORE)
LARGE WOOD PLANK	HONEY RIDGE	1LV09201	1LL09201	1SP09201
	GARDEN PARTY	1LV09202	1LL09202	1SP09202
	WOODED TRAIL	1LV09203	1LL09203	1SP09203
	MISTY MAGICAL	1LV09204	1LL09204	1SP09204
	PASTORAL BROWN	1LV09205	1LL09205	1SP09205
	EFFORTLESS GRAY	1LV09206	1LL09206	1SP09206
	DRIFTLAND	1LV09207	1LL09207	1SP09207
	NATURE CONCEPT	1LV09208	1LL09208	1SP09208
	BUCOLIC FOREST	1LV09209	1LL09209	1SP09209
LARGE RECTANGULAR TILE	CLOUD LIKE	1LV16601	1LL16601	1SP16601
	FOGGY WISP	1LV16602	1LL16602	1SP16602
	MISTY BEIGE	1LV16603	1LL16603	1SP16603

TEST DATA

FIRE CLASS

ASTM E 648 Flooring Radiant Panel Critical Radiant Flux – 0.45 watts/cm² or more Class I

ASTM E 662 Smoke Chamber Specific Optical Smoke Density – 450 or less

CARACTÉRISTIQUES DU PRODUIT

		PLANCHE DE BOIS STANDARD	PLANCHE DE BOIS GRAND FORMAT	CARREAU RECTANGULAIRE	CARREAU RECTANGULAIRE GRAND FORMAT
DIMENSIONS	Rewilding (endos sec)	180 mm x 1210 mm (7 po x 48 pc)	220 mm x 1510 mm (9 po x 60 po)	305 mm x 160 mm (12 po x 24 po)	406 mm x 812 mm (16 po x 32 po)
	Individuality (pose libre)				
	Visionary (âme rigide)	180 mm x 1210 mm (7,08 po x 47,64 po)	220 mm x 1510 mm (8,66 po x 59,45 po)		
ÉPAISSEUR	Rewilding (endos sec)	2,5 mm			
	Individuality (pose libre)	5,0 mm			
	Visionary (âme rigide)	5,2 mm (4,2 mm structure + 1,0 mm HDPE sous-couche attachée)			
pi ² / CARTON	Rewilding (endos sec)	37,33	37,50	36,00	35,56
	Individuality (pose libre)	18,67	15,00	16,00	14,22
	Visionary (âme rigide)	23,42	21,45	20,00	21,33
UNITÉS / CARTON	Rewilding (endos sec)	16	10	18	10
	Individuality (pose libre)	8	4	8	4
	Visionary (âme rigide)	10	6	10	6
COUCHE D'USURE		20 mil			
FINITION		HartGuard ^{MC} ultrashield avec technologie antimicrobienne Cleantivity ^{MC}			
INSTALLATION	Rewilding (endos sec)	À Coller			
	Individuality (pose libre)	Pose libre là coller			
	Visionary (âme rigide)	Verrouillage / Flottante			
GARANTIE LIMITÉE		15 ans pour un usage commercial limité			

N° DE PRODUIT

	NOM DU MOTIF	REWILDING (ENDOS SEC)	INDIVIDUALITY (POSE LIBRE)	VISIONARY (ÂME RIGIDE)		NOM DU MOTIF	REWILDING (ENDOS SEC)	INDIVIDUALITY (POSE LIBRE)	VISIONARY (ÂME RIGIDE)
PLANCHE DE BOIS STANDARD	Style Serein	1LV07001	1LL07001	1SP07001	PLANCHE DE BOIS GRAND FORMAT	Crête Miel	1LV09201	1LL09201	1SP09201
	Sentiments Chauds	1LV07002	1LL07002	1SP07002		Garden-Party	1LV09202	1LL09202	1SP09202
	Marron Prévisible	1LV07003	1LL07003	1SP07003		Sentier Boisé	1LV09203	1LL09203	1SP09203
	Réchauffement de l'âme	1LV07004	1LL07004	1SP07004		Brumeux Magique	1LV09204	1LL09204	1SP09204
	Beauté Infinie	1LV07005	1LL07005	1SP07005		Brun Pastoral	1LV09205	1LL09205	1SP09205
	Hiver Calme	1LV07006	1LL07006	1SP07006		Gris Sans Effort	1LV09206	1LL09206	1SP09206
	Saveur de Plage	1LV07007	1LL07007	1SP07007		Terre à la dérive	1LV09207	1LL09207	1SP09207
	Taupe Réimaginé	1LV07008	1LL07008	1SP07008		Concept Nature	1LV09208	1LL09208	1SP09208
	Ancien Trésor	1LV07009	1LL07009	1SP07009		Foret Bucolique	1LV09209	1LL09209	1SP09209
	CARREAU RECTANGULAIRE	Poussière D'étoiles	1LV12401	1LL12401		1SP12401	CARREAU RECTANGULAIRE GRAND FORMAT	Nuage Comme	1LV16601
Prévisions de pluie		1LV12402	1LL12402	1SP12402	Feuillard Brume	1LV16602		1LL16602	1SP16602
Roches et Minéraux		1LV12403	1LL12403	1SP12403	Beige Brumeux	1LV16603		1LL16603	1SP16603

DONNÉES DE TEST

CLASSE FEU

ASTM E 648 essai au panneau radiant du flux énergétique du revêtement de sol – 0,45 watts/cm² ou plus, classe I

ASTM E 662 essai de mesure de la densité optique de fumée – 450 ou moins



WANT TO SEE OUR FLOORING IN A VARIETY OF DIFFERENT COMMERCIAL ENVIRONMENTS?

Scan the QR code to visit AHFContract.com and use our Professional Spaces Visualizer.

VOUS VOULEZ VOIR NOS REVÊTEMENTS DE SOL DANS UNE VARIÉTÉ D'ENVIRONNEMENTS COMMERCIAUX DIFFÉRENTS ?

Balayer le code QR pour visiter AHFContract.com et utilisez notre visualiseur d'espaces professionnels.

AHFContract.com | Customer Relations 1.866.243.2726

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Product shown on sample does not represent all of the unique planks of the design. Actual product shade may vary slightly from sample.

NOTE: Due to printing limitations, colors pictured cannot be guaranteed to match actual flooring material.

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Le produit montré sur l'échantillon ne représente pas toutes les planches uniques du motif. Le ton du produit peut être légèrement différent de celui de l'échantillon.

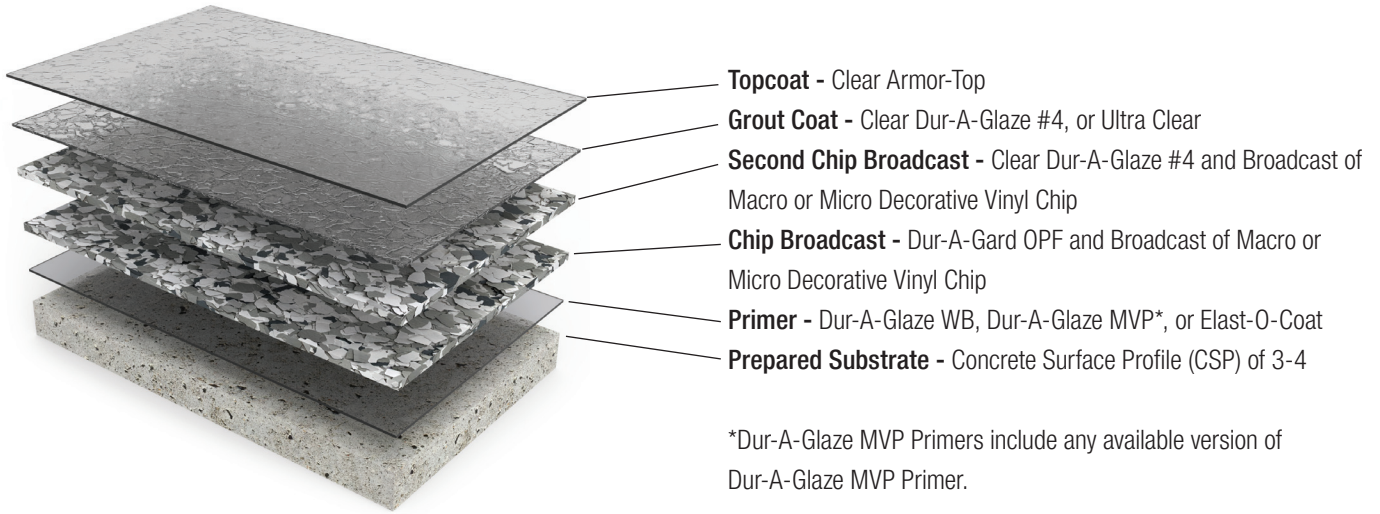
REMARQUE : En raison des limites de l'impression, il n'est pas garanti que les couleurs illustrées soient exactement celles des matériaux de revêtements de sol.

Declare.



Reorder #: CBNATURE
7440CBNNATURE-424

DUR-A-CHIP™



SYSTEM OVERVIEW

DUR-A-CHIP is a seamless, decorative flooring system consisting of 100% solids epoxy body coats with decorative Macro or Micro vinyl chip broadcasts, finished with a durable urethane topcoat ensuring excellent wear and chemical resistance.

FEATURES & BENEFITS

• Long Lasting

Seamless flooring systems for years of service with minimal maintenance

• Wear / Chemical Resistant

High quality urethane topcoat for superior wear and chemical resistance

• Decorative

Multiple blends of Macro or Micro vinyl chip blends for a unique look

• Non Slip

Textured finishes aid in a safer floor, even when wet

COMMON USE SITES

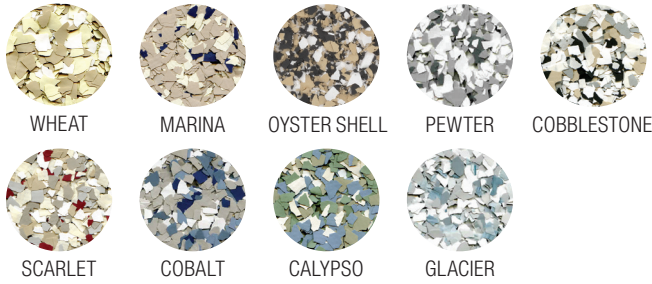
- Hospitals
- Cleanrooms
- Laboratories
- Pharmaceutical
- Lobbies
- Restrooms
- Locker Rooms
- Retail
- Schools
- Supermarkets
- Cafeterias
- Dining Areas
- Veterinary Exam Rooms



COLORS

Available in a wide variety of standard Macro, Micro, Earthstone, RX Designer, or Claystone Designer vinyl chip blends. For a full list of available colors visit DUR-A-FLEX.COM.

MACRO CHIP



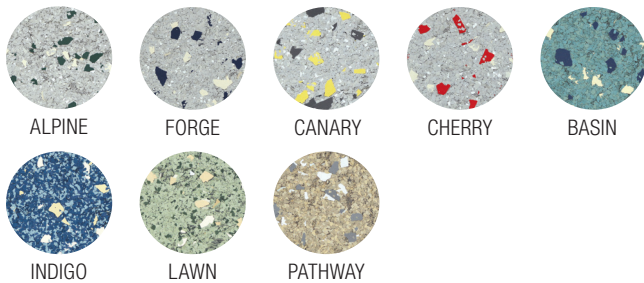
MICRO CHIP



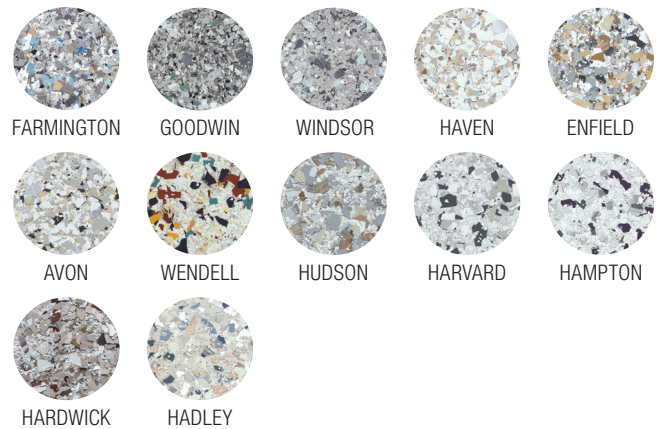
EARTHSTONE



RX DESIGNER BLENDS



CLAYSTONE DESIGNER BLENDS

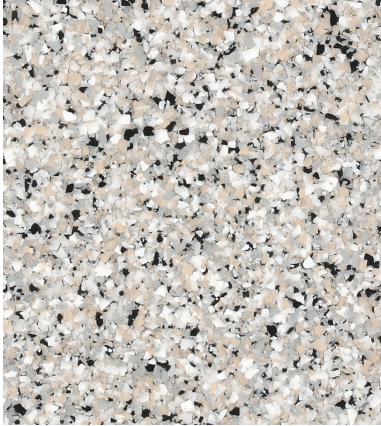


IMPORTANT!

Before using DUR-A-FLEX products, read and understand its accompanying Safety Data Sheet & Application Instructions for important safety information.

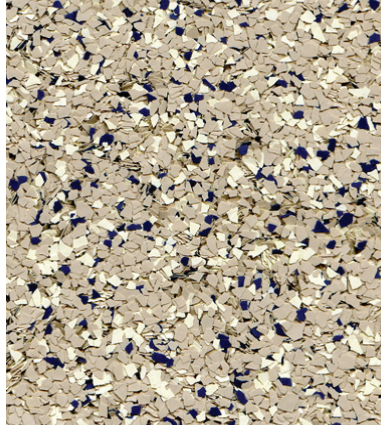
STANDARD TERMS AND CONDITIONS OF SALE, INCLUDING STANDARD WARRANTY APPLY - VISIT DUR-A-FLEX.COM FOR THE LATEST VERSION

230424



SHALE

DUR-A-FLEX

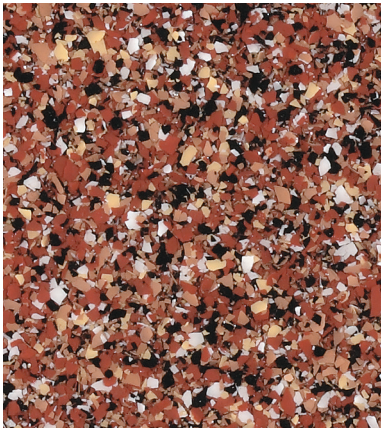


ACADIA



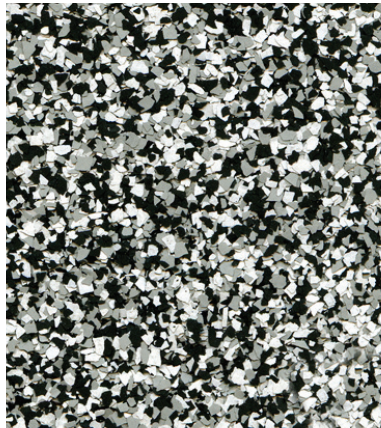
OLIVE STONE

DUR-A-FLEX



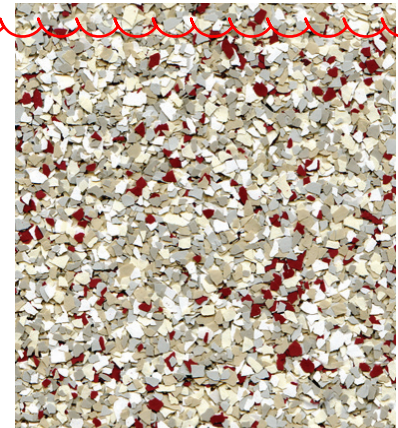
RED ROCK

DUR-A-FLEX



GALAXY

DUR-A-FLEX



TUSCANY



OCEAN

DUR-A-FLEX



SEA GLASS

DUR-A-FLEX



SAHARA

The samples shown are only close approximations and should not be used for specification purposes. Contact Dur-A-Flex to obtain actual samples for best color selection.





Wood Acoustic Wall Panels

Our wood wall panels absorb noise and enhance acoustics in any space. Available in Oak and Walnut finishes, they're ideal for adding sophistication and a classic ambiance to any room.

Wood Options

Oak | Black Felt

Our Oak wall panels offer a classic, natural look with rich grain patterns, perfect for creating a classic ambiance.

Walnut | Black Felt

Our Walnut wall panels deliver a rich, deep color and elegant texture, adding a touch of sophistication to any room.

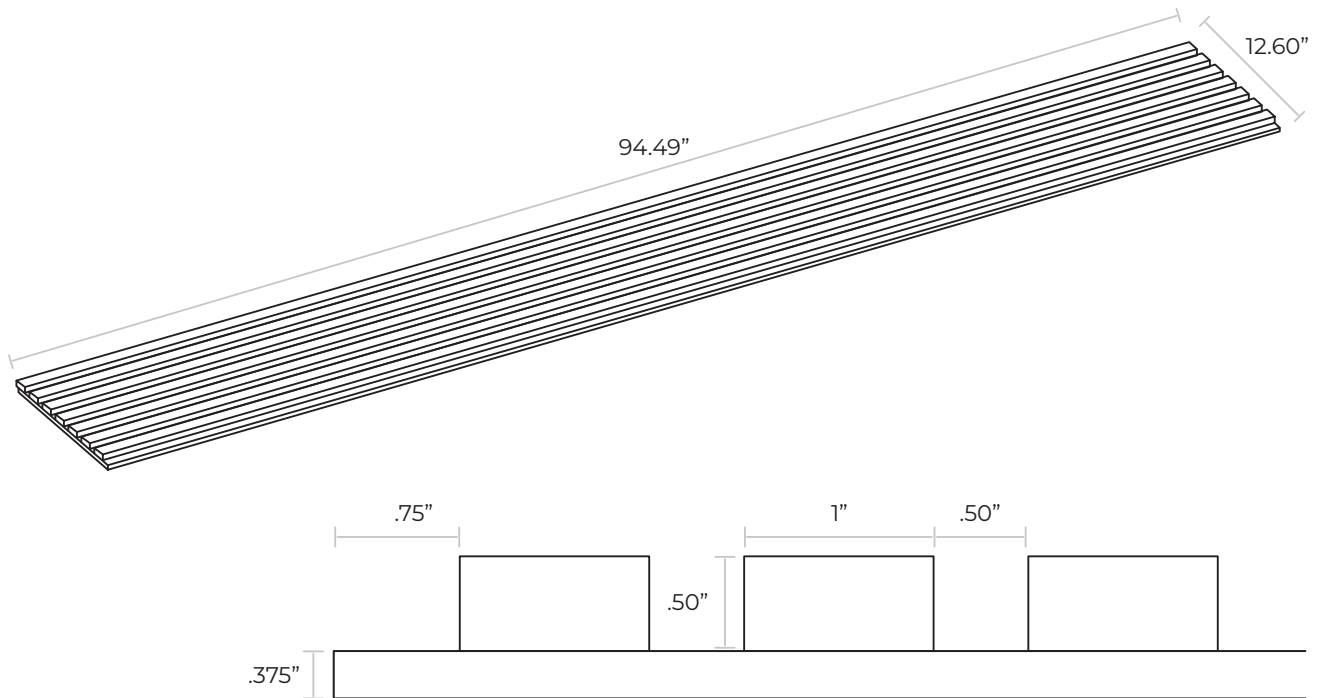


Specs

Our wood wall panels absorb noise and improve acoustics in any space. Available in Oak and Walnut, they add a classic ambiance to any room. Each box includes two panels, measuring 94.49" x 12.60" each, which fit together seamlessly in a horizontal arrangement.

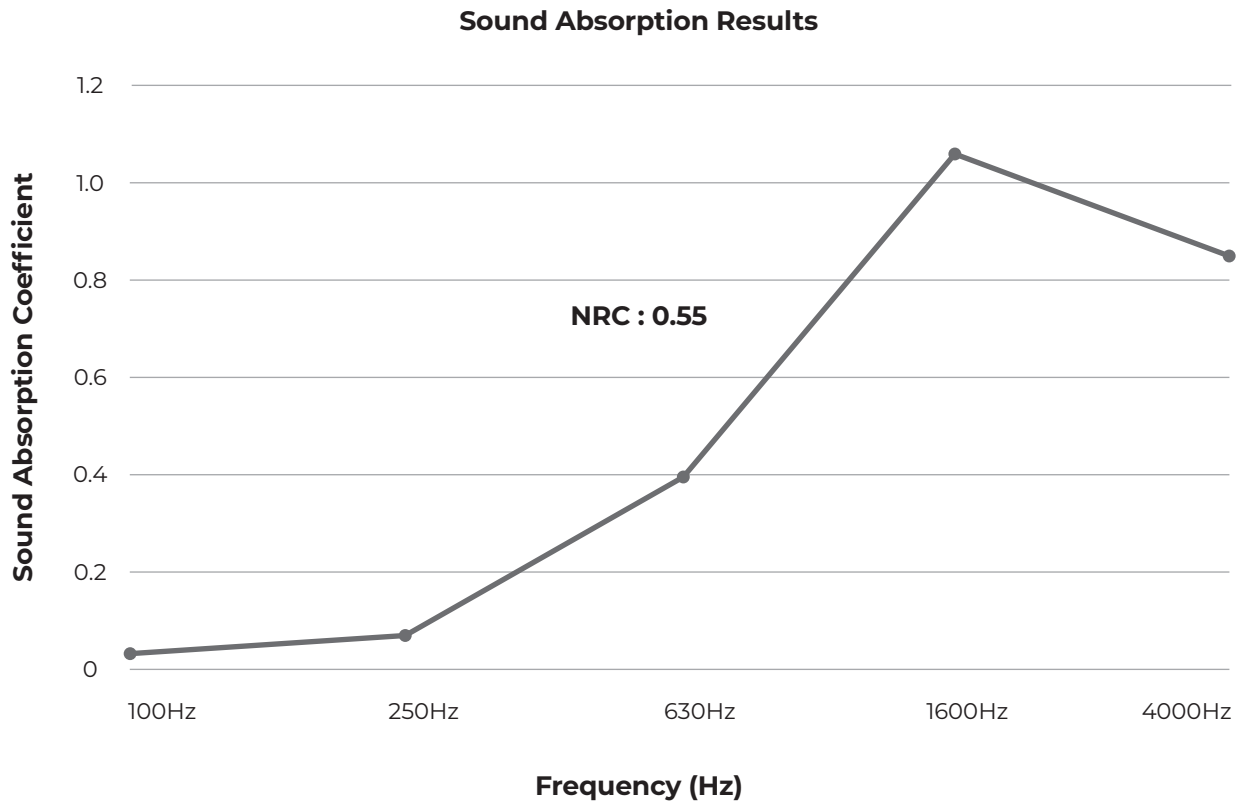
Material:	9mm 100% PET MDF, Wood Veneer
Thickness:	0.875"
Fire Rating:	ASTM E-84, Class A (felt backing only)
NRC:	0.55

Wood Slat Panels	Actual Size	Coverage	Weight
Oak	94.49" x 12.60" x 0.875"	8.267 sqft	11.025 lbs
Walnut	94.49" x 12.60" x 0.875"	8.267 sqft	11.025 lbs



Acoustics

Felt Right's Wood Acoustic Wall Panels have a NRC of 0.55. This means they reduce reflected energy by 55% on average wherever they're placed. Absorption percentage varies for different sound frequencies. Our panels generally absorb frequencies above 300 Hz and perform especially well (60-100% absorption) in the range critical to human speech (between 1.4 KHz and 8 kHz).



Installation

The wood acoustic wall panels are designed for easy installation. For best results, screw the panels directly into the wall using the appropriate fixings through the acoustic felt. When installing on ceilings, secure the panels directly to the ceiling joists. For detailed instructions, please refer to the installation PDF.

Care and Maintenance

For best results, consider applying a protective finish to the tiles. Wood oil is a great option, as it maintains the natural appearance and texture of the wood. After applying, a light dusting or vacuuming will help prevent dust accumulation. If you prefer not to use a finish, just wipe the panels with a dry cloth to keep them clean.



Samples

Explore Our Wood Samples

Our samples are available in all wood options, allowing you to explore and select the perfect option for your project.

Each sample comes unfinished, giving you the flexibility to apply any finish you prefer, from waxes to oils, to achieve your desired color and look.

Oak

Our Oak wall panels provide a classic warm natural look with rich grain patterns.

Walnut

Our Walnut wall panels add rich deep color and elegant texture to any room.

Get Samples

If you're an architect or designer, feel free to reach out to us at support@feltright.com to request your samples or order them at feltright.com/pages/samples.



Sustainability

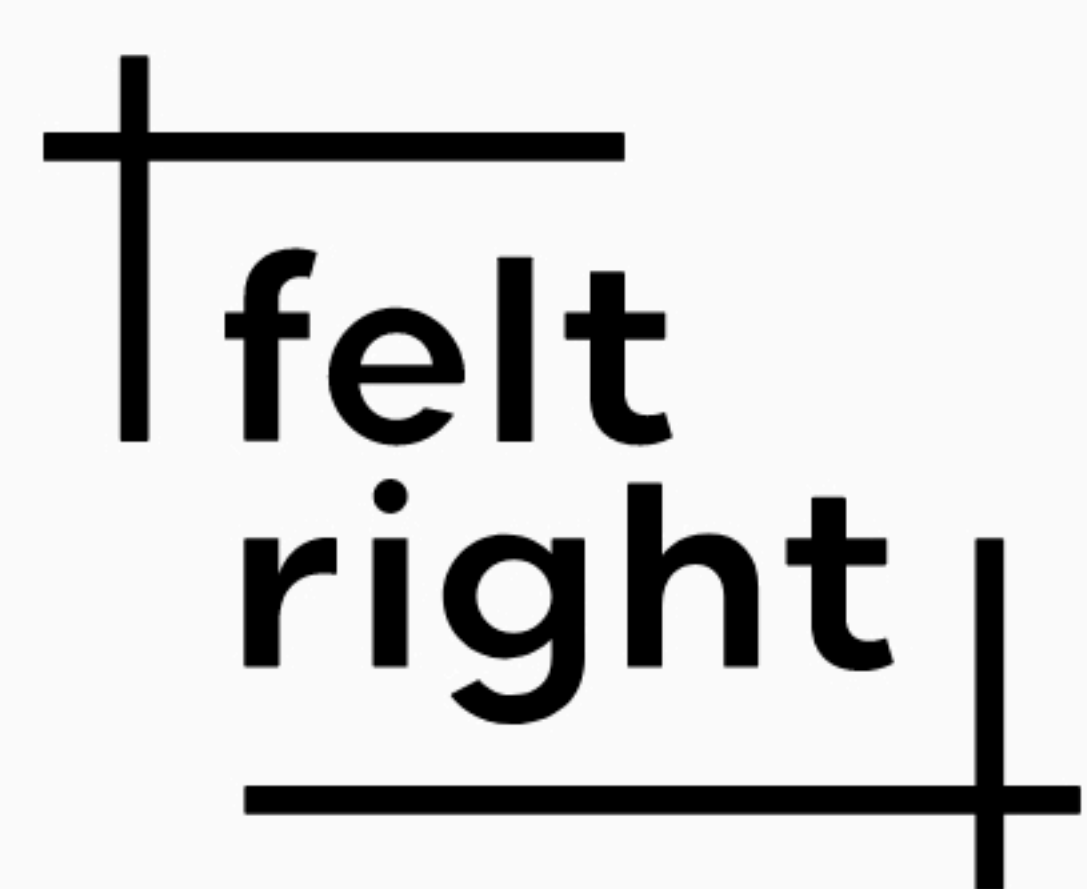
Material

PET plastic is a durable and resilient material, but it is often used for single-use applications like packaging and water bottles, which can end up in landfills or oceans. Felt Right products address this issue by incorporating 50% reclaimed single-use PET plastic, transforming it into durable felt backing for our wood slats tiles.

The Process

PET felt panels are produced through a sustainable process that upcycles post-consumer plastic bottles. This method guarantees a chemical-free composition, adhering to green manufacturing practices and avoiding any red-list chemicals or toxins throughout the production cycle.

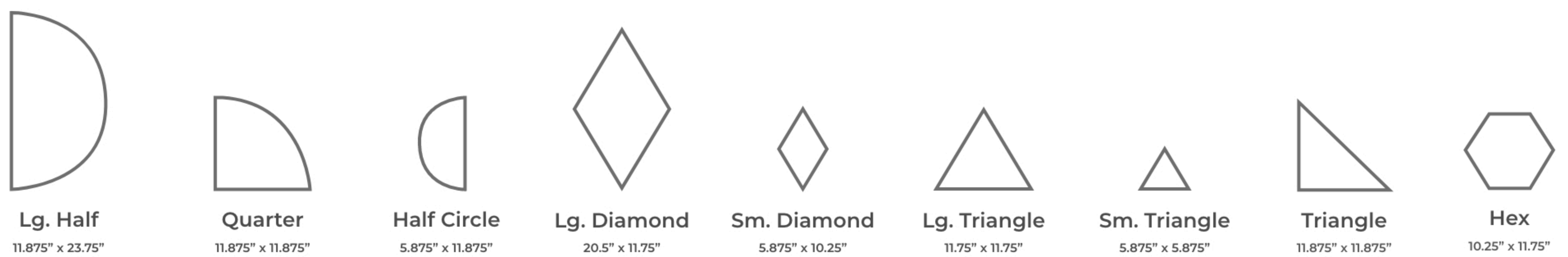
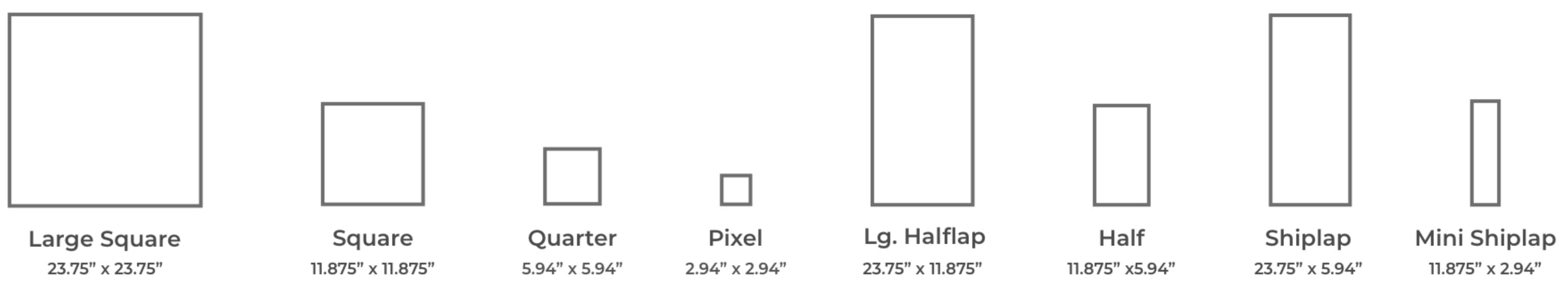




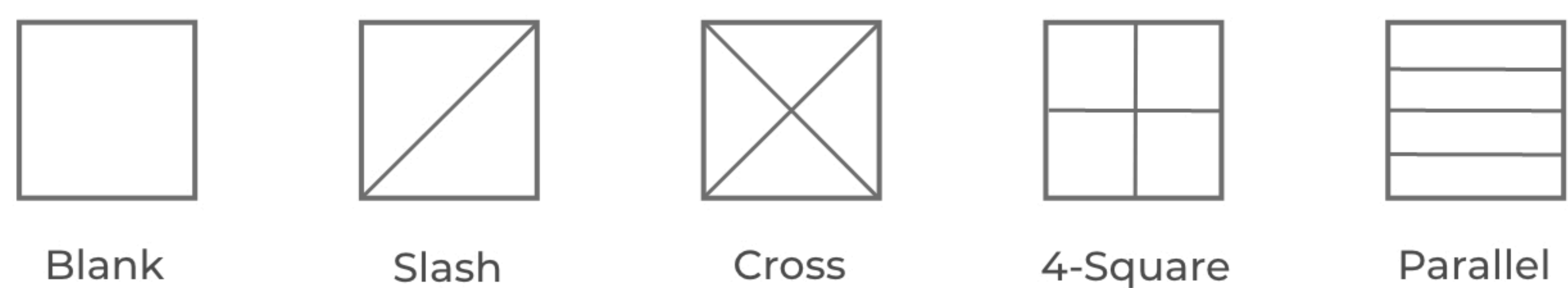
Acoustic Wall Panels

The foundation of the Felt Right system. These amazing little tiles kill unwanted noise, help you organize your life, let you express yourself, and best of all—they're made from recycled ocean plastic! They're also customizable, pinnable, and easy to install.

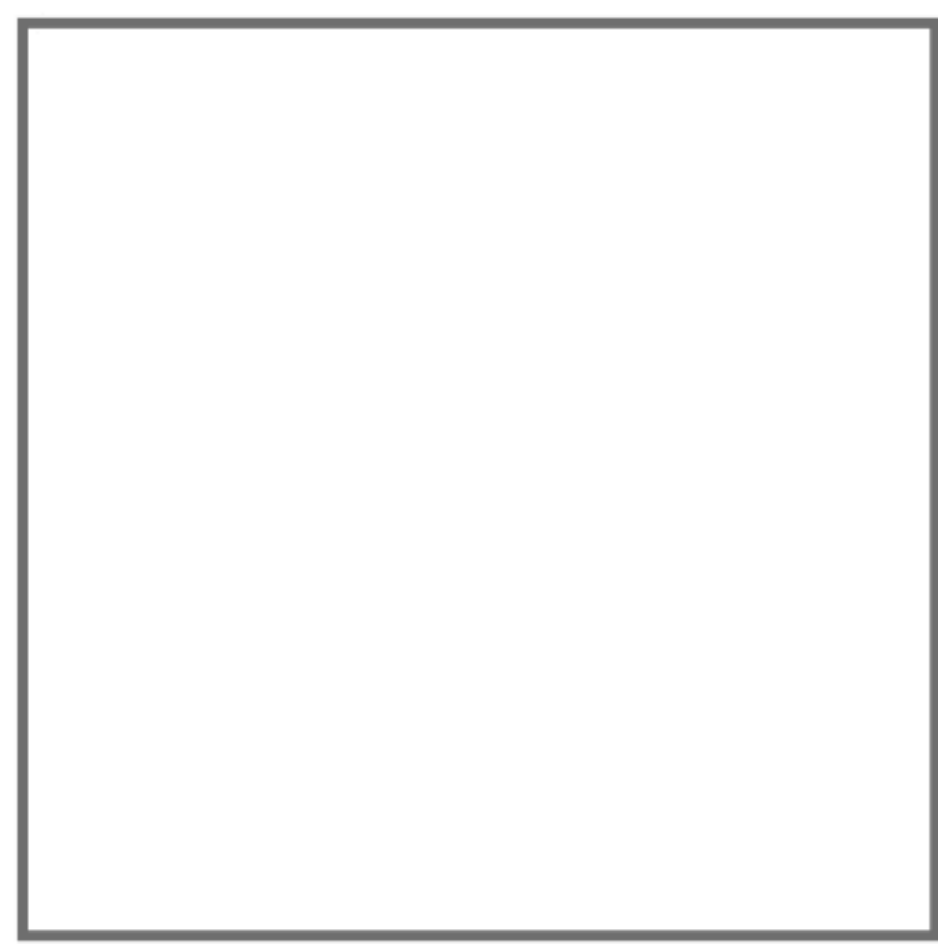
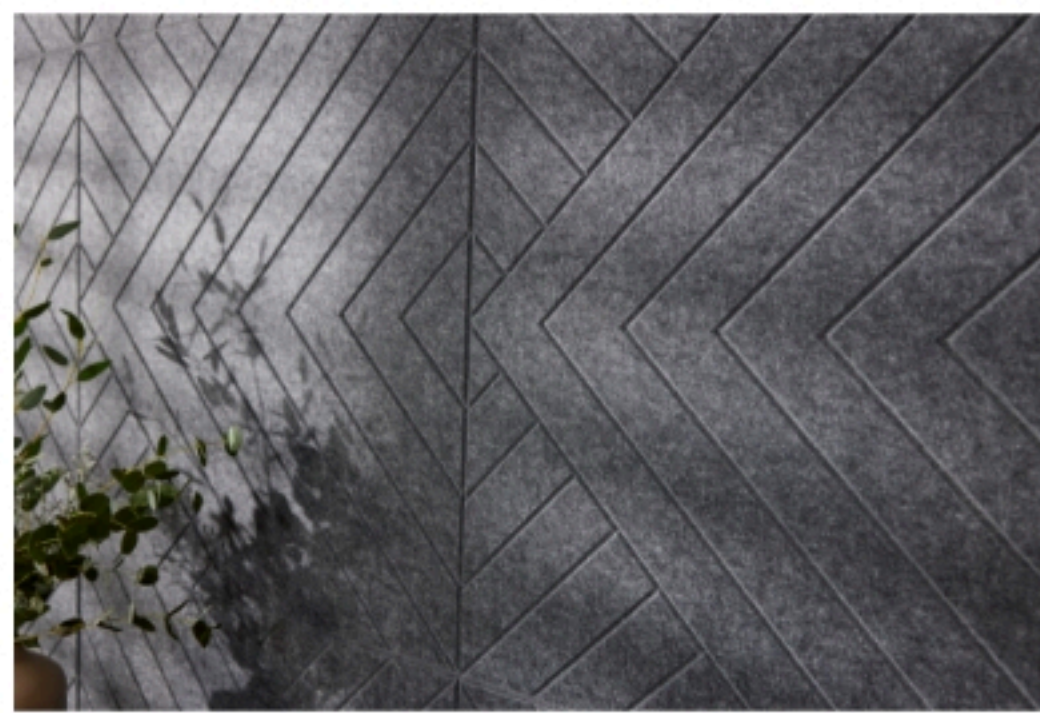
Colors & Shapes



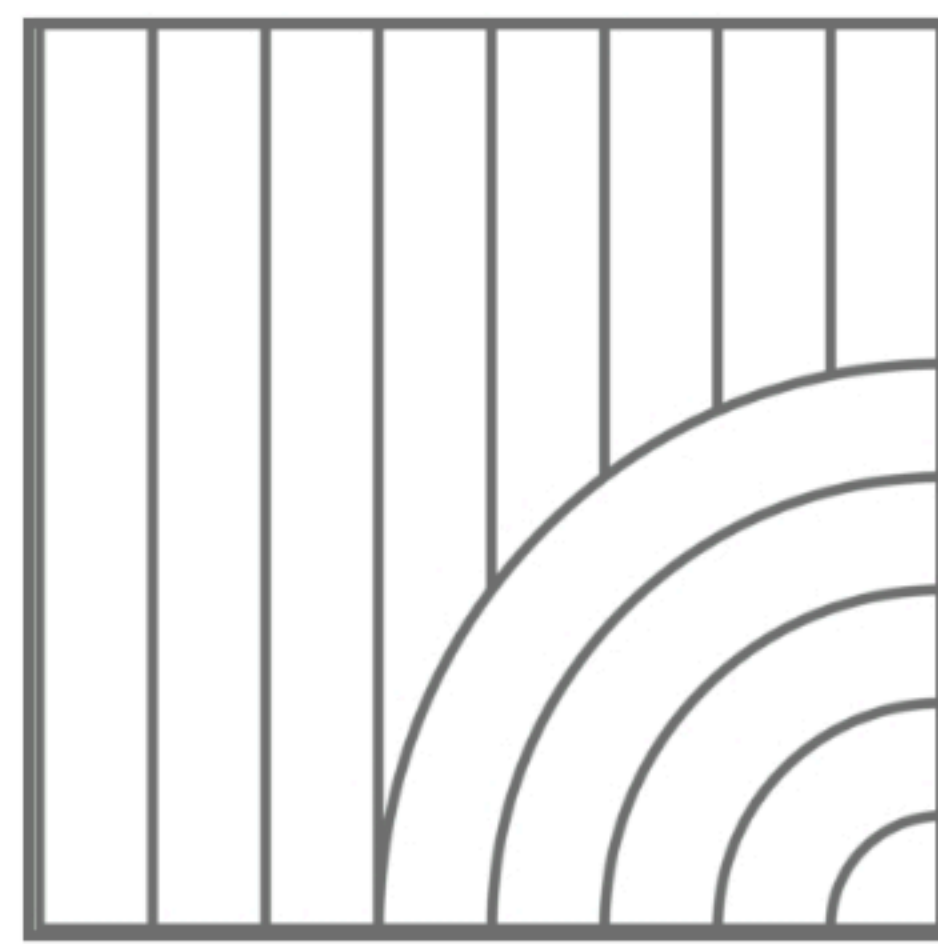
Square Engraving Options:



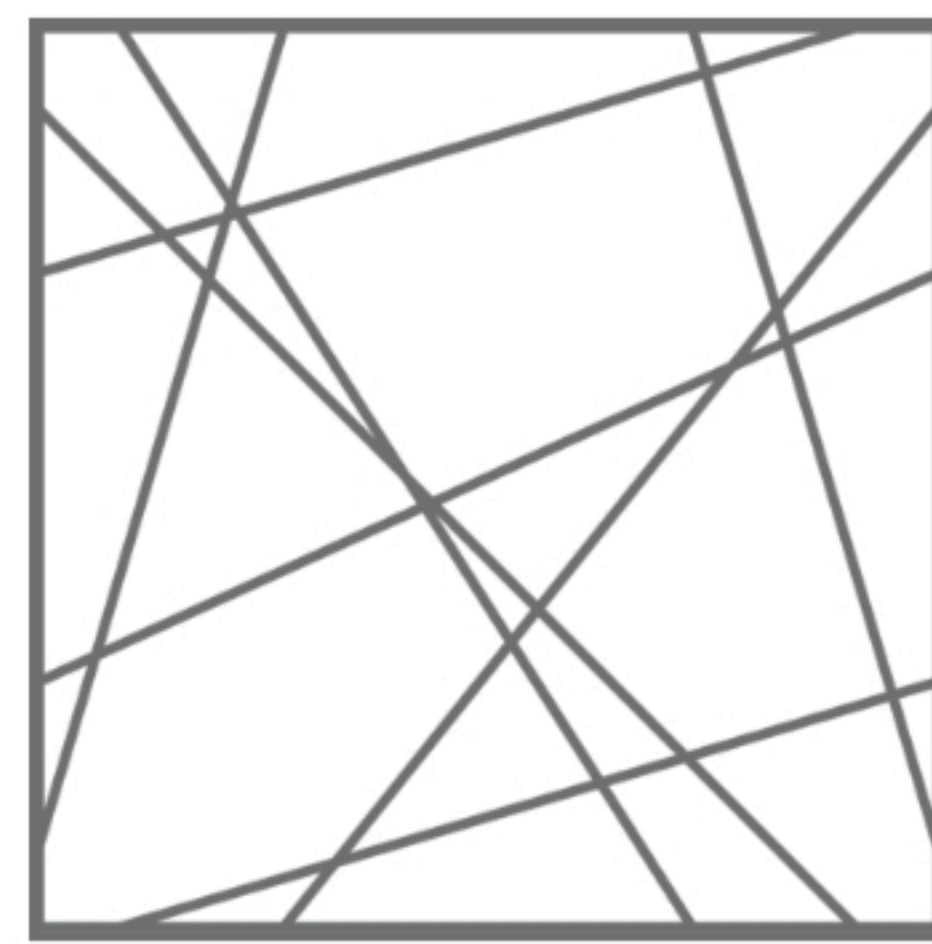
Large 2'x2' Engraved Tiles



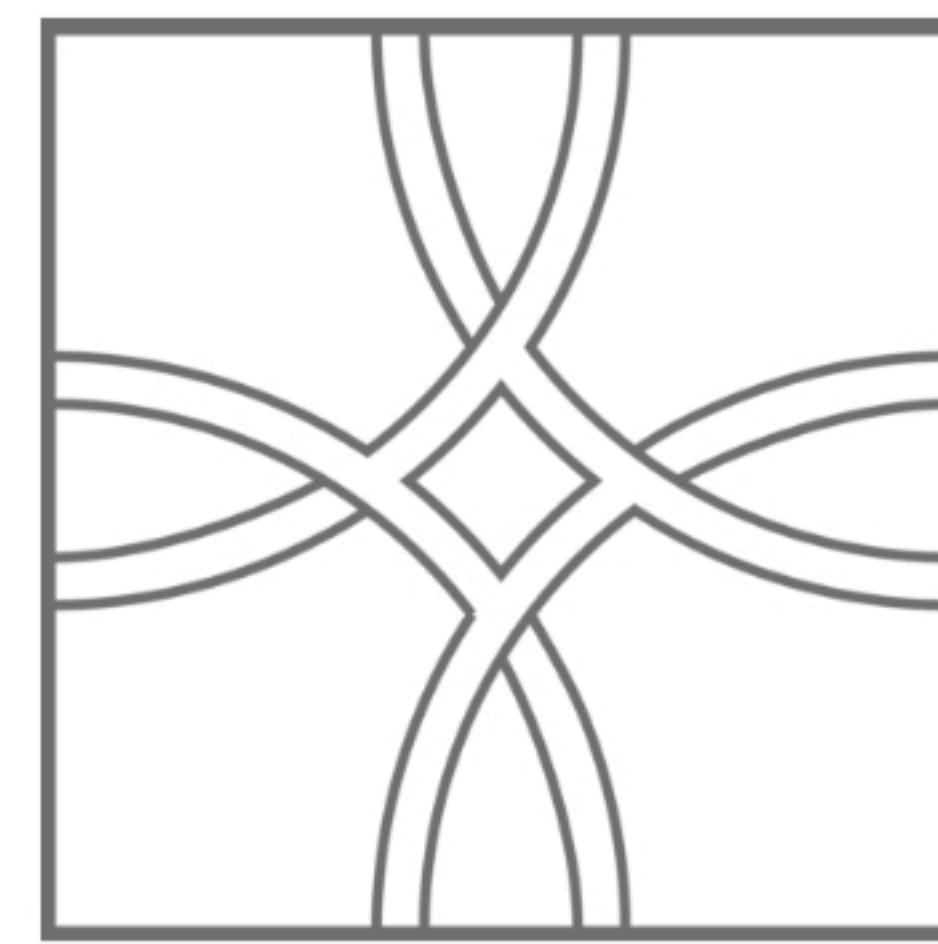
Blank



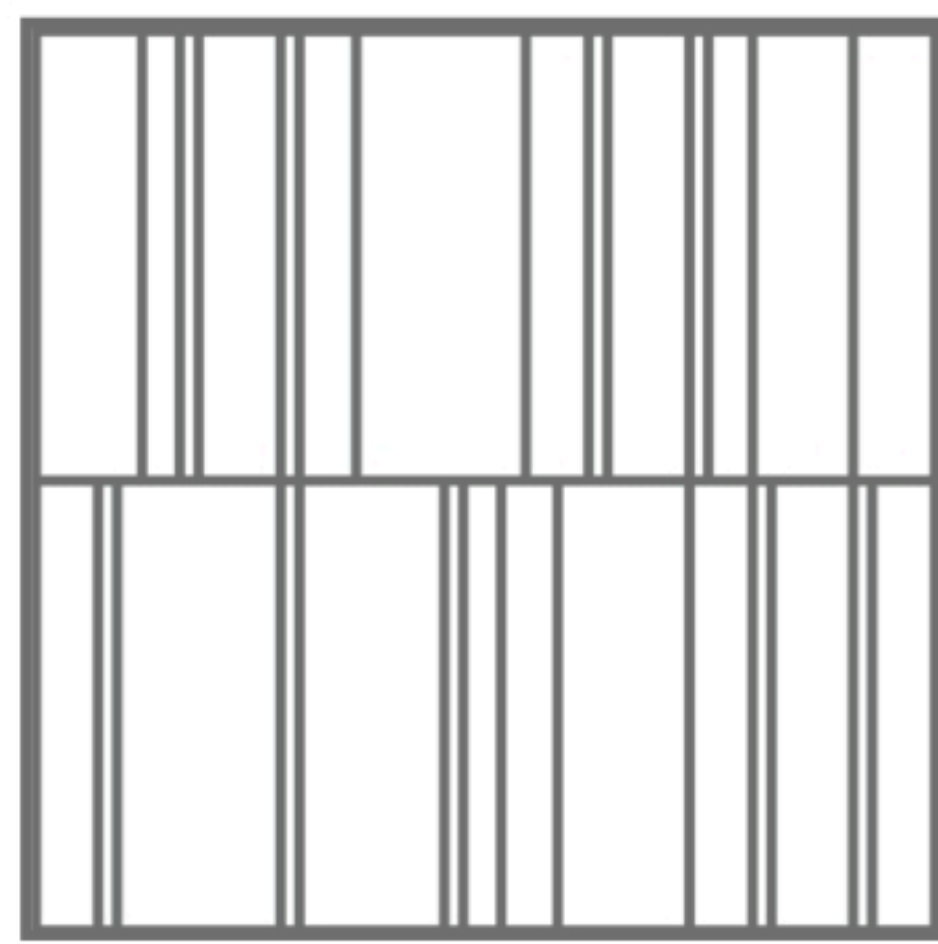
Tangent



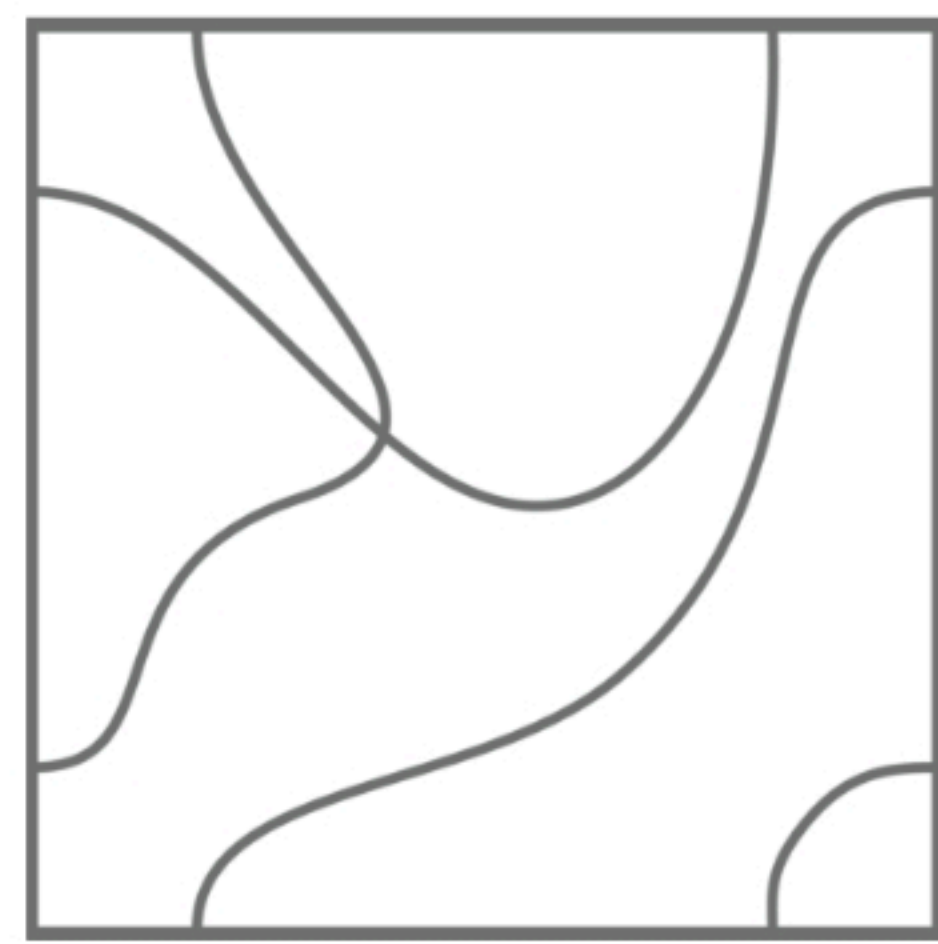
Criss Cross



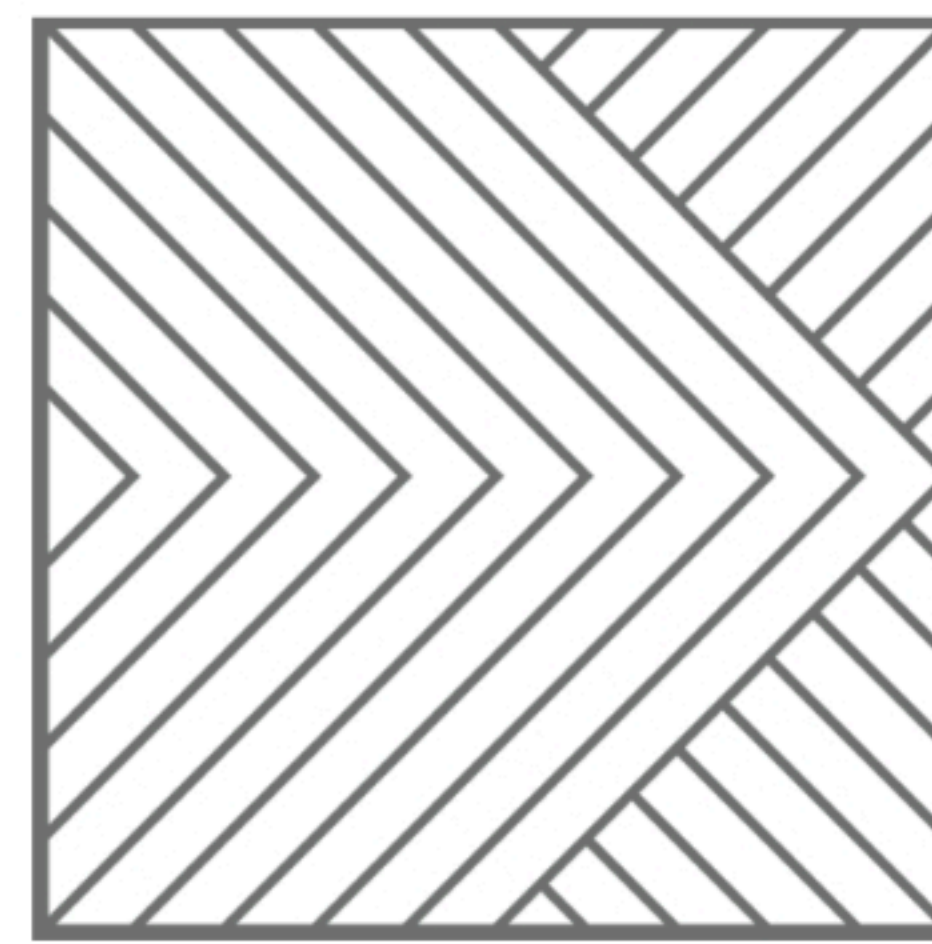
Knot



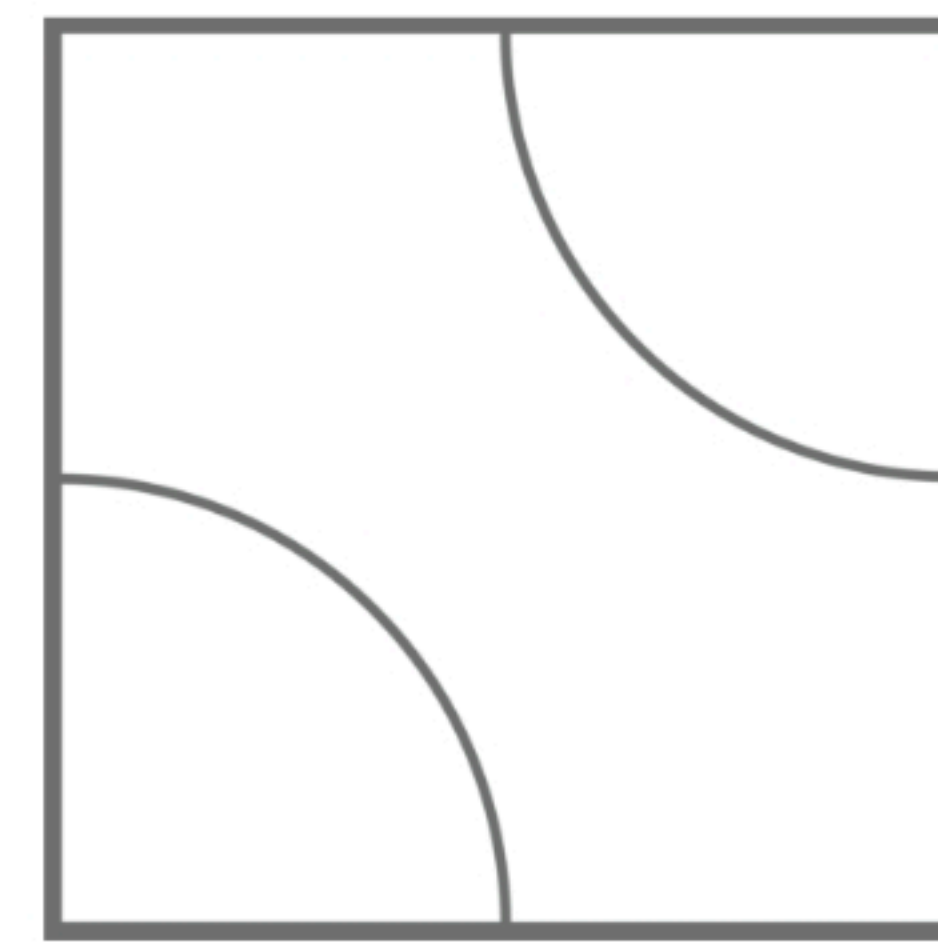
Offset



Topo



Converge



Arc

Specs

Felt Right panels feature a 45-degree beveled edge for a seamless transition between panels. They absorb sound, come in a variety of shape and color options, and are made from 50% recycled material. The 1'x1' square panels are also available in 4 engraved patterns. The specifications on this page refer to individual tiles.

Material:	100% PET (50% post-consumer recycled)
Thickness:	9mm (18mm available upon request)
Fire Rating:	ASTM E84 Class A
NRC:	0.35

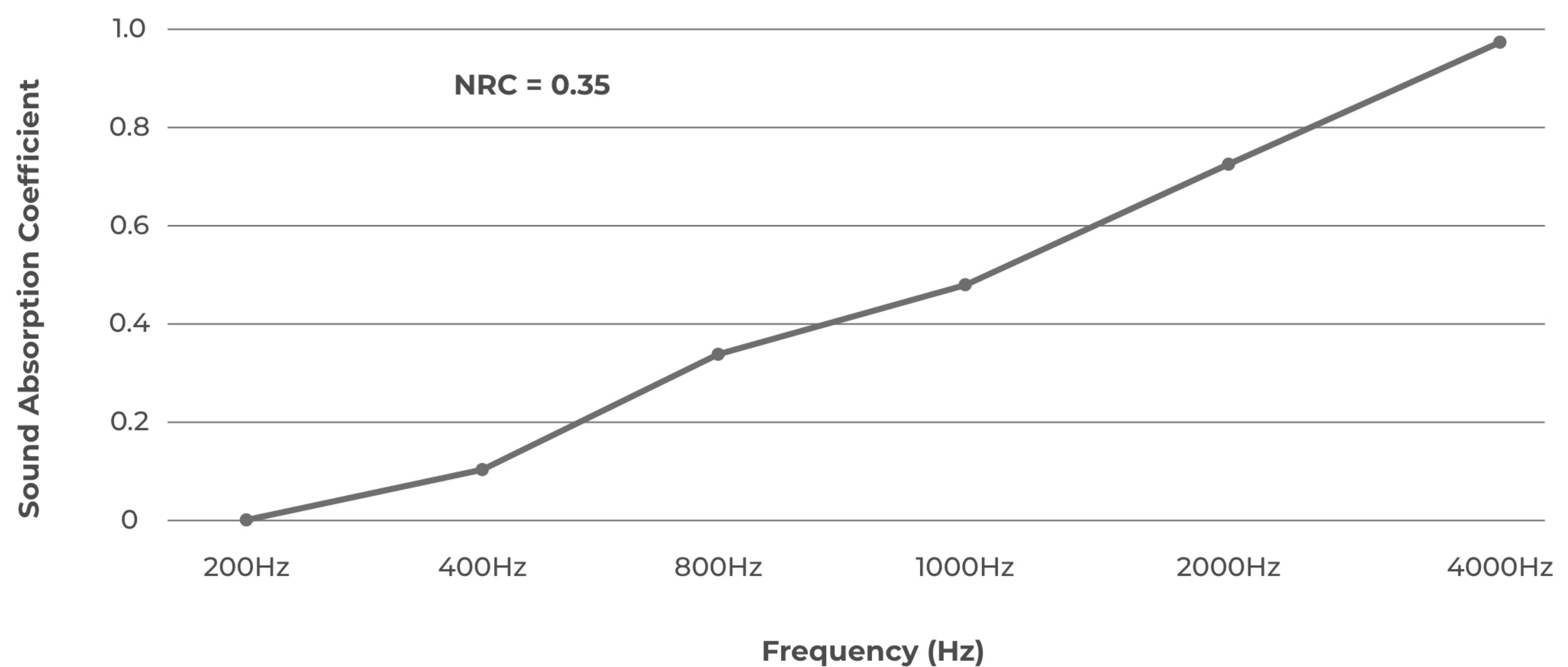
Panel Shape	Actual Size	Nominal Size	Weight
Large Square	23.75" x 23.75"	24" x 24"	800 g
Square	11.875" x 11.875"	12" x 12"	200 g
Quarter	5.94" x 5.94"	6" x 6"	50 g
Pixel	2.94" x 2.94"	3" x 3"	12.5 g
Large Halflap	23.75" x 11.875"	24" x 12"	400 g
Half	11.875" x 5.94"	12" x 6"	100 g
Shiplap	23.75" x 5.94"	24" x 6"	200 g
Mini Shiplap	11.875" x 2.94"	12" x 3"	50 g
Large Diamond	20.5" x 11.75"	20.5" x 12"	200 g
Diamond	5.875" x 10.25"	6" x 10"	45 g
Triangle	11.875" x 11.875"	12" x 12"	100 g
Hex	10.25" x 11.75"	10" x 11"	135 g
Large Half Circle	11.875" x 23.75"	12" x 24"	255 g
Quarter Circle	5.9375" x 11.875"	6" x 12"	127.5 g
Half Circle	11.875" x 11.875"	12" x 12"	70 g

Acoustics

Felt Right Panels have a NRC of 0.35. This means they reduce reflected energy by 35% on average wherever they're placed. Absorption percentage varies for different sound frequencies. Our acoustic panels generally absorb frequencies above 300 Hz and perform especially well (60-100% absorption) in the range critical to human speech (between 1.4 KHz and 8 kHz).

Installation method: 1/16" Double-Sided Adhesive Tab on Wall (may need a construction adhesive as well).

Frequency (Hz)	Absorption Coefficient	Total Absorption (Sabins)
100	0.04	2.59
200	0.00	0.05
400	0.10	6.91
800	0.34	24.62
1000	0.44	31.61
2000	0.73	52.69
3000	0.87	60.54
4000	0.96	69.00
5000	1.03	74.29

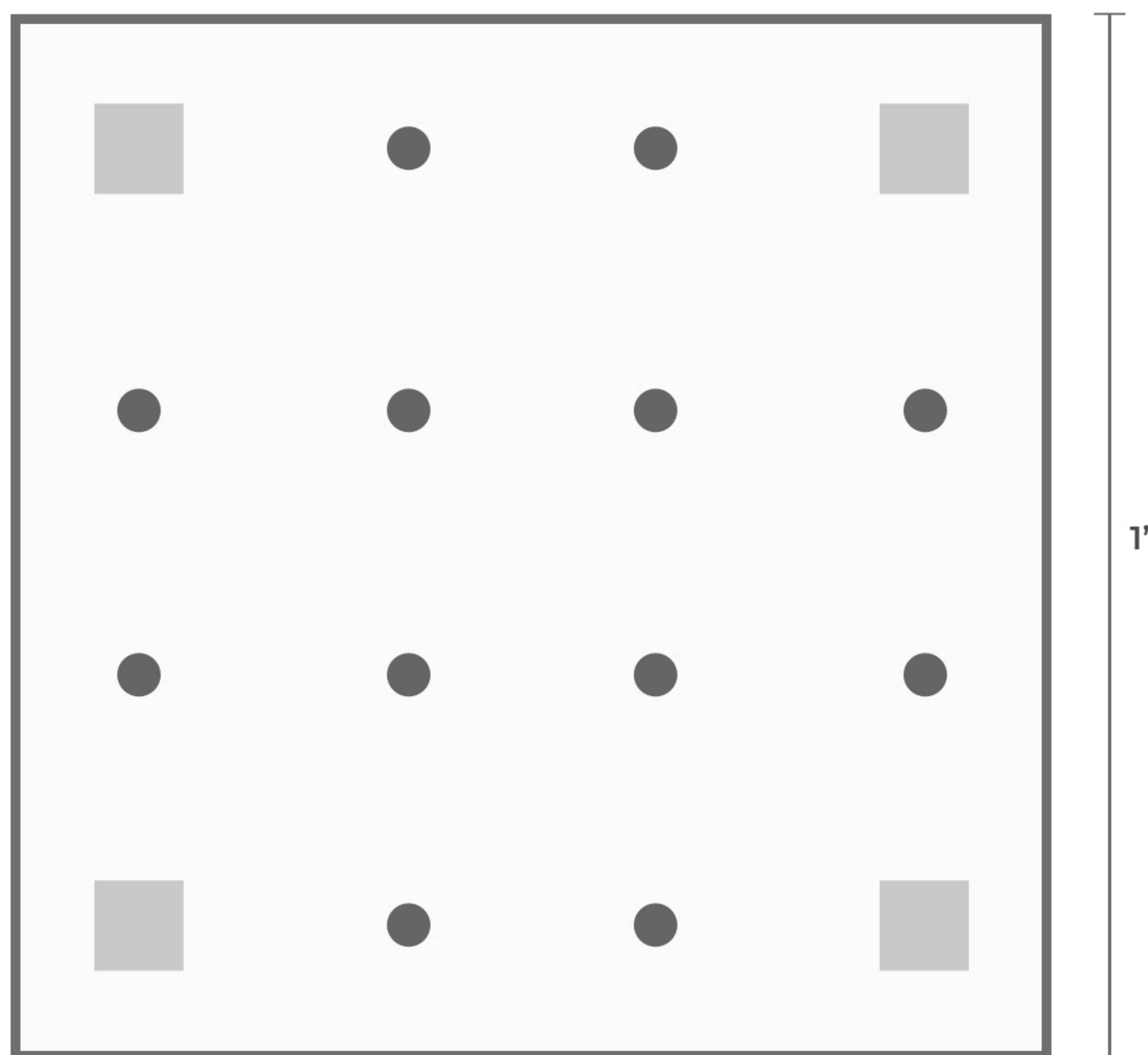


Installation

Felt Right modular acoustic panels are suitable for wall and ceiling installations using Felt Right proprietary paint-safe adhesive tabs, commercial-grade adhesive tabs, or a standard construction adhesive (e.g. Liquid Nails).

Construction Adhesive Installation

Use a construction adhesive (Heavy Duty Liquid Nails, Loctite, or Dynagrip) in addition to the adhesive tabs and/or a hot glue gun. Apply construction adhesive in 1/4" dots along the back of the felt where adhesive tabs are not applied. The adhesive tabs or hot glue will hold up the panels in the short term while the construction adhesive cures.



- Proprietary Adhesive Tab
- 1/4" dot of construction adhesive

Cleaning & Maintenance

Our tiles are made from 100% PET—naturally stain resistant, pet friendly, and easy to clean.

Use a vacuum wand or lint roller to remove loose dirt or dust from the material. For spot cleaning, remove spills and stains as soon as possible. Lightly apply a mild soap and/or household multi-purpose cleaner and blot the stain using a clean, damp rag. Allow the material to air dry.

Felt Right tiles may also be disinfected, if needed. For high-traffic, commercial applications, the material may be disinfected using a diluted solution of household bleach (at least 1000 ppm sodium hypochlorite). Prepare a bleach solution by combining 1/3 C bleach per gallon of water. Apply with a spray bottle. Bleach solutions will remain effective for a time period of up to 24 hours.

Sustainability

Material

PET plastic is a durable, resilient material. Unfortunately, it is often used in single-use applications such as packaging and water bottles, which may end up in landfills or worse yet, oceans where it does not belong.

Felt Right products incorporate 50% reclaimed single-use PET plastic, which is turned into beautiful, durable felt tiles.

The Process

PET felt panels are manufactured through a sustainable process involving the upcycling of post-consumer plastic bottles. This process ensures a chemical-free composition that adheres strictly to green manufacturing practices, devoid of any red-list chemicals or toxins throughout the entire production cycle.



The bottles are sterilized, and formed into fibers without harmful chemicals.



These fibers are then compressed and heated to create the felt material.



Samples

The Full Palette Sample Pack

Forty-two 2"x8" color samples. Each piece features our distinctive chamfered edges and is printed with the color name. Each sample pack also includes enough Felt Right adhesive tabs to create a miniature rainbow design.

Pick Any Six Colors

Choose your own unique palette of any six colors.

Colorway Sample Packs

Choose one of our six premade colorway palettes, which align with moods or styles that fit your personal style best.

Coaster Samples

Samples with a purpose: We strive to avoid waste and make sure everything we send out has a long, useful lifespan. Our new coaster samples are made from our unique felt material and serve a functional purpose in your home.

Architect or designer? Contact us at support@feltright.com



Additional documentation



9mm PET Felt Panels
Felt Right, LLC

Final Assembly: Draper, Utah, USA
Life Expectancy: 30 Year(s)
End of Life Options: Salvageable/Reusable in its Entirety, Recyclable (100%)

Ingredients:

9 mm PET Felt: Polyethylene Terephthalate

Living Building Challenge Criteria: Compliant

I-13 Red List:

<input checked="" type="checkbox"/> LBC Red List Free	% Disclosed: 100% at 100ppm
<input type="checkbox"/> LBC Red List Approved	VOC Content: Not Applicable
<input type="checkbox"/> Declared	

I-10 Interior Performance: Not Applicable
I-14 Responsible Sourcing: Not Applicable

FLT-0001
EXP. 01 MAR 2025
Original Issue Date: 2024

MANUFACTURER RESPONSIBLE FOR LABEL ACCURACY
INTERNATIONAL LIVING FUTURE INSTITUTE™ living-future.org/declare

Questions?

FAQ's - <https://feltright.com/pages/faq>

Contact Us: support@feltright.com



Learn more and order samples:
(801) 742-1458 | support@feltright.com
[Feltright.com](https://www.feltright.com)



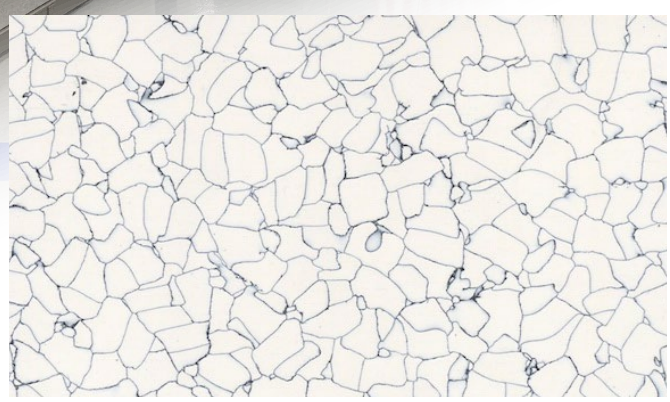
ENSURES GOOD INDOOR AIR QUALITY
CALIFORNIA 01350 CERTIFIED
 as a low-emitting material

AmeriWorx[®] Series
PRECISION MILLED VINYL TILE

100% American Made
 Precision-Milled 

Meets ANSI/ESD S20.20

AMERIWORX CLASSICS



Spring Snow



Adirondack Ridge

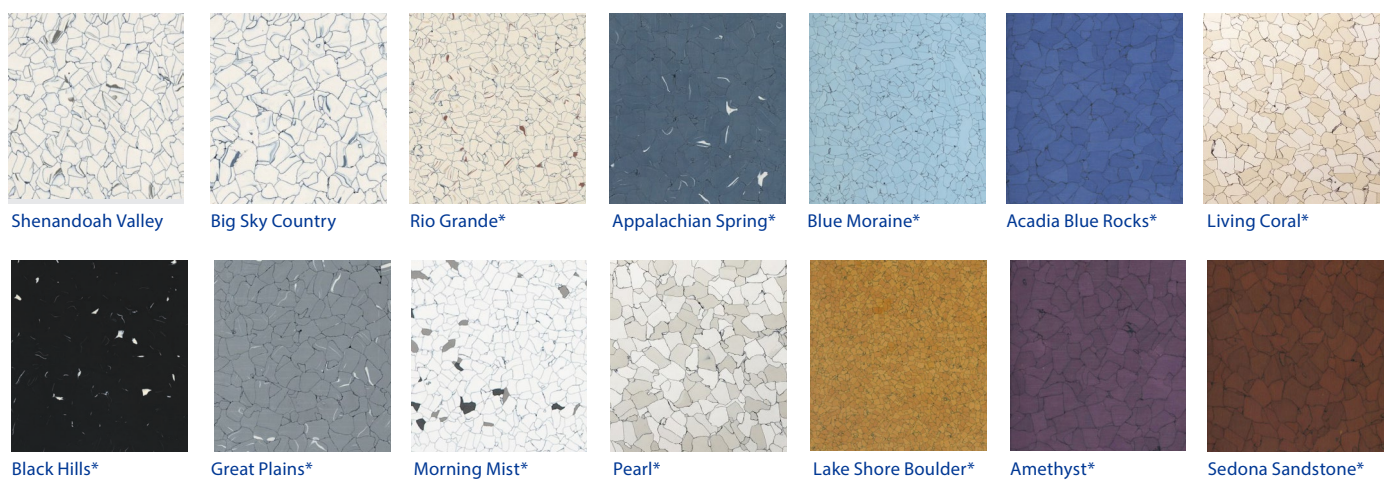
AMERIWORX ROX



Black Rock Canyon



Grey Dolomite



*non-stock, minimums apply
 Conductive and Dissipative materials available.*

Please note: Dissipative vinyl is a special order item.

All AmeriWorx tiles can be installed with StaticWorx Pressure-sensitive Adhesive

**Conductive and
 dissipative materials
 available in all styles.**



*Warranty requires that the tile system is installed using StaticWorx approved materials and procedures

flooring that keeps you grounded



AMERIWORX VINYL TILE

BENEFITS

- **Gap-Free Installation:** Precision milled edges eliminate gaps in installation. High density resin eliminates tile shrinkage.
- **Color runs through entire thickness of the tile** so that deep scratches do not reveal a different color — helps hide scratches.
- **Never requires wax:** High density resin reduces maintenance, resists scuff marks and staining, and overall is easier to keep clean.
- **Ideal for extreme duty manufacturing applications.**
- **Meets requirements for Buy Federal American as well as RoHS directive.**

INDOOR AIR QUALITY INFORMATION

California Department of Health CDPH/EHLB/Standard Method Version 1.1, 2010 (Emission testing method for CA Specification 01350)

- CALGreen, CA Code of Regulations Title 24, Part II, 2016, Sections 4.504.4/5.504.4.6: Resilient Flooring Systems
- ANSI/ASHRAE/USGBC/IES Standard 189.1-2017, Section 8.4.2.3: Floor Covering Materials
- USGBC LEED CI, NC, Schools, 2009, IEQ Credit 4.3: LEM - Flooring Systems
- USGBC LEED for Healthcare, 2009 (Feb 2011), IEQ Credit 4: LEM, Group 3 - Flooring
- Collaborative for High Performance Schools (CHPS) rating system, 2017 Criteria EQ2.2.3: Flooring Systems
- Green Guide for Healthcare, V2.2, 2007, EQ Credit 4.3: LEM - Flooring Systems

SPECIFICATIONS

Composition: Precision milled vinyl tile of high density resin with a conductive carbon matrix. Pre-consumer recycled content > 10%.

Electrical Performance: Lifetime Warranty

Free from defects in workmanship and materials: Lifetime Warranty

Sizes: 12" x 12"
(24" x 24", 36" x 36" available as custom sizes)

Maintenance: No wax

Adhesive and Spread Rate: Covers approx. 180 - 220 sq. ft/gal

Gauge: 3.0 mm

Grounding Material (Supplied with order): One 2"x 24" copper strip installed every 1,000 ft

Trowel Sizes: 1.6 x 1.6 mm (1/16"x 1/16") Square Notch with 1.6 mm (1/16") Flats



ESD Messaging Tiles Available



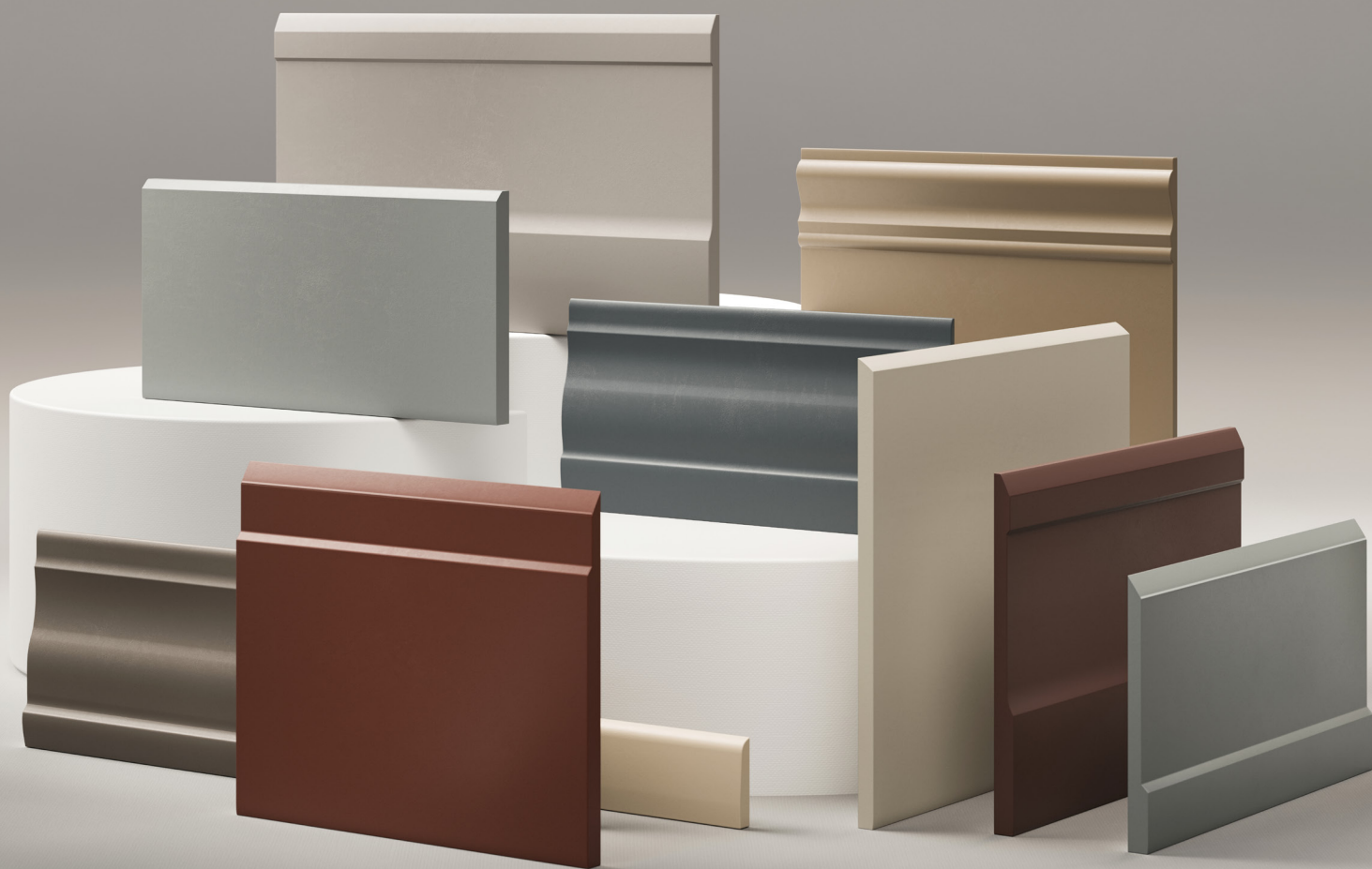
INDUSTRY TESTS

Category	Test Method	Results
Critical Radiant flux CRF (W/cm ²)	ASTM E-648	> 1.0 W/cm ²
Chemical Resistance	ASTM F-925	Excellent (Acids, Alkalis, Household Chemicals)
Electrical Resistance	ASTM F-150	Point to Point & Point to Ground: 50,000 – 1,000,000 ohms Dissipative: 1,000,000 - < 1,000,000,000 ohms
Electrostatic Propensity	AATCC-134	<12 volts
Fire Resistance (Steiner Tunnel)	ASTM E-84	< 75 (Class 1)
Electrically Conductive Floor Coverings	ANSI/UL 779	Meets UL Standard
Floor Materials – Resistive Characterization of Materials	ANSI/ESD.S7.1-2013 Conductive: <1.0 x 10 ⁶ Dissipative: ≥ 1.0 x 10 ⁶ and < 1.0 x 10 ⁹	Surpasses recommended standards of ANSI/ESD S20.20-2014
Floor Materials and Footwear-Resistance Measurement in Combination with a Person	ANSI/ESD STM97.1-2015 < 3.5 X 10 ⁷	Surpasses recommended standards of ANSI/ESD S20.20-2014
Floor Materials and Footwear- Voltage Measurement in Combination with a Person	ANSI/ESD STM97.2-2016 <25 volts with conductive footwear	Surpasses recommended standards of ANSI/ESD S20.20-2014
Life Safety Code	NFPA 101	Passes
Smoke Density	ASTM E-662	≤ 450
Solid Vinyl Floor Covering Materials	ASTM F-1700	Conforms
Standard for Health Care Facilities	NFPA 99	Passes
Static Decay, Method 4046 at 15% RH	ASTM F-101C	5000 – 0 Volts in <0.01 sec.
Static Load	ASTM F-970	< 0.001" RI @ 250 psi (1.125" diameter foot) 0.005" RI @ 2,500 psi (0.5" diameter foot)

Johnsonite

Millwork Wall Base® System

FINISHING BORDERS





System profiles

With the most comprehensive collection of finishing borders in the industry, Johnsonite covers all the details that make a space complete. Choose from a variety of wall base profiles from modern to traditional, along with chair rail, corner guard, quarter rounds, and shoe moulding.

WALL BASE



Ambassador
4" MW-XX-K
U.S. Patent No. D500,149



Attaché
6" MW-XX-E



Delineate
4.25" MW-XX-T



Diplomat
4.5" MW-XX-A



Equinox
4.5" MW-XX-R



Exhibit
4.25" MW-XX-FS
6" MW-XX-FS6
8" MW-XX-FS8 (shown above)



Inflection
5.25" MW-XX-G
U.S. Patent No. D499,193



Ledge
6" MW-XX-X62



Mandalay
2.5" MW-XX-H25
3" MW-XX-H3
4.5" MW-XX-H (shown above)
6" MW-XX-H6
U.S. Patent No. D493,895



Monarch
6" MW-XX-M



Monument
2.5" MW-XX-S25
4" MW-XX-S4 (shown above)



Oblique
3" MW-XX-N



Outline
3.5" MW-XX-D
U.S. Patent No. D484,254



Recessed
6" MW-XX-X63



Reveal
4.25" MW-XX-F (shown above)
6" MW-XX-F6
8" MW-XX-F8
U.S. Patent No. D484,253; D510,145



Silhouette
4" MW-XX-J



Stance
4.5" MW-XX-X60 (shown above)
6" MW-XX-X61

ACCESSORIES



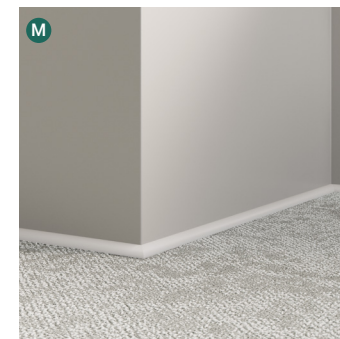
Rampart (chair rail)
4" CHR-XX-C



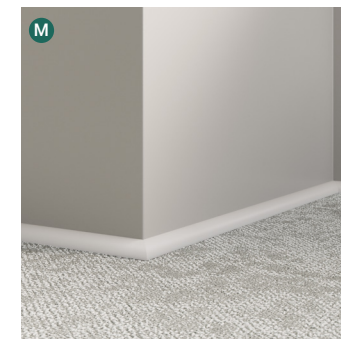
Corner Guard
VBG-XX-C



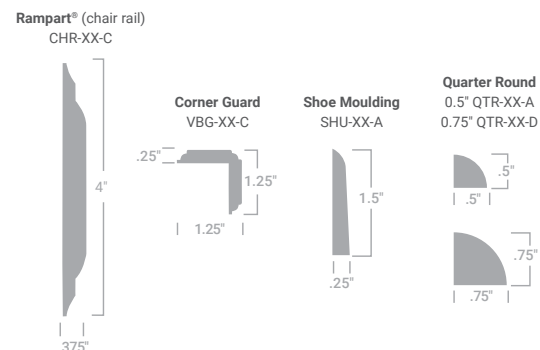
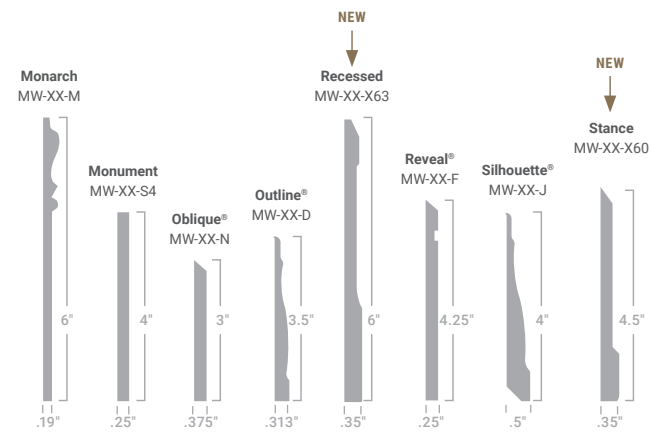
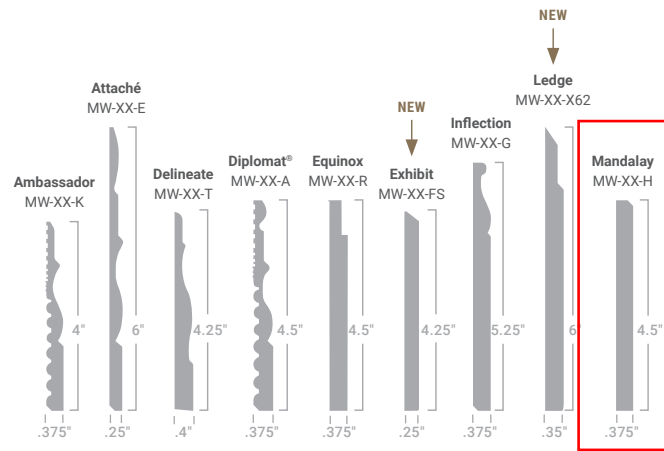
Shoe Moulding
1.5" SHU-XX-A



Quarter Round
0.5" QTR-XX-A



Quarter Round
0.75" QTR-XX-D



All Johnsonite Millwork profiles are available in standard 8' lengths.

Color palette availability

Johnsonite Millwork® is available in all solid colors plus 00 unfinished.

M Available in Masquerade palette

MADE RIGHT MEANS JOHNSONITE

Since the early 1960s, the Johnsonite name has been synonymous in the flooring industry with lasting quality, creative flexibility, and unwavering integrity.

With the category's broadest selection of patterns, textures, colors, and profiles—plus the ability to match any tailored palette with quick lead times and low minimums—we'll help you turn what used to be basic rubber tile and finishing accessories into fully coordinated design statements.

We come to work every day to help you win, crafting solutions you can rely on. That's why Made Right Means Johnsonite.



Meet Tony, the production manager who helps ensure that all Johnsonite products are made right, including the expanded Millwork collection now available in four new profiles and more than 100 stylish colors. If you don't see the color you need, Tony and his team will create it for you with quick lead times and low minimum order quantities.



ColorMatch® palette

We'll perfectly match 32 leading colors across Johnsonite's rubber and vinyl product categories without dye lots



Design flexibility

Industry's broadest selection of colors, patterns, textures and profiles



Healthy materials

Free of ortho-phthalates, PFAS and antimicrobials



Made in USA

Designed and manufactured in USA; Buy American Act Compliant



Tailored by Tarkett

Precisely match any color with quick lead times and low minimum order quantities

ColorMatch®

Perfectly matched flooring and accessories, made easy. This designer palette of leading colors is coordinated across multiple product categories with no dye lots...ever! Our rigorous manufacturing and quality standards enable you to confidently mix and match a color across all Johnsonite rubber and vinyl products, including flooring, finishing borders, and finishing accessories. We guarantee these colors will match year after year, product after product.

08 Icicle W *	24 Grey Haze WG *	55 Silver Grey WG *	32 Pebble WG *	29 Moon Rock WG *
01 Snow White W *	22 Pearl CB *	31 Zephyr CB *	80 Fawn CB *	TA8 Welsh Castle CB *
11 Canvas WB *	09 Clay WB *	49 Beige WB *	45 Sandalwood WB *	76 Cinnamon
283 Toast	47 Brown	TB1 Peppercorn	167 Fudge	40 Black B *
21 Platinum CG *	38 Pewter CG *	28 Medium Grey CG *	71 Storm Cloud CG *	TA6 Bedrock CG *
48 Grey WG *	20 Charcoal WG *	TA4 Gateway WG *	63 Burnt Umber B *	44 Dark Brown B *
86 Hunter Green	18 Navy Blue			

* See the Color Foundations key on page 8.

Every step matters

Tarkett's holistic approach to sustainability is woven into the fabric of how we do business and sits at the heart of our day-to-day decision making.

For decades, we've been scrutinizing every detail of our business for its impact on resources like soil, water, air, and climate—because when you're trailblazing a more sustainable future, **every step matters**.

The **proof** is in the numbers.



Circular economy

94%

of our raw materials are third-party assessed for their impact on human and environmental health based on Cradle to Cradle criteria.

69%

of raw materials are abundant, rapidly renewable or recycled.

13

zero-waste-to-landfill manufacturing plants

1.5 million lbs

of flooring recycled in 2023 in North America



Certifications you can trust

2011

started working with EPEA to integrate Cradle to Cradle principles into every facet of our business

2013

first commercial flooring CERTIFIED **asthma & allergy friendly**[®]

2022

Powerbond[®] RS is the first soft surface product in the industry to be CERTIFIED **asthma & allergy friendly**[®].



Transparency you can trust

100ppm

raw materials content revealed down to 100 parts per million

When most manufacturers reveal raw materials content down to just 1,000 ppm, there's simply no contest.

We've been providing Material Health Statements since 2013 to give you peace of mind about the content of our products.



Healthy impacts

99%

of flooring solutions have low VOC emission levels—10x lower than the most stringent world standards.

100%

ortho-phthalate-free vinyl production; first company to eliminate ortho-phthalates from all products



Global excellence

2010

first flooring manufacturer to join the UN Global Compact

2016

Began reporting to the Carbon Disclosure Project (CDP). In 2023, Tarkett scored A-, the CDP management level.

2020

first assessment by EcoVadis. In 2023, Tarkett's score of 74/100 earned us a Gold medal and placed us in the top 2% of rated companies.

2023

SBTi deemed our target ambition in line with a 1.5°C trajectory, currently the most ambitious designation available through the SBTi process.

Source: Tarkett 2023 Corporate Social and Environmental Responsibility Report

Specifications

	Millwork Wall Base [®]	Ambassador	Attaché	Delineate	Diplomat [®]	Equinox	Exhibit	Infection	Ledge	Mandalay	Monarch	Monument	Oblique [®]	Outline [®]	Recessed	Reveal [®]	Silhouette [®]	Stance	Millwork Accessories	Rampart [®] (chair rail)	Corner Guard	Shoe Moulding	Quarter Round (0.5)	Quarter Round (0.75)	
Profile heights																									
2.5"																									
3"																									
3.5"																									
4"		✓																							
4.25"				✓			✓										✓		✓		✓				
4.5"					✓	✓				✓															
5.25"								✓																	
6"			✓				✓		✓	✓	✓				✓	✓		✓							
8"							✓		✓	✓	✓				✓	✓		✓							
Palette																									
115 solid colors	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Masquerade (digitally printed)							M						M	M		M	M					M	M	M	
Warranty																									
2 year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

All Johnsonite Millwork profiles are available in standard 8' lengths.

Testing

Classification:	ASTM F1861	Passes
Flexibility:	ASTM F137	Passes
Chemical Resistance:	ASTM F925	Passes
Resistance to Light:	ASTM F1515	ΔΣ < 8
Fire Testing:	ASTM E648	Class 1
	CAN/ULC S102.2	FSR 120 / SDV >500

Sustainability attributes

MILLWORK FINISHING BORDERS

Carbon neutrality:
Carbon neutral available upon request

Healthy materials:
94% raw materials third-party assessed; ortho-phthalate-free

Indoor air quality:
FloorScore[®] certified; meets CA DPH Section 01350

Transparency documentation:
Product-specific EPD

Responsible end of use management:
Part of Tarkett ReStart program for take back and recycling



Transparency documentation

At Tarkett, transparency, social responsibility and environmental stewardship aren't add-ons—they're part of everything we do. By partnering with ecomedes and mindful MATERIALS, we make it easy for you to explore our sustainable flooring product options, their product certifications, green building systems and federal standards support documents. Visit tarkett.ecomedes.com to learn more.



ReStart is Tarkett's third-party certified reclamation program.



To join the ReStart program, scan the QR code or go to commercial.tarkett.com/Restart

For more accurate color and pattern representation, we suggest you visit an authorized Tarkett dealer to view an actual product sample. All third-party trademarks are the property of their respective owners.

©Tarkett North America 44999500028 04/2024



GE APPLIANCES

GE® ENERGY STAR® 21.9 Cu. Ft. Top-Freezer Refrigerator

Model #: GIE22JSNRSS

Color: Stainless Steel



Dimensions: 66 3/8 H x 32 3/4 W x 34 1/2 D

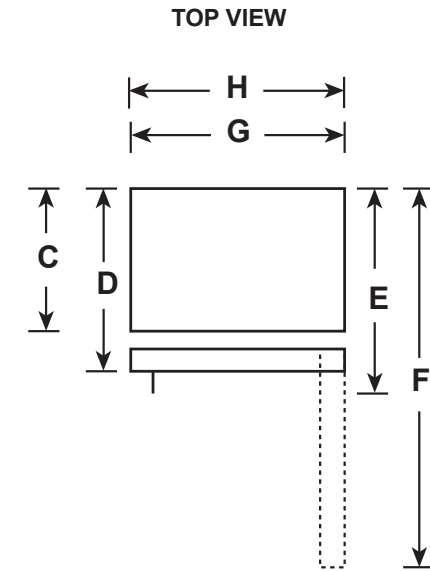
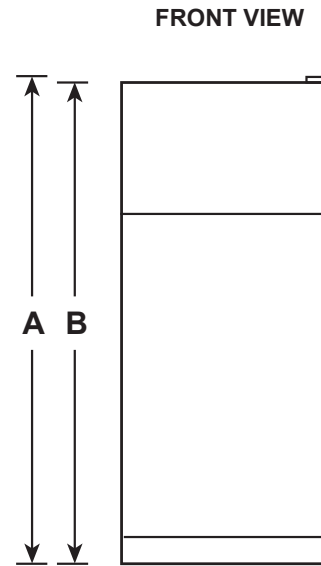


GIE22JSN/JTN/JMN

GE® ENERGY STAR® 21.9 Cu. Ft. Top-Freezer Refrigerator

DIMENSIONS AND INSTALLATION INFORMATION (IN INCHES)

OVERALL DIMENSIONS	Height to top of hinge (in.) A	66-3/8
	Height to top of case (in.) B	65-7/8
	Case depth without door (in.) C	28-5/8
	Case depth less door handle (in.) D	32-3/8
	Case depth with door handle (in.) E	34-1/2
	Depth with fresh food door open 90° (in.) F	63-1/2
	Width (in.) G	32-3/4
	Width with door open 90° with door handle (in.) H	35-3/8
AIR CLEARANCES	Each side (in.)	1/8
	Top (in.)	1
	Back (in.)	2



For answers to your Monogram, GE Café™ Series, GE Profile™ Series or GE Appliances product questions, visit our website at geappliances.com or call GE Answer Center® Service, 800.626.2000.



As an ENERGY STAR® partner, GE has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

GIE22JSN/JTN/JMN

GE® ENERGY STAR® 21.9 Cu. Ft. Top-Freezer Refrigerator

FEATURES AND BENEFITS

Premium inner door – Enjoy greater flexibility and organizational options with modular bins right on the door

LED lighting – Find all your favorite foods under natural-looking light

Edge-to-edge glass shelves – Enjoy a polished look and easy-access cleaning with edge-to-edge shelves that extend the full width of the refrigerator

Sliding deli drawer – Enjoy greater flexibility in your fridge and easily create more space for tall items with an innovative drawer that can be positioned wherever you prefer

Adjustable wire freezer shelf – Easily adjusts between two positions to accommodate items of all shapes and sizes

ADA-compliant – Designed for easy operation and access

Upfront temperature controls – Easy-to-use controls regulate both fresh food and freezer sections

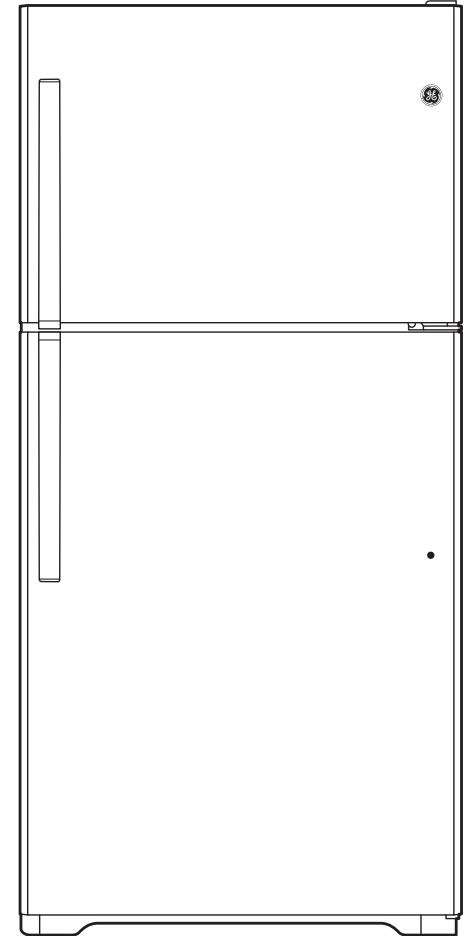
Factory-installed icemaker – Refrigerator comes ready to automatically create ice

Model GIE22JTNBB – Black

Model GIE22JTNWW – White

Model GIE22JSNSS – Stainless steel

Model GIE22JMN – Slate



Quick Adjust Mop/Broom Holder - 36"

Keep mops and brooms tidy.



- Holders slide easily along track to adjust spacing between tools.
- Snap in, snap out design for quick access.
- Rubber grippers hold mops and brooms securely.

[Enlarge](#)

MODEL NO.	DESCRIPTION	DIMENSIONS W x D x H	NO. OF CLIPS	PRICE EACH			IN STOCK SHIPS TODAY
				1	3	6+	
H-6090	Quick Adjust	36 x 3 x 2"	6	\$44	\$42	\$40	1 <input type="button" value="ADD"/>

[+ Additional Info](#) [+ Shopping Lists](#) [Request a Catalog](#)

SAME DAY SHIPPING

HUGE SELECTION IN STOCK

SHIPS FROM 13 LOCATIONS



Regency 16-Gauge Stainless Steel One Compartment Floor Mop Sink with Notched Front - 20" x 16" x 12" Bowl

#600SM162012N



Technical Data

Length	25 Inches
Width	21 Inches
Height	16 Inches
Bowl Depth	12 Inches
Bowl Front to Back	16 Inches
Bowl Left to Right	20 Inches
Features	Massachusetts Accepted Plumbing Product NSF Listed
Gauge	18 Gauge
Installation Type	Floor Model

Features

- Rounded corners for easy cleaning
- 16-gauge type 304-series stainless steel bowl
- 3 1/2" drain basket and wall clip included
- Bowl size is 20" x 16" x 12"
- Notched front allows for easy disposal of water

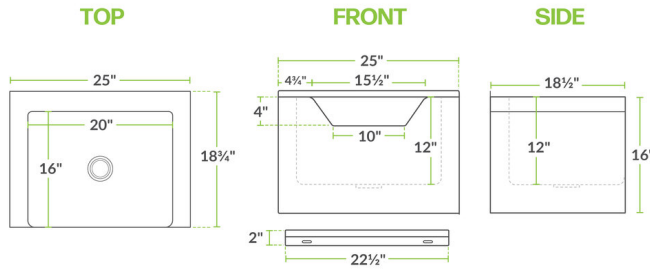
Certifications



Technical Data

Material	Stainless Steel
Stainless Steel Type	Type 304
Style	Notched
Type	Mop Sinks

Plan View



Notes & Details

Keep your staff safe by eliminating heavy lifting of mop buckets with this one compartment floor mop sink with notched front from Regency Tables and Sinks. The bowl is made of high-quality 16-gauge type 304 stainless steel for reliable service. This gauge is thicker and much more durable than many similar sinks available that are made of 18-gauge stainless steel. Additionally, type 304 stainless steel is exceptionally corrosion-resistant and easy to clean! It also has TIG welded areas, which are blended to match adjacent surfaces to a satin-smooth finish.

The 20" x 16" x 12" compartment offers rounded corners and ample space to conveniently wash your mop. This sink has a 4" notched front so you can pour water out of large containers without the risk of them moving during use. This eliminates the need to lift heavy mop buckets full of water over the edge to dump it out! In addition, the drain includes a 3 1/2" basket strainer to eliminate the possibility of clogging. By regularly maintaining your drainage system, you will cut down on possible service and replacements costs.

Thanks to the high sides, water splashes will be confined inside the sink and then directly drip down into the drain. This added feature helps maintain the integrity of your wall and floor to keep your establishment in its best condition. Perfect for use in any restaurant kitchen or dish room, this floor mop sink gives you a convenient and sanitary way of disposing dirty water and other liquids.

⚠ WARNING: This product can expose you to chemicals including lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.p65warnings.ca.gov.

The KnoxBox 3200 is the number one high-security key lock box trusted by first responders and property owners. Store up to 10 keys to quickly gain rapid access to commercial properties.



Available in 3 colors:



FEATURES

- ✓ Stores maximum 10 keys. Access cards and small entry items may also fit in interior compartment but will reduce max key quantity.
- ✓ Built Knox-Rugged and secure: UL 1037, UL 1610, UL 1332, UL 437
- ✓ Finished with Knox-Coat® to protect four times better than standard powder coat
- ✓ Weather-resistant door gasket
- ✓ Hinged door

BENEFITS

- ✓ Allows rapid property access
- ✓ Reduces property damage
- ✓ Prevents forced entry into buildings
- ✓ Minimizes first responder injury
- ✓ Compliant to National Fire Code (NFPA, IFC, IBC)

OPTIONS

- ✓ Knox Tamper Alert connects to building's alarm system for extra security
- ✓ Mount types: Recessed and Surface
- ✓ 3 color options: Black, Aluminum, Dark Bronze

ACCESSORIES

- ✓ Multi-Purpose Switch for use on electrical doors, gates and other electrical equipment
- ✓ Recess Mounting Kit for new concrete or masonry construction
- ✓ Public Safety Labels
- ✓ Tag-Out Tamper Seals
- ✓ Key Tags
- ✓ Key Rings

ORDERING SPECIFICATIONS

To insure procurement and delivery of the KnoxBox 3200, it is suggested that following specification paragraph is used:

KnoxBox surface/recessed mount with hinged door, with/without UL Listed Knox Tamper Alert. 1/4" plate steel housing, 1/2" thick steel door with interior gasket seal and stainless steel door hinge. Box and lock UL Listed. Lock has 1/8" thick stainless steel dust cover with tamper seal mounting capability.

Exterior Dimensions: Surface Mount Body - 4"H x 5"W x 3-7/8"D
Recessed Mount Flange - 7"H x 7"W

Lock: UL Listed. Double-action rotating tumblers and hardened steel pins accessed by a biased cut key.

Finish: Knox-Coat proprietary finishing process

Color: Black, Dark Bronze or Aluminum

P/N: KnoxBox 3200 (mfr's cat. ID)

Mfr's Name: KNOX COMPANY



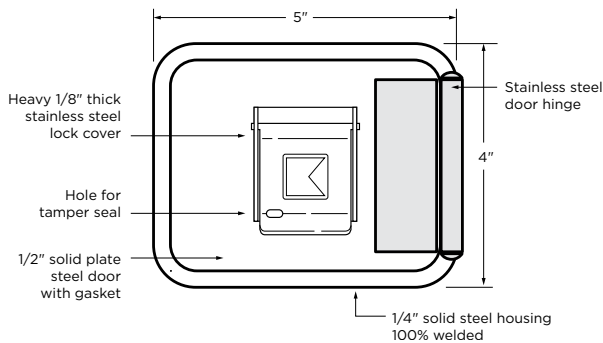
WEIGHT:

Surface Mount - 8 lb
Recessed Mount - 9 lb

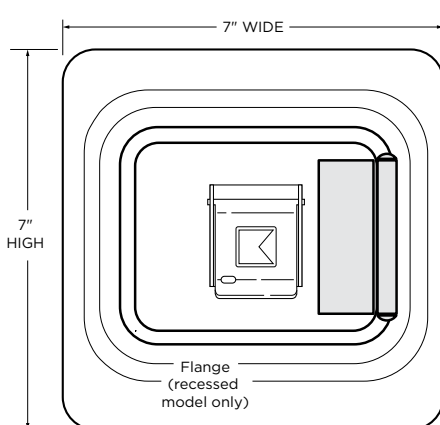
DIMENSIONS:

Surface Mount Body - 4"H x 5"W x 3-7/8"D
Recessed Mount Flange - 7"H x 7"W

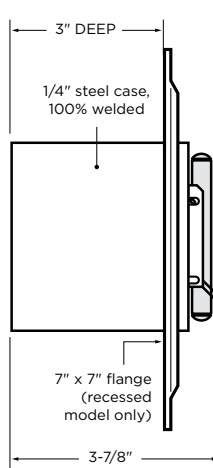
SURFACE MOUNT - FRONT VIEW



RECESS MOUNT - FRONT VIEW



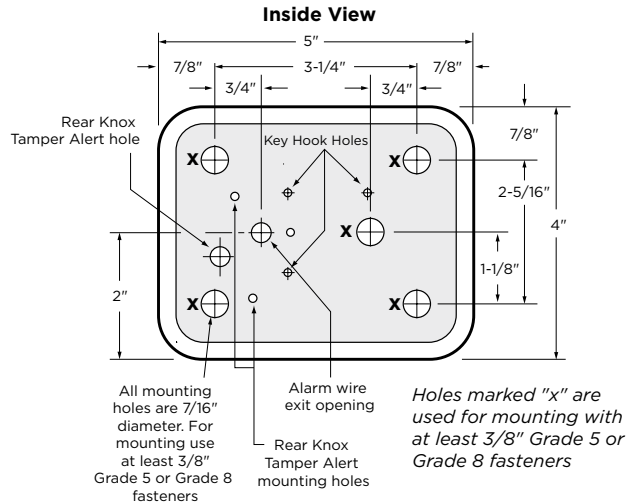
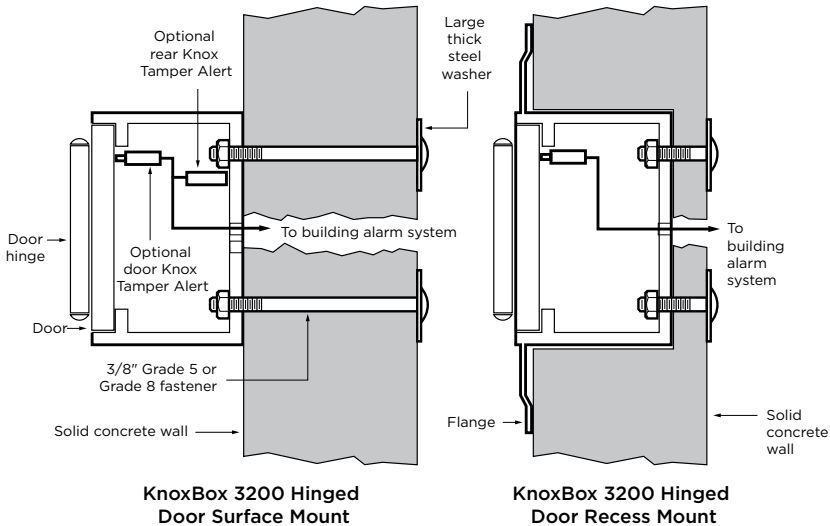
SIDE VIEW



GENERAL MOUNTING INSTRUCTIONS

Suggested minimum mounting height, 6 feet above ground.

ATTENTION: KnoxBox is a very strong device that **MUST** be mounted properly to ensure maximum security and resist physical attack.



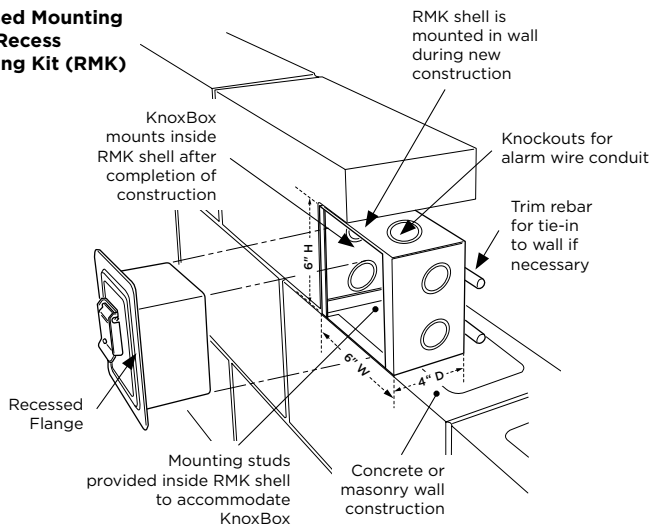
RECESS MOUNTING KIT AND INSTALLATION INSTRUCTIONS

The Recess Mounting Kit (RMK) includes shell housing and mounting hardware, which may only be used for recessed models to cast-in-place within new concrete or masonry construction. The KnoxBox is mounted into the shell housing after construction is completed.

RECESS MOUNTING KIT DIMENSIONS

Rough-in Dimensions:
6-1/2"H x 6-1/2"W x 5"D

Recessed Mounting Using Recess Mounting Kit (RMK)



IMPORTANT:

Care should be taken to ensure the front of the Recess Mounting Kit (RMK) shell housing, including the cover plate and screw heads, is flush with the wall. The RMK must be plumbed to ensure vertical alignment of the box.

ABOUT THE KNOX COMPANY

Since 1975, the Knox Company has successfully developed innovative rapid access solutions for first responders with products that provide fast, safe, and secure entry into commercial, industrial, and residential properties, while minimizing damage and maximizing safety. Today, more than 15,000 fire, EMS, and law enforcement departments/agencies depend on Knox products to gain access into over one million buildings/properties.

KNOX COMPANY

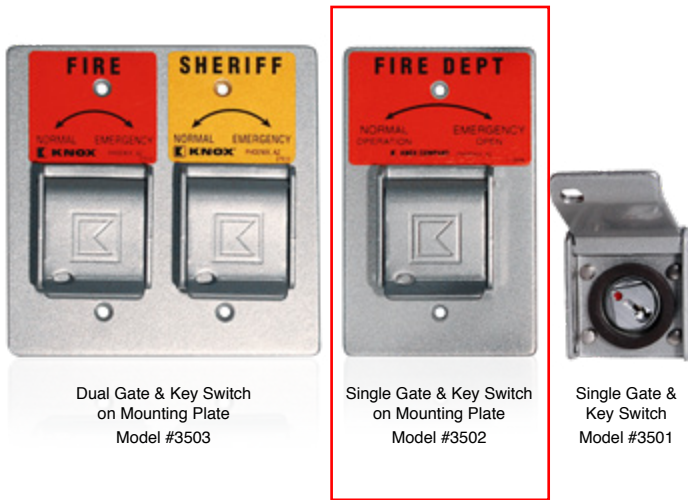
1601 W. DEER VALLEY RD
PHOENIX, AZ 85027

T. 800-566-9269

KNOXBOX.COM

INFO@KNOXBOX.COM

Eliminate perimeter barriers that delay emergency response with the Knox Gate & Key Switch. Override electronic gates and lower voltage equipment to allow emergency access into communities, apartment complexes, parking garages, pedestrian gates, industrial receiving areas and much more.



FEATURES

- ✓ One position, two position or momentary switch
- ✓ Face plate and lock cover ensure weather resistant operation
- ✓ Dual locks enable shared access with other agencies

BENEFITS

- ✓ Gain rapid access through electronic gates without forced entry
- ✓ Overrides electronic gates, motorized doors, electrical switches
- ✓ Can share access with multiple agencies
- ✓ Utilizes Knox Master Key solution

OPTIONS

- ✓ Single or dual key switch
- ✓ Fire, EMS, security or law enforcement identification labels

ELECTRICAL DATA

- ✓ Switch: SPDT or DPDT
- ✓ 7 A resistive, 4 A inductive, (sea level), 28 VDC
- ✓ 7 A resistive, 2.5 A inductive, (50,000 ft.), 28 VDC
- ✓ 7 A resistive or inductive, 115 VAC, 60 Hz
- ✓ UL® and CSA listed: 7 A, 250 VAC
- ✓ Temperature tolerance up to +180° F

ORDERING SPECIFICATIONS

To insure procurement and delivery of the Knox Gate & Key Switch, it is suggested that the following specification paragraph be used:

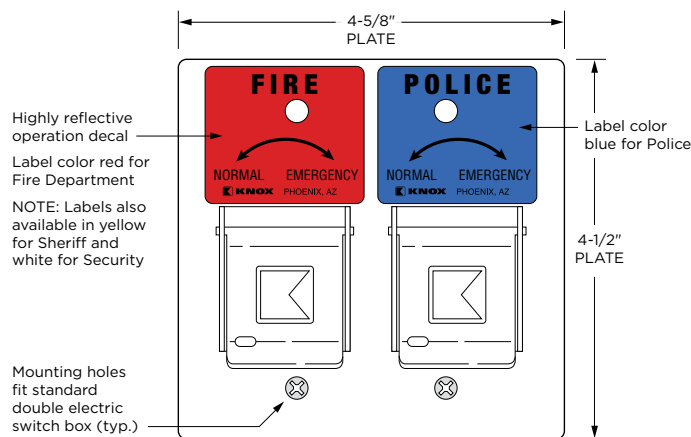
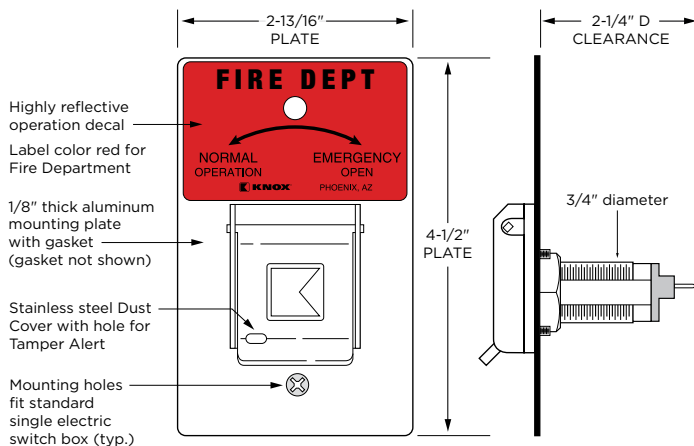
Dimensions: Requires 2 1/4" recessed depth x 3/4" diameter

Switch: SPDT or DPDT; 7 A resistive, 4 A inductive, key removable two position

Mounting: Key switch is designed to be recess mounted

P/N: 3500 Series Knox Gate & Key Switch (mfr's cat. ID)

Mfr's Name: KNOX COMPANY



ABOUT KNOX COMPANY

Over forty years ago, a unique concept in rapid access for emergency response was born. The KnoxBox®, a high-security key lock box, was designed to provide rapid access for emergency responders to reduce response times, minimize injuries and protect property from forced entry.

Today, one revolutionary lock box has grown into a complete system providing rapid access for public safety agencies, industries, military, and property owners across the world. The Knox Company is trusted by over 14,000 fire departments, law enforcement agencies, and governmental entities.

55 Inch Class LG OLED evo AI G5 4K Smart TV 2025 with Supplied Wall Mount



Key features

- The LG G5 is the best TV I have ever tested.-CNET
- Brightness Booster Ultimate magnifies each individual pixel for remarkably luminous detail
- Bright Room Ready performs great no matter the room or the lighting
- LG's Most Powerful AI Processor, the Alpha 11 AI Processor Gen2 AI for a personalized experience, spectacular picture & sound with AI Picture Pro & AI Super Upscaling²
- With OLED's over 8.3 million self-lit smart pixels see perfect black and perfect color
- 5 Year panel warranty³ and industry-leading OLED Care+ so you'll enjoy OLED for years to come
- Enjoy movie magic from home with Dolby Vision®, Dolby Atmos® & FILMMAKER MODE™⁴
- Ultimate Gaming with 165Hz Refresh Rate*, NVIDIA G-Sync, AMD FreeSync Premium and 0.1ms response time⁷

Picture (Panel)			
Brightness Booster	Display Resolution	Display Type	Perfect Black
Brightness Booster Ultimate	4K Ultra HD (3,840 x 2,160)	4K OLED	Yes
Refresh Rate			
120Hz Native (VRR 165Hz)			
Picture (Processing)			
Dynamic Tone Mapping	Dolby Vision	Filmmaker Mode	Dimming Technology
Yes (OLED Dynamic Tone Mapping Pro)	Yes	Yes	Pixel Dimming
AI Picture	HDR (High Dynamic Range)	Motion	Picture Processor
Yes	Dolby Vision / HDR10 / HLG	OLED Motion	α11 AI Processor 4K Gen2
AI Upscaling			
α11 AI Super Upscaling 4K			

Smart TV			
Multi View	Amazon Alexa (Built-in)	Always Ready	Matter
Yes	Yes (Built-in)	Yes	Yes
Works with Apple Airplay2	AI Concierge	USB Camera Compatible	Game Service
Yes	Yes	Yes	Yes
Music Service	Home Office	Google Cast built-in	Works with Amazon Alexa
Yes	Yes	Yes	Yes
Works with Apple Home	Content Partners	Full Web Browser	Works with Hey Google
Yes	Netflix, Max, Disney+, YouTube, Prime Video, ESPN, Apple TV, Sling TV and more	Yes	Yes
Hands-free Voice Control	Home Hub	Intelligent Voice Recognition	LG Channels
Yes	Yes	Yes	Yes
App Store	ThinQ® Smart Technology	Magic Remote Control	Operating System (OS)
Yes	Yes	Built-In	webOS 25
Sports Alert			
Yes			
Audio			
Clear Voice Pro	AI Sound	Audio Codec	Bluetooth Surround Ready
Yes (AI Object Remastering)	α11 AI Sound Pro (Virtual 11.1.2 Up-mix)	AC4, AC3(Dolby Digital), EAC3, HE-AAC, AAC, MP2, MP3, PCM, WMA, apt-X (Refer to manual)	Yes
Dolby Atmos	LG Sound Sync	Speaker Direction	Speaker System
Yes	Yes	Down Firing	4.2 Channel
Sound Mode Share	WISA Ready		
Yes	Yes		
Connectivity			
SPDIF (Optical Digital Audio Out)	Bluetooth® Support	Ethernet Input	HDMI Audio Return Channel
1ea	Yes (v 5.3)	1ea	eARC (HDMI 2)
HDMI Input	Simplink (HDMI CEC)	IP Control	RF Input (Antenna/Cable)
4ea (supports 4K 120Hz, eARC, VRR, ALLM, QMS, QFT (4 port))	Yes	Yes	1ea
RS-232C Input (Min Jack)	Smartphone Remote App	TV Tuner	USB Input
Yes	Yes	ATSC1.0 (Terrestrial), QAM (Cable)	3ea (v 2.0)
Wi-Fi® Standard			
Yes (Wi-Fi 6E)			
Power			
Annual Power Consumption	Power Consumption	Power Supply (Voltage, Hz)	Standby Power Consumption
231kWh/y	125 W	AC 120V, 50/60Hz	Under 0.5W
Dimensions/Weights			
TV Weight without Stand	Packaging Dimensions (WxHxD)	Packaging Weight	Stand Width
37 lbs	53.25" x 31.5" x 6.52"	54.7 lbs	19.1"
TV Dimensions with Stand (WxHxD)	TV Dimensions without Stand (WxHxD)	TV Weight with Stand	VESA Mounting (WxH)
48.1" x Position 1 = 31"/ Position 2 = 29" x 10.4"	48.1" x 27.7" x 1.1"	48.7 lbs	300 x 200

Monoprice Low Profile Fixed TV Wall Mount Extra Wide For 42" To 90" TVs up to 165lbs, Max VESA 600x400, Fits Curved Screens



Monoprice™

Low Profile Fixed TV Wall Mount

Fits TVs 42 in to 90 in, Max Weight 165 lbs, VESA Patterns up to 600×400



EXTRA LARGE SIZE AND WEIGHT CAPACITY

The Monoprice™ Low Profile Fixed TV Wall Mount is compatible with VESA patterns up to 600 mm × 400 mm, and supports a maximum weight capacity of 165 lbs, making it perfect for TVs up to 90" in size. Like all Monoprice TV mounts, the Low Profile Fixed TV Wall Mount has undergone rigorous lab testing, holding double its rated weight at over 300 lbs without damage to the mount.

LOW PROFILE MOUNTING

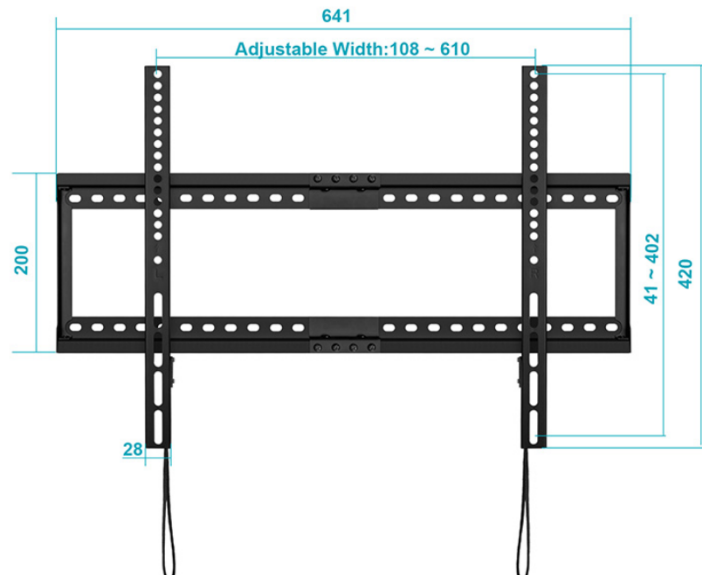
The Low Profile Fixed TV Wall Mount is an excellent choice for those seeking a sturdy and space-saving solution for mounting a display at eye level—the slim, low-profile design positions your TV a mere 1.1" from the wall.



EASY ACCESS DESIGN

The mount features spring-tensioned locking lugs with quick-release pull tabs for effortless TV adjustments. Whether you need to reposition the TV or access cables at the back, a simple tug on the pull tabs enables you to tilt the TV upward and out of the way, or even remove it entirely if needed.

DIMENSIONS (MM)



Features

- Three-function pull-down sprayhead with touch control allows you to switch between aerated stream, ring spray and Boost technology
- Boost technology increases the flow rate by 30% with the press of a button. Use Boost with stream for faster filling or with ring spray for more powerful cleaning
- ProMotion® technology's light, quiet braided hose and swiveling ball joint make the pull-down sprayhead easier and more comfortable to use
- MasterClean™ sprayface features an easy-to-clean surface that withstands mineral buildup and maximizes spray performance
- High-arch spout offers vertical clearance for tall cookware and pitchers
- Single lever handle makes adjusting water temperature easy.
- 1.5 gpm (5.7 lpm) maximum flow rate at 60 psi (4.14 bar)
- Temperature memory allows faucet to be turned on and off at the temperature set during prior usage
- KOHLER® ceramic disc valves exceed industry longevity standards for a lifetime of durable performance
- DockNetik® secure docking system locks sprayhead into place when not in use

Material

- Premium metal construction for durability and reliability
- KOHLER® finishes resist corrosion and tarnishing

Installation

- Single-hole or three-hole installation (escutcheon plate included)
- Flexible supply lines simplify installation

Recommended Products/Accessories

- K-77685 Single-cartridge water filtration system
- K-77686 Double-cartridge water filtration system
- K-77687 single replacement filter cartridge
- K-77688 Replacement Filter Cartridges, Two-Pack

Optional Products/Accessories

- 1012715 Kitchen Faucet Deep Rough-In Kit



ADA **CSA B651**

Codes/Standards


ASME A112.18.1/CSA B125.1
NSF/ANSI/CAN 61
NSF/ANSI/CAN 372
All applicable US Federal and State material regulations
DOE - Energy Policy Act 1992
California Energy Commission (CEC)
ADA
ICC/ANSI A117.1
CSA B651
IAPMO Certification

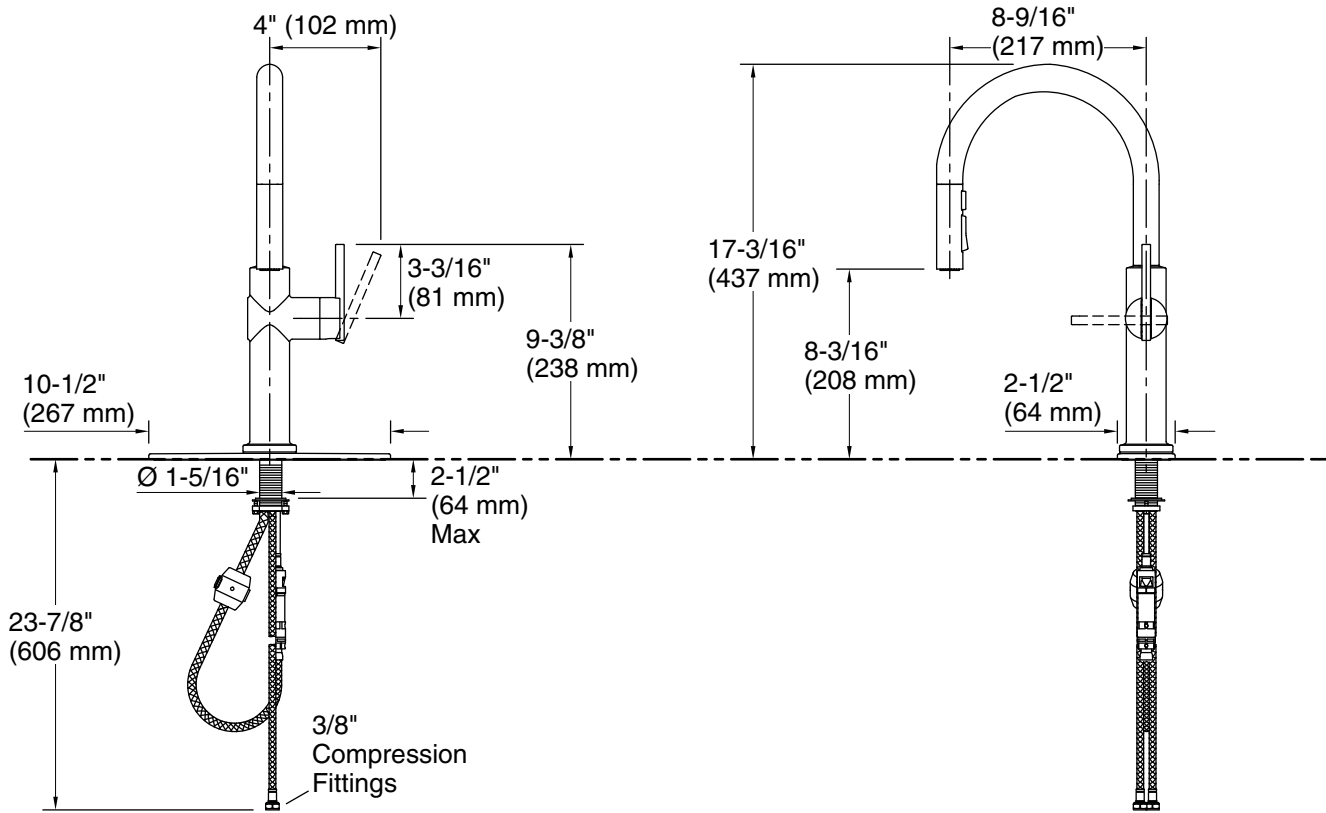
KOHLER® Faucet Lifetime Limited Warranty

See website for detailed warranty information.

Available Colors/Finishes

Color tiles intended for reference only.

Color	Code	Description
	CP	Polished Chrome
	VS	Vibrant® Stainless
	BL	Matte Black
	2MB	Vibrant® Brushed Moderne Brass



Technical Information

All product dimensions are nominal.

Faucet:

Flow rate: 1.5 gal/min (5.7 l/min)

Drain included: No

Spout:

Spout reach: 8-9/16" (217 mm)

Handshower:

Rated maximum flow: 0 gal/min (0 l/min)

Pressure/fixture Supply Requirements

Fixture pressure max (static): 125 psi (861.8 kPa)

Fixture pressure min (static): 20 psi (137.9 kPa)

Notes

Install this product according to the installation instructions.

ADA compliant for faucet handles only.

ADA compliant for faucet handles only

ADA, CSA B651 compliant when installed to the specific requirements of these regulations.

PRODUCT SPECIFICATIONS

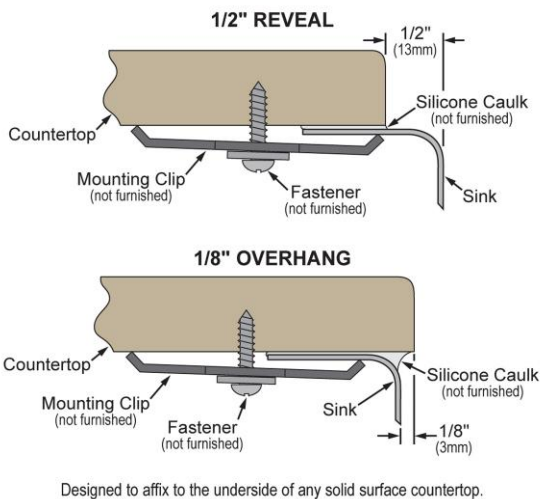
Lustertone® Classic Stainless Steel 23-1/2" x 18-1/4" x 4-7/8" Single Bowl Undermount ADA Sink w/Perfect Drain®. Sink is manufactured from 18 gauge 304 Stainless Steel with a Lustrous Satin finish, Rear Center drain placement, and Bottom only pads.

Installation Type:	Undermount
Material:	304 Stainless Steel
Special Features:	Perfect Drain
Finish:	Lustrous Satin
Gauge:	18
Sound Deadening:	Bottom only pads
Number of Bowls:	1
Sink Dimensions:	23-1/2" x 18-1/4" x 6-3/8"
Bowl 1 Dimensions:	21" x 15-3/4" x 4-7/8"
Drain Size:	3-3/8" (86mm)
Drain Location:	Rear Center
Minimum Cabinet Size:	27"
Mounting Hardware:	Undermount brackets sold separately
Template Included:	Yes
Cutout Template #:	1000001400

Template is available for download at [elkay.com](#). CAD software will be required to open the template.

Perfect Drain: Seamlessly welded stainless steel collar eliminates the gap between a traditional drain and the sink for a more sanitary and gap free installation. Select garbage disposers can be installed on either sink bowl for user convenience. Please see our Garbage Disposer Compatibility Guide.

Installation Profile:



PART: _____ QTY: _____
 PROJECT: _____
 CONTACT: _____
 DATE: _____
 NOTES: _____
 APPROVAL: _____



Included with Product: One LKPD1 Perfect Drain and strainer

A Century of Tradition and Quality. For more than 100 years, Elkay has been making innovative products and providing exceptional customer care. We take pride in offering plumbing products that make life easier, inspire change and leave the world a better place.



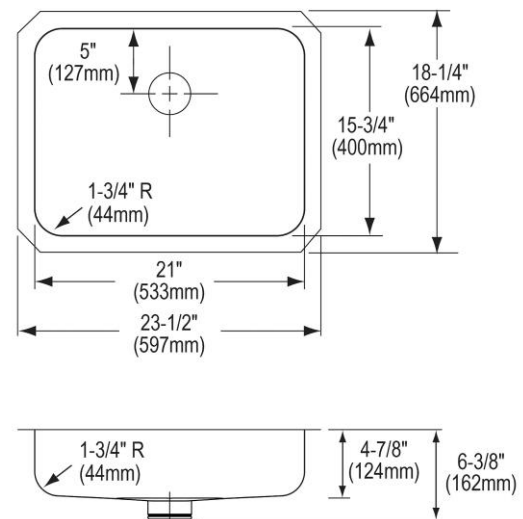
Product Compliance: ADA & ICC A117.1
 ASME A112.19.3/CSA B45.4
Accessory: ASME A112.18.2/CSA B125.2



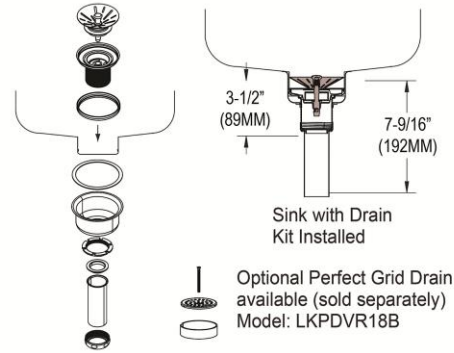
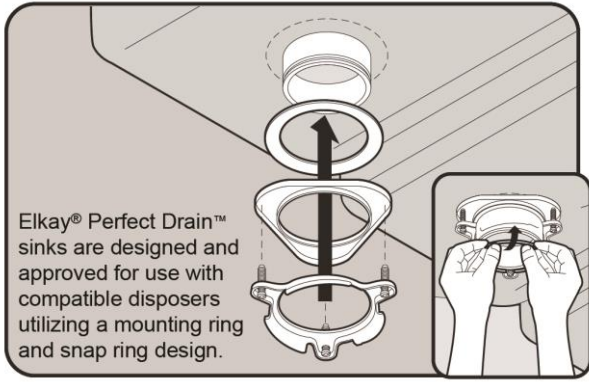
Sinks are listed by IAPMO® as meeting the applicable requirements of the Uniform Plumbing Code®, International Plumbing Code®, and National Plumbing Code of Canada.








Complies with ADA & ICC A117.1 accessibility requirements when installed according to the requirements outlined in these standards.

- [Clean and Care Manual \(PDF\)](#)
- [Installation Instructions \(PDF\) - 1000005239](#)
- [Installation Instructions \(PDF\) - 74180289_Disposer](#)
- [Installation Instructions \(PDF\) - 74180340-USA_Drain](#)
- [Installation Instructions \(PDF\) - Garbage Disposer Compatibility Guide](#)
- [Warranty \(PDF\)](#)




In keeping with our policy of continuing product improvement, Elkay reserves the right to change product specifications without notice. Please visit [elkay.com](#) for the most current version of Elkay product specification sheets. This specification describes an Elkay product with design, quality, and functional benefits to the user. When making a comparison of other producers' offerings, be certain these features are not overlooked. Latest version of the spec sheet available: https://www.elkayfiles.com/spec-sheets/ELUHAD211550PD_spec.pdf



Included Accessories		
LKPD1	Perfect Drain [®] Fitting Type 304 Stainless Steel Body and Strainer Spec Sheet (PDF)	
Optional Accessories		
LKWOBG2115SS	Elkay Stainless Steel 20" x 14-3/4" x 1" Bottom Grid Spec Sheet (PDF)	
CB1516	Elkay Hardwood 15" x 16-3/4" x 3/4" Cutting Board Spec Sheet (PDF)	
LKDS99	3-1/2" Garbage Disposal Stopper / Strainer for use with Perfect Drain [®] -Chrome Polished Stainless Steel Spec Sheet (PDF)	
LKPDAD18B	Perfect Drain [®] Chrome Plated Brass Body Strainer and LKADOS Tailpiece Spec Sheet (PDF)	
LKPDVR18B	Perfect Drain [®] Chrome Plated Brass Body Vandal-resistant Strainer Spec Sheet (PDF)	
LKGT1041	Elkay Gourmet Single Hole Kitchen Faucet Pull-out Spray and Lever Handle with Hi and Mid-rise Base Options Spec Sheet (PDF)	

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LKWERBSS	Elkay [®] Stainless Steel 15-3/8" x 12-3/8" x 5-7/16" Rinsing Basket Spec Sheet (PDF)	
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In keeping with our policy of continuing product improvement, Elkay reserves the right to change product specifications without notice. Please visit elkay.com for the most current version of Elkay product specification sheets. This specification describes an Elkay product with design, quality, and functional benefits to the user. When making a comparison of other producers' offerings, be certain these features are not overlooked. Latest version of the spec sheet available: https://www.elkayfiles.com/spec-sheets/ELUHAD211550PD_spec.pdf

CODE NUMBER

3873376

DESCRIPTION

Vitreous China Wall-Mounted Ledgeback Lavatory with SloanTec® Glaze.

DETAILS

- Centerset: Single
- Nominal Dimensions: 18 ¼" x 20" x 7 ¼" (464 x 508 x 184mm)

FEATURES

- White Vitreous China
- Permanent SloanTec™ hydrophobic antimicrobial glaze inhibits the growth and buildup of germs, bacteria, mold, mildew and mineral scale on the surfaces

- Wall mounted, ledgeback
- Rear overflow
- Single hole with right hand soap hole
- Carrier not included
- Mounting hardware included
- 20" x 18¼" (508 mm x 463 mm)

OPTIONAL CERAMIC SHROUD

- White vitreous china
- 7¾" x 10 ½" x 9¾" (197 mm x 267 mm x 248 mm)
- Mounting hardware included
- Must be specified separately Model SS-27, code 387678

DOWNLOADS

- [Wall-Hung Ledgeback Lavatory with Optional Shroud Installation](#)
- [Additional Downloads](#)



COMPLIANCES & CERTIFICATIONS



(ADA Compliant, BAA Compliant, cUPC Certified, UPC Certified)

NOTES

All information contained within this document subject to change without notice.

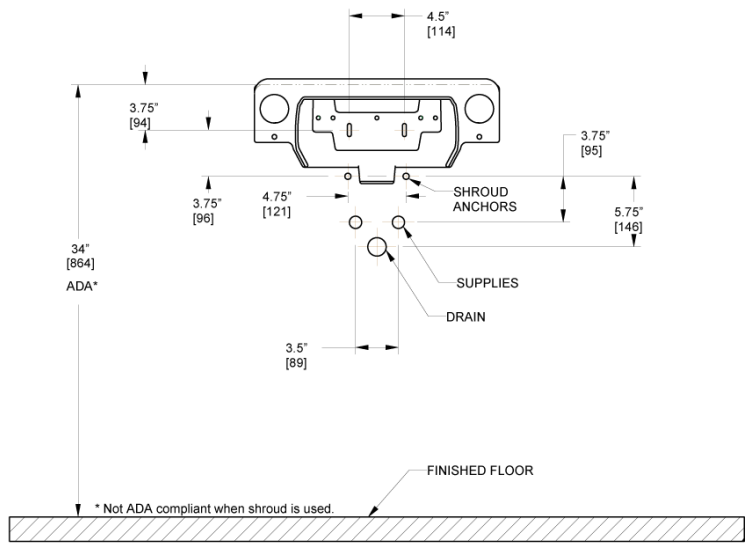
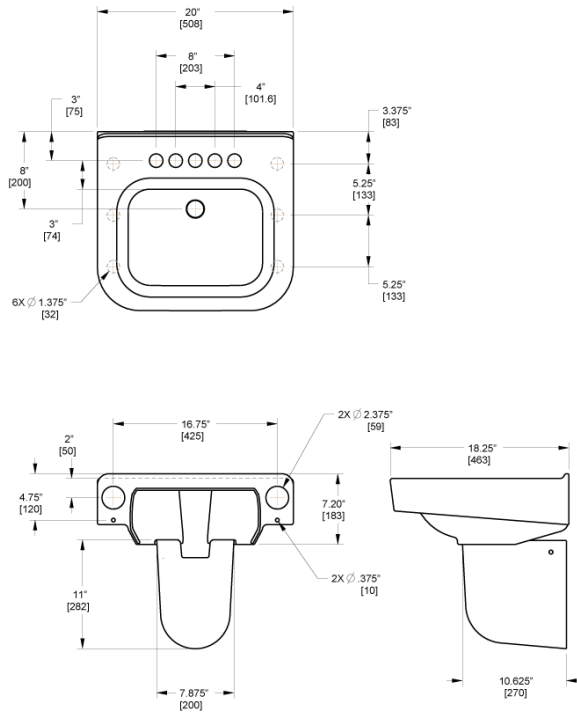
All vitreous china dimensions shown in these drawings are nominal and not to scale. Dimensions can vary within the tolerances established in the governing ASME A112.19.2/CSA B45.1 standard. It is important to consider this when planning rough-in and plumbing layouts.

Lavatory does not meet ADA requirements when optional ceramic shroud is used.

WARRANTY

[View Warranty Information](#)

ROUGH-IN





THE ORIGINAL™

0.8 GPF Single Flush Toilet Elongated Bowl with 12" Rough-In



THE ORIGINAL™

0.8 GPF SINGLE FLUSH TOILET

Elongated Bowl with 12" Rough-In

FEATURES

- Quiet, powerful flush delivered with a patented Stealth® flush chamber and air transfer system
- Reliable standard Fluidmaster fill valve
- One flush thoroughly evacuates the bowl every time, eliminating double flushing
- Smooth, low friction ceramic surface helps achieve a clear bowl every time
- Two-piece toilet
- Stylish, inconspicuous and durable flush button
- No flapper to cause leakage
- ADA Compliant*

SPECIFICATIONS



Materials: Vitreous China **Finish Color:** White

Codes/Standards:

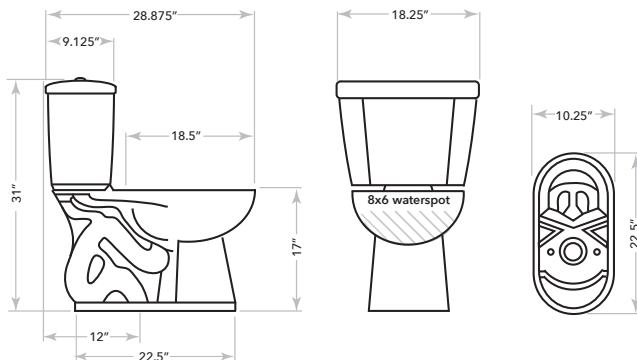
ASME A112.19.2/CSA B45.1

DOE - Energy Policy Act 1992

California Energy Commission (CEC)

ICC/ANSI A117.1

MEASUREMENTS



BULK PACKAGING

N7717 Elongated Bowl

UPC Code 732291771733

Packaging Type Kraft Corrugated

Packaging Dimensions 16" W
17.5" H
29.5" D

Packaging Weight 53 lbs

Skid Quantity 18 or 12

N7714 Tank

UPC Code 732291771429

Packaging Type Kraft Corrugated

Packaging Dimensions 9.5" W
17" H
19" D

Packaging Weight 37 lbs

Skid Quantity 30

*Pending final installation factors. **LIMITED LIFETIME WARRANTY on vitreous china products. Toilet tank trim: fill valve and flush valve assembly and plumbing fittings are warranted for a period of fifteen (15) years to the purchaser from the date of purchase. Call Niagara Conservation® for complete warranty details.



SUBMITTAL : GS5-45HPC

Heat Pump Water Heater



Job Name	Location
Purchaser	Engineer
Submitted to	Reference <input type="checkbox"/> Approval <input type="checkbox"/> Construction <input type="checkbox"/>
Unit Designation	Schedule #

Specifications	GS5-45HPC
Uniform Energy Factor	Dependent on Tank
Uniform First Hour Rating	Dependent on Tank
Recovery rate @ 90°F Temp Rise	20.6 GPH
Nom Heating Capacity (Btu/h)	15,400 Btu/h
Nom Heating Capacity (kw)	4.5kw
Ambient Operating Range	-25 to 114°F
Heating COP @ 80°F Ambient	5.5
Heating COP @ 43°F Ambient	4.2
Heating COP @ 17°F Ambient	2.8
Hot Water Temperature (°F)	145°F / 150°F
Tank Temperature to Start	113°F
GS5 Inlet Water Temp to Stop	118°F
Refrigerant Type	R744 (CO ₂)
Refrigerant Charge (Oz)	25.4oz (720g)
Power Voltage	208/230v-1Ph-60Hz
Breaker Size	15A
MCA (Amps)	7.2A
Compressor MRC (Amps)	5.0A
Fan Motor MOC/Watts	0.3A / 30W
Pump MOC/Watts	0.6A / 60W
Noise Level (DbA)	37
Weight (lbs)	108lbs
Storage Tank Model #'s	SAN-43SSAQA
	ECO-43SSAQB
	SAN-83SSAQA
	ECO-83SSAQB
	SAN-119GLBK
	ECO-119GLASME
	ECO-200GLBK
	ECO-285GLNST
	ECO-360GLNST
	ECO-455GLNST
	ECO-505GLNST
Piping - Tank to Heat Pump & return to Tank	
Cold & Hot Water pipe size	1/2" & 1/2"
Max Pipe Length including	66ft
Max Vertical Separation of	23ft
Max Incoming Water Pressure	75 Psi
Certifications	
Safety	ETL/ETLc
Energy Star	US & Canada
Residential Warranty	
Heat Pump	3 Years Labor
	10 Years Parts

Construction

The Outdoor unit shall be galvanized steel with a baked on powder coated finish on all panels except unit base

Heat Exchangers

Evaporator coil shall be mechanically bonded Aluminum fin to copper tube. Fins shall be coated to resist corrosion

The Refrigerant to Water HX (Gas Cooler) shall be a Double Wall co-axial type pressure tested to 6000 psi

Refrigerant System

Compressor shall be a hermetically sealed DC Inverter drive Rotary type. Refrigerant shall be R744 (CO₂). Refrigerant flow shall be controlled by an Electronic Expansion Valve

Fan & Motor

The GS5 fan shall be propeller, driven by a BLDC motor

Water Pump

The pump shall be a BLDC Impeller type, with a maximum lift of 23ft and total piping length of 66ft

Controls

The unit shall be operated using Eco2 Systems supplied Temperature sensor(s) installed in the Storage tank The ECO/SAN-43, ECO/SAN-83, SAN-119, ECO-119 & ECO-200 Tanks shall have Tank sensors installed and shall be wired directly to the GS5 Heat Pump with 18-2AWG stranded , shielded wire

A Modbus communication signal shall be accepted by the GS5 Heat Pump via a Controller that shall be supplied by ECO2 Systems as an accessory

The accessory Controller shall be wired to the GS5

Interconnect Piping

Interconnect Piping shall be 1/2" copper or where permitted 1/2" PEX tubing directly to the Heat Pump(s)

More than 2 Heat Pumps connected to the same tank shall utilize a reverse return manifold piping system Both Cold and Hot piping should be insulated with min 3/4" closed cell foam and where required Heat Trace shall be used to prevent pipes from freezing

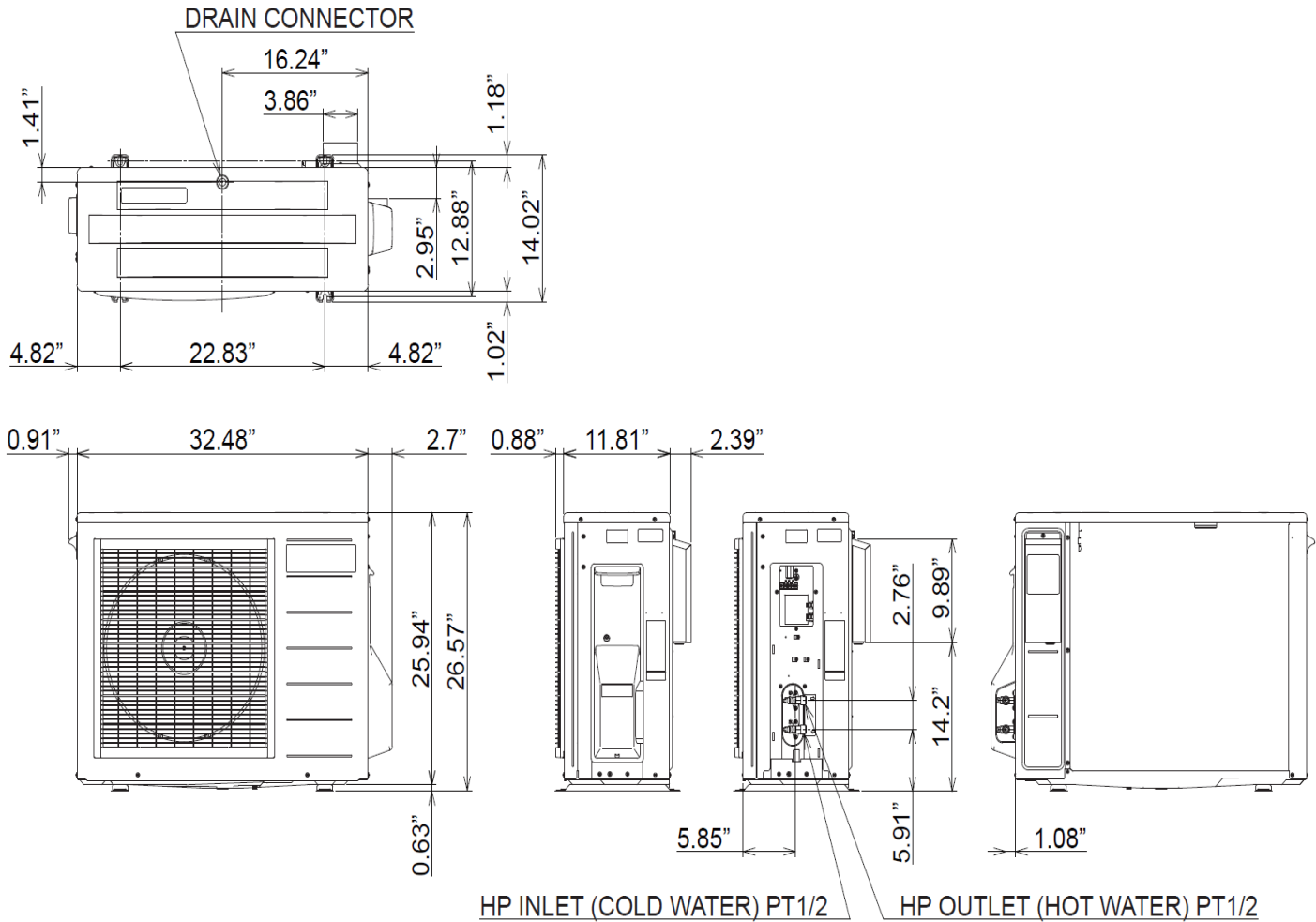


SUBMITTAL : GS5-45HPC Heat Pump Water Heater



Job Name	Location			
Purchaser	Engineer			
Submitted to	Reference <input type="checkbox"/>	Approval <input type="checkbox"/>	Construction <input type="checkbox"/>	<input type="checkbox"/>
Unit Designation	Schedule #			

GS5-45HPC Dimensions



Unit: inch

Eco2 Systems LLC

PO Box 1358, Walled Lake MI 48390, Tel : 1-844 SAND CO2 (1-844 726 3262)

www.eco2waterheater.com

Due to Eco2 Systems LLC's policy of on-going product development specifications are subject to change without notice

SUB-ECO2-GS5-072024

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SUBMITTAL : ECO-43SSAQB

43 Gallon Storage Tank



Job Name :	Location
Purchaser	Engineer
Submitted to	Reference <input type="checkbox"/> Approval <input type="checkbox"/> Construction <input type="checkbox"/>
Unit Designation	Schedule #

Specifications	ECO-43SSAQB
Performance	
Uniform Energy Factor	3.66
Uniform First Hour Rating	69 Gallons
Design	
Nominal Water Storage Volume	43 Gallons
Pressure Relief Valve (Psig & °F)	150 Psig & 210°F
Temperature Sensor	Thermistor
Tank Weight (lbs)	88lbs
Standby Loss in 67°F Ambient	73 Btu/h
Tank Location & Clearances	
Tank Installation location	Indoor
	Exterior if ambient
	is always above 34°F
Tank Clearance required	2" around Tank
Tank Connection Sizes	
Cold Water Inlet	3/4" NPT
Hot Water Outlet	3/4" NPT
Cold Water to Heat Pump	3/4" NPT
Hot Water Return from Heat Pump	3/4" NPT
Press Relief Valve Discharge Line	3/4"
Pipe Size - Tank to Heat Pump	
Size	1/2" & 1/2"
Max Pipe Length inc	66ft
Max Vertical Separation of	23ft
Certifications	
Safety	ETL & ETLc
Performance	Energy Star
AHRI Certification reference #	TBA
Tank Warranty	
Tank	15 Years
	Limited Lifetime

Construction

Storage tank shall be constructed from a blend of 316/444 Stainless Steel pressure tested to 300 psi Tank outer shell shall be steel with a baked on powder coating for protection

Insulation

A minimum of 1 7/8" R12 polystyrene insulation shall be used to insulate the tank to reduce heat loss

Connections

All connections shall be 3/4" NPT Female type Brass adaptors will be supplied with tank Cold Water Piping from Storage Tank to Heat Pump and return of Hot Water piping from Heat Pump to Tank be 1/2" Copper or PEX. Reducing nipples shall be field supplied and installed

Controls

The tank shall be supplied with a Temperature sensor installed in a sensor well to control the GS5-45HPC & GS5-45HPC-D Heat Pumps The tank shall be supplied with 2 extra Thermowells located at the same level as the Hot Water input from the GS5 unit and the Cold Water output to the GS5 Thermowells are to be used for Shed and Load signals from Utilities via CTA-2045/JA-13 Control wiring between Tank to GS5-45HPC and GS4-45HPC-D shall require a 2 wire 18AWG shielded wire between the Tank and Heat Pump

Pressure and Temperature Relief

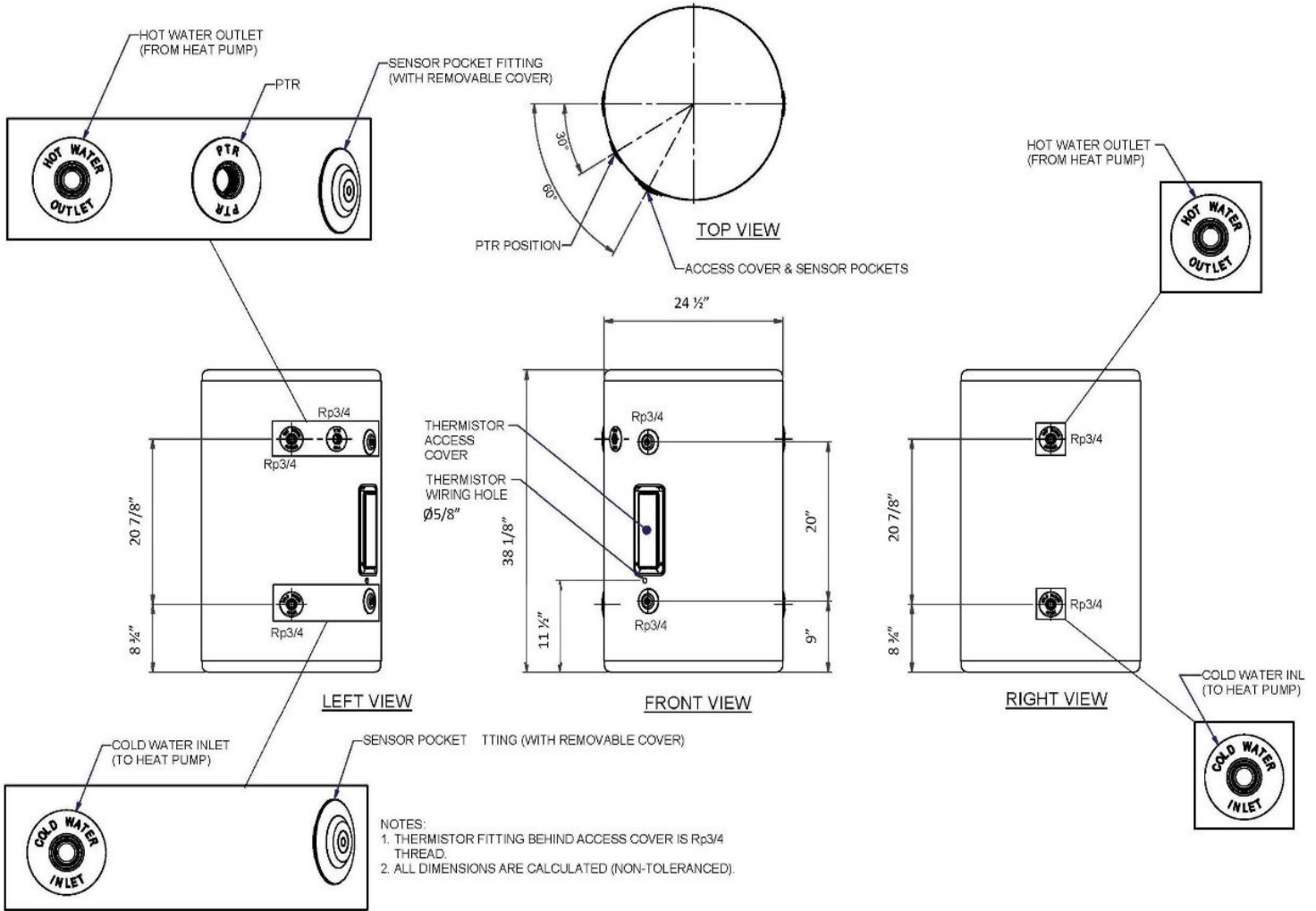
Tank shall be supplied with ASME certified Pressure and Temperature Relief valve. Settings shall be at 150 Psig for Pressure and 210°F for Temperature

Mixing Valve

A factory supplied, but field installed Mixing or Anti Scald valve shall be supplied with the Tank Valve connections shall be 3/4" Female NPT Valve shall be field set to ensure delivered water temperature shall be below 120°F to prevent scalding

Job Name	Location		
Purchaser	Engineer		
Submitted to	Reference <input type="checkbox"/>	Approval <input type="checkbox"/>	Construction <input type="checkbox"/>
Unit Designation	Schedule #		

ECO-43SSAQB Dimensions



SBF-3462

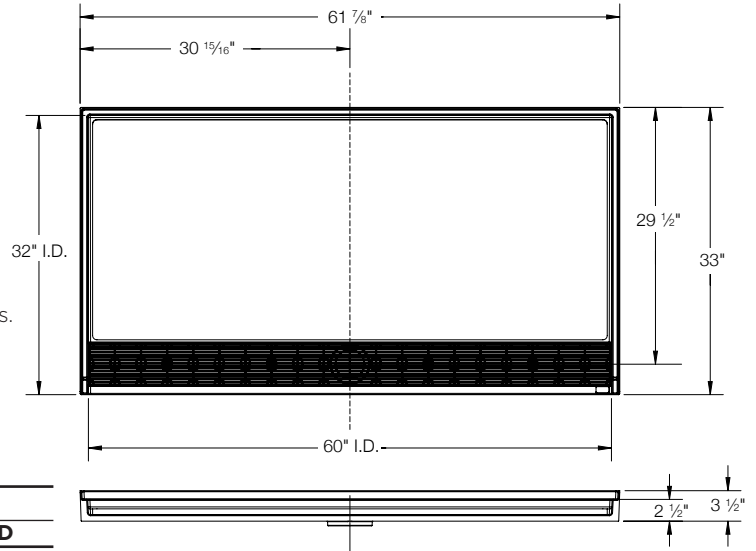
Swanstone Performix Roll-In Trench Drain Shower Pan



Manufactured from Swanstone Solid Surface

FEATURES

- Compression-molded solid surface with glass reinforcement technology.
- 3/4" low threshold entry.
- Patented wall-to-wall trench system with attractive 304 stainless grate.
- No need to recess slab which provides a cost-saving, easy installation.
- Reinforced solid surface will not mold or mildew, no grout to clean.
- Engineered for strength with molded-in structure supports.
- Slip-resistant, textured bottom surface.
- Coordinates with Swanstone shower systems.
- Warranty: Limited Lifetime - Residential
Limited 30-year - Commercial



Model	Nominal Size	Rough-In Dimensions			
		A	B	C	D
SBF-3462 Roll-In Shower Pan	34" x 62"	61 1/4"	33 3/16"	30 1/8"	29 9/16"

IMPORTANT: Rough-in dimensions are provided for reference only. You must measure the actual shower pan and check local building code requirements before construction of the stud wall. Meets ADA requirements for use in new construction or existing bathing facilities.

SPECIFICATIONS

Model	Part	Ship Wt. Lb.	Carton Dims. In.	Cu. Ft.
SBF-3462	SB03462	67	69 x 39 x 10	15.18

Includes: One code-approved compression-molded Swanstone trench drain shower pan. Standard 2" drain sold separately.

Packaging: Each pan packed in a rectangular carton.

Note: This product meets the dimensional requirements to allow for installation in ADA applications. For up-to-date ADA regulations, visit ADA.gov.

COLORS

Solid Colors:

- White (010)
- Bisque (018)
- Bone (037)

Aggregate Colors:

- Bermuda Sand (040)
- Black Galaxy (015)
- Carrara (221)
- Concrete Ash Gray (203)
- Concrete Birch (226)
- Concrete Charcoal Gray (209)
- Concrete Clay (212)
- Concrete Limestone (218)
- Concrete Sandstone (215)
- Ice (130)
- Tahiti White (011)

STANDARDS AND RATINGS

ADA

American National Standard Institute—ANSI Z124.1.2

International Association of Plumbing and Mechanical Officials (IAPMO)—Listed

CSA Standard B45.5 by IAPMO

Uniform Plumbing Code (UPC)

California Building Code (CBC)/Title 24

For a complete list of tests and results see the Technical Data Sheet.

MAINTENANCE AND CLEANING INFORMATION

Clean regularly with common household liquid cleaners and a sponge or soft cloth. For hard water stains, scale removers can be used. If necessary, abrasive cleaners can be used with a nylon brush or pad to remove build up on the shower pan surface. **Do not** use a metal-scouring pad or a wire brush, as it will damage the surface. **Do not** use "leave on" cleaning products, such as automatic spray shower cleaners. Prolonged contact with harsh chemicals could have an adverse reaction over time and discolor surfaces. **Do not** use cleaning agents that caution use on acrylic, polyester or plastics.

SUPPORT DOCUMENTS

Installation instructions available at swanstone.com.

MADE IN USA

PVA-A42AA7 & PUZ-A42NKA7-BS
42,000 BTU/H MULTI-POSITION AIR HANDLER
42,000 BTU/H HEAT PUMP UNIVERSAL OUTDOOR



Job Name:

System Reference:

Date:

Indoor Unit.....PVA-A42AA7

Outdoor Unit.....PUZ-A42NKA7-BS



INDOOR UNIT FEATURES

- Ducted air handler provides a solution to cool and heat large zones
- Highly efficient totally enclosed ECM motor
- Selectable external static pressure: 0.30, 0.50 and 0.80 in.WG with 3 fan speeds at each static setting
- 1 inch R4.2 fiberglass free insulation reduces condensation and boosts efficiency
- Positive pressure cabinet with air leakage of less than 1.0% at 1.0 in.WG
- Unique blow through design allows simple coil cleaning when the blower is removed
- Multi-position installation: horizontal (left or right), vertical (up or down). For downflow configurations, the CMA-1 is recommended for proper management of condensate to prevent water blow-off in certain conditions
- Optional electric heat kit for additional heat capacity
- Optional humidifier control and ERV control
- Multiple control options available:
 - kumo cloud® smart device app for remote access
 - Third-party interface options
 - Wired or wireless controllers

OUTDOOR UNIT FEATURES

- Variable speed INVERTER-driven compressor
- Power receiver pre-charged with refrigerant volume for piping length up to 100 ft
- Low ambient cooling down to 0°F providing 100% capacity
- 24-hour continuous operation (cooling mode)
- High pressure protection
- Fast restart
- Superior energy and operational efficiency
- Seacoast protection on heat exchanger and base panel (rated for 2,000 hours in accordance with ASTM B117 testing)

SPECIFICATIONS: PVA-A42AA7 & PUZ-A42NKA7-BS

Cooling at 95°F ¹	Maximum Capacity	BTU/H	42,000
	Rated Capacity	BTU/H	42,000
	Minimum Capacity	BTU/H	15,000
	Maximum Power Input	W	4,150
	Rated Power Input	W	4,150
	Moisture Removal	Pints/h	7.9
	Sensible Heat Factor		0.81
Heating at 47°F ²	Maximum Capacity	BTU/H	48,000
	Rated Capacity	BTU/H	46,000
	Minimum Capacity	BTU/H	18,100
	Maximum Power Input	W	4,320
	Rated Power Input	W	3,900
	Power Factor [208V / 230V]	%	95.4 / 95.4
Heating at 17°F ³	Maximum Capacity	BTU/H	31,400
	Rated Capacity	BTU/H	28,400
	Maximum Power Input	W	3,490
	Rated Power Input	W	3,440
Heating at 5°F ⁴	Maximum Capacity	BTU/H	26,800
	Maximum Power Input	W	3,400
Efficiency	SEER		18.0
	EER ¹		10.1
	HSPF [IV]		9.3
	COP at 47°F ²		3.44
	COP at 17°F at Maximum Capacity ³		2.64
	COP at 5°F at Maximum Capacity ⁴		2.31
Electrical	ENERGY STAR® Certified		No
	Voltage, Phase, Frequency		208/230, 1, 60
	Guaranteed Voltage Range	V AC	198 - 253
	Voltage: Indoor - Outdoor, S1-S2	V AC	208/230
	Voltage: Indoor - Outdoor, S2-S3	V DC	24
	Short-circuit Current Rating [SCCR]	kA	5
	Recommended Fuse/Breaker Size (Outdoor)	A	30
	Recommended Wire Size [Indoor - Outdoor]	AWG	14
	Power Supply		Indoor unit is powered by the outdoor unit
	Indoor Unit	MCA	A
Fan Motor Full Load Amperage		A	4.50
Fan Motor Type			DC Motor
Airflow Rate at Cooling, Dry		CFM	1,040–1,262–1,485
Airflow Rate at Heating, Dry		CFM	1,040–1,262–1,485
Sound Pressure Level [Cooling]		dB[A]	36–40–44
Sound Pressure Level [Heating]		dB[A]	36–40–44
External Static Pressure		in.WG	0.30–0.5–0.8
Drain Pipe Size		In. [mm]	3/4 FPT [19.05]
Coating on Heat Exchanger			—
External Finish Color			Galvanized steel cabinet-Powder coated Slate Gray
Unit Dimensions		W x D x H: In. [mm]	25 x 21-5/8 x 59-1/2 [635 x 548 x 1,511]
Package Dimensions		W x D x H: In. [mm]	13-7/16 x 34-11/16 x 65 [340 x 880 x 1,650]
Unit Weight		Lbs. [kg]	172 [78]
Indoor Unit Operating Temperature Range	Cooling Intake Air Temp [Maximum / Minimum]*	°F	90 DB, 72 WB / 66 DB, 61 WB
	Heating Intake Air Temp [Maximum / Minimum]	°F	77 DB / 59 DB

NOTES:

AHRI Rated Conditions (Rated data is determined at a fixed compressor speed)

¹ Cooling (Indoor // Outdoor)	°F	80 DB, 67 WB // 95 DB, 75 WB
² Heating at 47°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 47 DB, 43 WB
³ Heating at 17°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 17 DB, 15 WB

Conditions ⁴Heating at 5°F (Indoor // Outdoor) °F 70 DB, 60 WB // 5 DB, 4 WB

*Indoor/Outdoor Unit Operating Temperature Range (Cooling Air Temp [Maximum / Minimum]):

- Applications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.
 - » Wind baffles required to operate below 23°F DB in cooling mode.
 - » Heat pump system with wind baffle: 0°F - 115°F.
 - » Refer to wind baffle documentation for further information.

**Outdoor Unit Operating Temperature Range (Cooling Thermal Lock-out / Re-start Temperatures; Heating Thermal Lock-out / Re-start Temperatures):

- System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

SPECIFICATIONS: PVA-A42AA7 & PUZ-A42NKA7-BS

Outdoor Unit	MCA	A	25.0	
	MOCP	A	31	
	Fan Motor Full Load Amperage	A	0.5 + 0.5	
	Airflow Rate [Cooling / Heating]	CFM	3880 / 3880	
	Refrigerant Control		LEV	
	Defrost Method		Reverse Cycle	
	Coating on Heat Exchanger		Blue Fin Coating (BS Model only)	
	Sound Pressure Level, Cooling ¹	dB(A)	52	
	Sound Pressure Level, Heating ²	dB(A)	53	
	Compressor Type		INVERTER-driven twin rotary	
	Compressor Model		MNB33FBRMC-L	
	Compressor Rated Load Amps	A	8	
	Compressor Locked Rotor Amps	A	13.0	
	Compressor Oil [Type // Charge]	oz.	FV50S // 45	
	External Finish Color		Ivory Munsell 3Y 7.8/1.1	
	Base Pan Heater		N/A	
	Unit Dimensions	W x D x H: In. [mm]	41-5/16 x 13 (+1-3/16) x 52-11/16 [1050 x 330 (+30) x 1338]	
	Package Dimensions	W x D x H: In. [mm]	42-15/16 x 17-11/16 x 56-4/16 [1091 x 450 x 1429]	
	Unit Weight	Lbs. [kg]	214 [97]	
	Package Weight	Lbs. [kg]	245 [111]	
	Outdoor Unit Operating Temperature Range	Cooling Air Temp [Maximum / Minimum]*	°F	115 DB / 0 DB
		Heating Air Temp [Maximum / Minimum]	°F	70 DB, 59 WB / -4 DB, -4 WB
		Heating Thermal Lock-out / Re-start Temperatures**	°F	-8 / -4
Refrigerant	Maximum Charge Quantity	Lbs, oz	10.0, 6.0	
	Initial Charge Quantity	Ft. [m]	0.0 [30.0]	
	Additional Refrigerant Charge Per Additional Piping Length	oz./Ft. [g/m]	0.7 [50]	
Piping	Gas Pipe Size O.D. [Flared]	In.[mm]	5/8 [15.88]	
	Liquid Pipe Size O.D. [Flared]	In.[mm]	3/8 [9.52]	
	Maximum Piping Length	Ft. [m]	165 [50]	
	Maximum Height Difference	Ft. [m]	100 [30]	
	Maximum Number of Bends		15	

NOTES:

AHRI Rated Conditions

(Rated data is determined at a fixed compressor speed)

¹Cooling (Indoor // Outdoor) °F 80 DB, 67 WB // 95 DB, 75 WB

²Heating at 47°F (Indoor // Outdoor) °F 70 DB, 60 WB // 47 DB, 43 WB

³Heating at 17°F (Indoor // Outdoor) °F 70 DB, 60 WB // 17 DB, 15 WB

Conditions

⁴Heating at 5°F (Indoor // Outdoor) °F 70 DB, 60 WB // 5 DB, 4 WB

*Indoor/Outdoor Unit Operating Temperature Range (Cooling Air Temp [Maximum / Minimum]):

• Applications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.

» Wind baffles required to operate below 23°F DB in cooling mode.

» Heat pump system with wind baffle: 0°F - 115°F.

» Refer to wind baffle documentation for further information.

**Outdoor Unit Operating Temperature Range (Cooling Thermal Lock-out / Re-start Temperatures; Heating Thermal Lock-out / Re-start Temperatures):

• System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

INDOOR UNIT ACCESSORIES: PVA-A42AA7

Control Interface	3-Pin Connector	PAC-715AD
	BACnet® and Modbus® Interface	PAC-UKPRC001-CN-1
	CN24 Relay Kit	CN24RELAY-KIT-CM3
	Connector cable for remote display	PAC-SA88HA-EP
	IT Extender	PAC-WHS01IE-E
	kumo station® for kumo cloud®	PAC-WHS01HC-E
	Lockdown bracket for remote controller	RCMKP1CB
	Remote Operation Adapter†	PAC-SF40RM-E
	Thermostat Interface	PAC-US444CN-1
	Thermostat Interface	PAC-US445CN-1
	USNAP Adapter	PAC-WHS01UP-E
Remote Sensor	Flush Mount Remote Temperature Sensor	PAC-USSEN002-FM-1
	Flush Mount Temperature Sensor	PAC-USSEN001-FM-1
	Remote Temperature Sensor	PAC-SE41TS-E
	Wireless temperature and humidity sensor for kumo cloud®	PAC-USWHS003-TH-1
Wired Remote Controller	Airzone ZBS Wired Blueface Principal Controller White	AZZBSBLUEFACECB
	Airzone ZBS Wired Lite Controller White	AZZBSLITECB
	Airzone ZBS Wired Think Controller White	AZZBSTHINKCB
	Airzone ZBS Wireless Lite Controller White	AZZBSLITERB
	Airzone ZBS Wireless Think Controller White	AZZBSTHINKRB
	Deluxe Wired MA Remote Controller†	PAR-40MAAU
	Simple MA Remote Controller†	PAC-YT53CRAU-J
	Touch MA Controller†	PAR-CT01MAU-SB
Wireless Remote Controller	kumo touch™ RedLINK™ Wireless Controller	MHK2
	Wireless MA Receiver	PAR-FA32MA-W
	Wireless MA Remote Controller	PAR-FL32MA-E
Condensate	Blue Diamond (Advanced) Mini Condensate Pump w/ Reservoir & Sensor (208/230V) [recommended]	X87-721
	Blue Diamond (MegaBlue Advanced) Condensate Pump w/ Reservoir & Sensor	X87-835
	Blue Diamond Sensor Extension Cable — 15 Ft.	C13-103
	Refco Condensate Pump (100-240 VAC) up to 120,000 BTU/H	COMBI
Control Wire	20/2PR, 1PR shielded + 1PR plenum wire for Airzone, 100 ft reel	CW2042S2-100
	20/2PR, shielded + 1PR plenum wire for Airzone, 500 ft reel	CW2042S2-500
Disconnect Switch	(30A/600V/UL) [fits 2" X 4" utility box] - Black	TAZ-MS303
	(30A/600V/UL) [fits 2" X 4" utility box] - White	TAZ-MS303W
Downflow Kit	Condensate Management Kit for downflow installation	CMA-1
Electric Heat Lockout	Electric Heat Lockout	ETC-211020-MIT
Electric Kit Heats	10kW Electric Heater	EH10-MPA-LB
	15kW Electric Heater	EH15-MPAS-LB
	17kW Electric Heater	EH17-MPAS-LB
Lineset	10' x 3/8" x 10' x 5/8" Lineset (Twin-Tube Insulation)††	MPLS385812T-10
	100' x 3/8" x 100' x 5/8" Lineset (Twin-Tube Insulation)††	MPLS385812T-100
	15' x 3/8" x 15' x 5/8" Lineset (Twin-Tube Insulation)††	MPLS385812T-15
	30' x 3/8" x 30' x 5/8" Lineset (Twin-Tube Insulation)††	MPLS385812T-30
	50' x 3/8" x 50' x 5/8" Lineset (Twin-Tube Insulation)††	MPLS385812T-50
	65' x 3/8" x 65' x 5/8" Lineset (Twin-Tube Insulation)††	MPLS385812T-65
Terminal Block	Separate Terminal Power Block	SPTB1

NOTES:

†PAC-SF40RM-E (Unable to use with wireless remote controller)

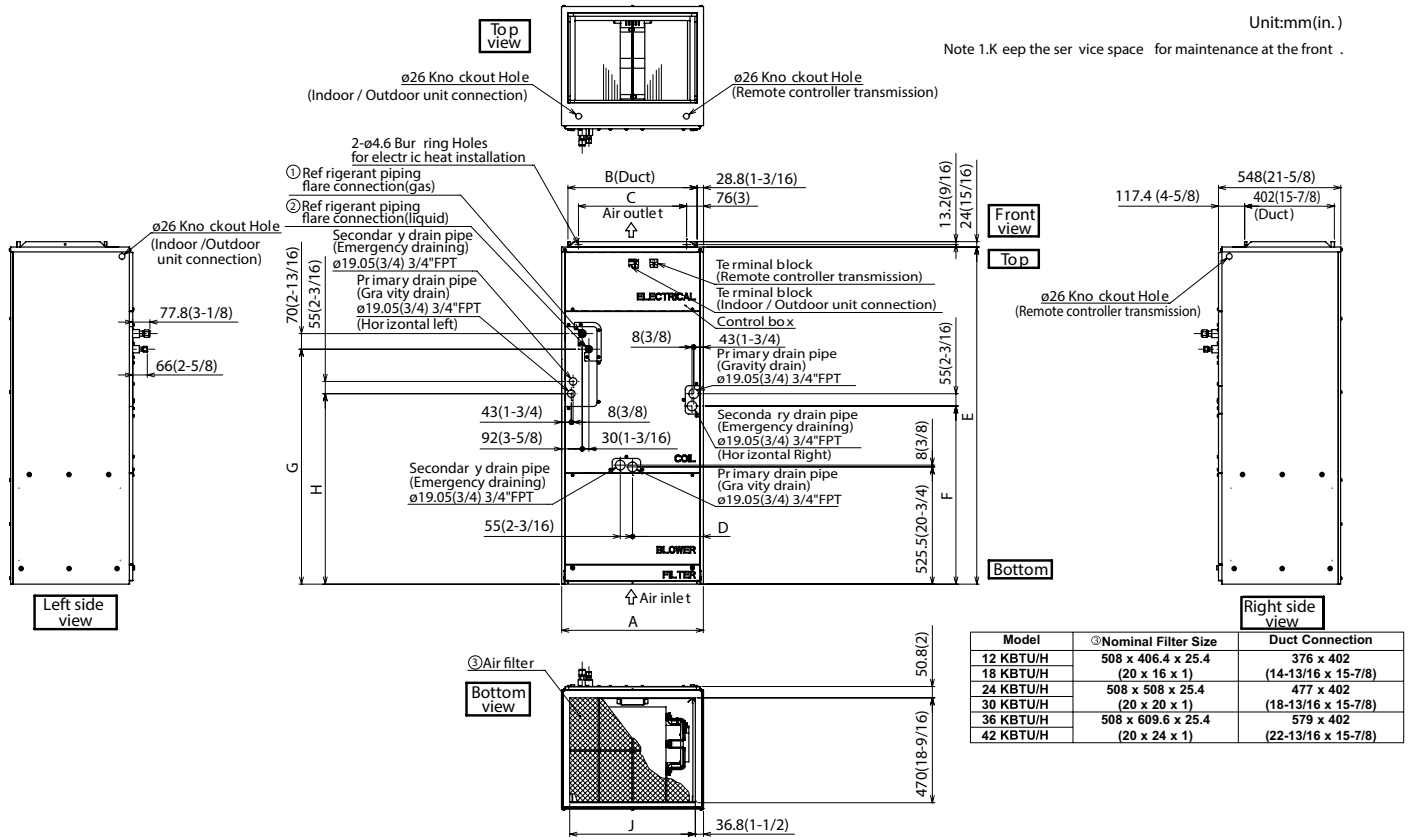
OUTDOOR UNIT ACCESSORIES: PUZ-A42NKA7-BS

Air Outlet Guide	Air Outlet Guide (1 Piece)	PAC-SG59SG-E
	Air Outlet Guide (1 Piece)	PAC-SH96SG-E (two pieces are required)
Control/Service Tool	Control/Service Tool	PAC-SK52ST
	M- & P-Series Maintenance Tool Cable Set	M21EC0397
	USB/UART Conversion Cable (Required for all laptop connection)	M21EC1397
M-NET Converter	M-NET Converter	PAC-SJ85MA-E
	M-NET Converter	PAC-SJ95MA-E
Mounting Pad	Condensing Unit Mounting Pad: 24" x 42" x 3"	ULTRILITE2
Stand	18" Dual Fan Stand	QSMS1802M
	24" Dual Fan Stand	QSMS2402M
	Condenser Wall Bracket	QSWB2000M-1
	Condenser Wall Bracket - Stainless Steel Finish	QSWBSS
	Outdoor Unit Stand — 12" High	QSMS1202M
Wind Baffle	Front Wind Baffle	WB-PA3 (two pieces are required)
	Rear Wind Baffle	WB-RE6
	Side Advanced Wind Baffle	WB-SD6

INDOOR UNIT DIMENSIONS: PVA-A42AA7

Unit:mm(in.)

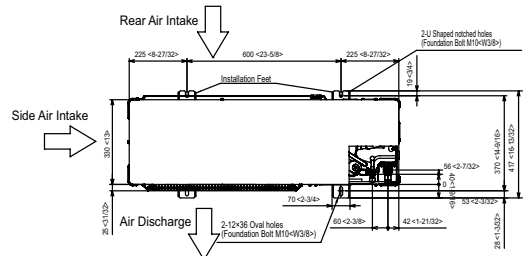
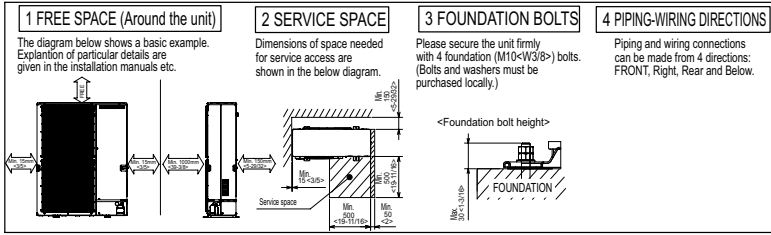
Note 1.Keep the service space for maintenance at the front.



Model	A	B	C	D	E	F	G	H	J	Unit: mm (in.)	
										①Gas Pipe	②Liquid Pipe
12 KBTU/H	432 (17)	376 (14-13/16)	281 (11-1/8)	224 (8-7/8)	1275 (50-1/4)	680 (26-13/16)	823 (32-7/16)	735.5 (29)	360 (14-3/16)	Φ 12.7 (1/2)	Φ 6.35 (1/4)
18 KBTU/H	534 (21)	477 (18-13/16)	382.6 (15-1/8)	266.5 (10-1/2)	1378 (54-1/4)	737 (29-1/16)	953.5 (37-9/16)	792 (31-3/16)	461 (18-3/16)	Φ 15.88 (5/8)	Φ 9.52 (3/8)
24 KBTU/H	635 (25)	579 (22-13/16)	484.6 (19-1/8)	317.5 (12-1/2)	1511 (59-1/2)	798.5 (31-7/16)	1053 (41-1/2)	853.5 (33-5/8)	563 (22-3/16)	Φ 15.88 (5/8)	Φ 9.52 (3/8)
30 KBTU/H											
36 KBTU/H											
42 KBTU/H											

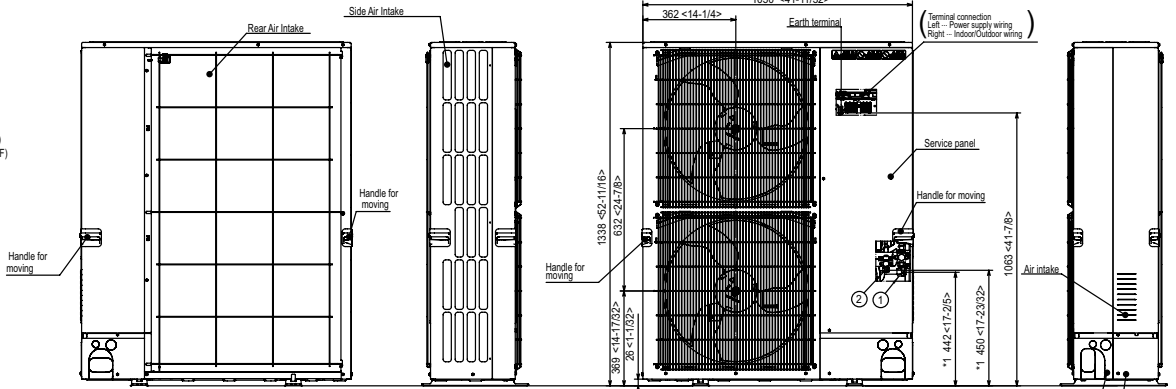
OUTDOOR UNIT DIMENSIONS: PUZ-A42NKA7-BS

Unit: mm<in>

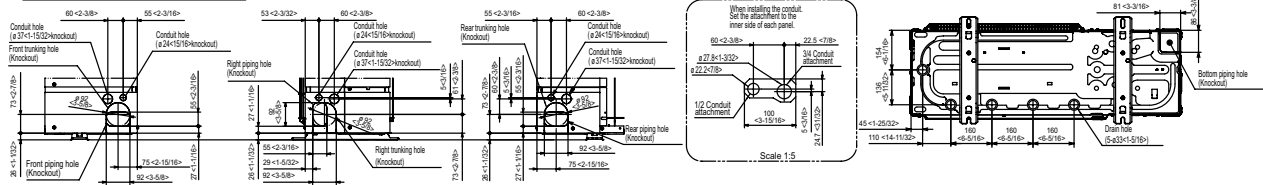


Example of Notes

- ① - Refrigerant GAS pipe connection (FLARE) ø15.88(5/8F)
- ② - Refrigerant LIQUID pipe connection (FLARE) ø9.52(3/8F)
- *1 ... Indication of STOP VALVE connection location.



Piping Knockout Hole Details



1340 Satellite Boulevard Suwanee, GA 30024
Toll Free: 800-433-4822 www.mehvac.com

FORM# PVA-A42AA7 & PUZ-A42NKA7-BS - 202211



PVA-A24AA7 & PUZ-HA24NHA1-R1
24,000 BTU/H MULTI-POSITION AIR HANDLER
24,000 BTU/H HYPER-HEATING UNIVERSAL OUTDOOR



Job Name:

System Reference:

Date:

Indoor Unit.....PVA-A24AA7

Outdoor Unit.....PUZ-HA24NHA1-R1



INDOOR UNIT FEATURES

- Ducted air handler provides a solution to cool and heat large zones
- Highly efficient totally enclosed ECM motor
- Selectable external static pressure: 0.30, 0.50 and 0.80 in.WG with 3 fan speeds at each static setting
- 1 inch R4.2 fiberglass free insulation reduces condensation and boosts efficiency
- Positive pressure cabinet with air leakage of less than 1.0% at 1.0 in.WG
- Unique blow through design allows simple coil cleaning when the blower is removed
- Multi-position installation: horizontal (left or right), vertical (up or down). For downflow configurations, the CMA-1 is recommended for proper management of condensate to prevent water blow-off in certain conditions
- Optional electric heat kit for additional heat capacity
- Optional humidifier control and ERV control
- Multiple control options available:
 - kumo cloud® smart device app for remote access
 - Third-party interface options
 - Wired or wireless controllers

OUTDOOR UNIT FEATURES

- Variable speed INVERTER-driven compressor
- Wide heating range: heating performance down to -13°F (average of 80% heating capacity)
- High speed heating at start up: Hyper-Heating INVERTER® reduces the time for heating at start up by about half compared to standard models
- Pre-charged with refrigerant volume for piping length up to 70 ft.
- High pressure/temperature protection
- Built-in base pan heater

SPECIFICATIONS: PVA-A24AA7 & PUZ-HA24NHA1-R1

Cooling at 95°F ¹	Maximum Capacity	BTU/H	24,000
	Rated Capacity	BTU/H	24,000
	Minimum Capacity	BTU/H	10,000
	Maximum Power Input	W	2,100
	Rated Power Input	W	2,100
	Moisture Removal	Pints/h	3.7
	Sensible Heat Factor		0.83
Heating at 47°F ²	Power Factor [208V / 230V]	%	90.0 / 90.0
	Maximum Capacity	BTU/H	28,000
	Rated Capacity	BTU/H	26,000
	Minimum Capacity	BTU/H	10,000
	Maximum Power Input	W	2,200
	Rated Power Input	W	1,980
Heating at 17°F ³	Power Factor [208V / 230V]	%	89.0 / 89.0
	Maximum Capacity	BTU/H	26,000
	Rated Capacity	BTU/H	17,500
	Maximum Power Input	W	3,550
Heating at 5°F ⁴	Rated Power Input	W	2,126
	Maximum Capacity	BTU/H	26,000
Heating at -13°F ⁷	Maximum Power Input	W	3,986
	Maximum Capacity	BTU/H	20,800
Efficiency	SEER ²		19.0
	EER ² ¹		11.4
	HSPF ² [IV]		9.4
	COP at 47°F ²		3.8
	COP at 17°F at Maximum Capacity ³		2.1
	COP at 5°F at Maximum Capacity ⁴		1.9
	ENERGY STAR [®] Certified		Yes
Electrical	Voltage, Phase, Frequency		208/230, 1, 60
	Guaranteed Voltage Range	V AC	198 - 253
	Voltage: Indoor - Outdoor, S1-S2	V AC	208/230
	Voltage: Indoor - Outdoor, S2-S3	V DC	24
	Short-circuit Current Rating [SCCR]	kA	5
	Recommended Fuse/Breaker Size (Outdoor)	A	25
	Recommended Wire Size [Indoor - Outdoor]	AWG	12
	Power Supply		Indoor unit is powered by the outdoor unit
Indoor Unit	MCA	A	4.13
	Fan Motor Full Load Amperage	A	3.3
	Fan Motor Type		DC Motor
	Airflow Rate at Cooling, Dry	CFM	613–744–875
	Airflow Rate at Heating, Dry	CFM	613–744–875
	Sound Pressure Level [Cooling]	dB[A]	30–34–38
	Sound Pressure Level [Heating]	dB[A]	30–34–38
	External Static Pressure	in.WG	0.30–0.5–0.8
	Drain Pipe Size	In. [mm]	3/4 FPT [19.05]
	Coating on Heat Exchanger		—
	External Finish Color		Galvanized steel cabinet-Powder coated Slate Gray
	Unit Dimensions	W x D x H: In. [mm]	21 x 21-5/8 x 54-1/4 [534 x 548 x 1,378]
	Package Dimensions	W x D x H: In. [mm]	28-3/4 x 22 x 58-5/8 [730 x 560 x 1,490]
	Unit Weight	Lbs. [kg]	141 [64]
Package Weight	Lbs. [kg]	163 [74]	
Indoor Unit Operating Temperature Range	Cooling Intake Air Temp [Maximum / Minimum]*	°F	90 DB, 72 WB / 66 DB, 61 WB
	Heating Intake Air Temp [Maximum / Minimum]	°F	77 DB / 59 DB

NOTES:

AHRI Rated Conditions

(Rated data is determined at a fixed compressor speed)

¹Cooling (Indoor // Outdoor) °F 80 DB, 67 WB // 95 DB, 75 WB

²Heating at 47°F (Indoor // Outdoor) °F 70 DB, 60 WB // 47 DB, 43 WB

³Heating at 17°F (Indoor // Outdoor) °F 70 DB, 60 WB // 17 DB, 15 WB

Conditions

⁴Heating at 5°F (Indoor // Outdoor) °F 70 DB, 60 WB // 5 DB, 4 WB

⁷Heating at -13°F (Indoor // Outdoor) °F 70 DB, 60 WB // -13 DB, -14 WB

* Indoor/Outdoor Unit Operating Temperature Range (Cooling Air Temp [Maximum / Minimum]):

- Wind baffles required to operate below 23°F DB in cooling mode.
- Refer to wind baffle documentation for further information.

**Outdoor Unit Operating Temperature Range (Cooling Thermal Lock-out / Re-start Temperatures; Heating Thermal Lock-out / Re-start Temperatures):

- System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

SPECIFICATIONS: PVA-A24AA7 & PUZ-HA24NHA1-R1

Outdoor Unit	MCA	A	17.0
	MOCP	A	27
	Fan Motor Output	W	74
	Airflow Rate [Cooling / Heating]	CFM	1940 / 1940
	Refrigerant Control		Linear expansive valve
	Defrost Method		Reverse Cycle
	Sound Pressure Level, Cooling ¹	dB(A)	52
	Sound Pressure Level, Heating ²	dB(A)	53
	Compressor Type		Scroll
	Compressor Model		DNB28FBAMT
	Compressor Rated Load Amps	A	9
	Compressor Locked Rotor Amps	A	18.0
	Compressor Oil [Type // Charge]	oz.	FVC68D // 34
	External Finish Color		Ivory Munsell 3Y 7.8/1.1
	Base Pan Heater		Built-in
	Unit Dimensions	W x D x H: In. [mm]	37-13/32 x 13 (+1-3/16) x 37-1/8 [950 x 330 (+30) x 943]
	Package Dimensions	W x D x H: In. [mm]	41 x 18 x 41 [1040 x 450 x 1033]
	Unit Weight	Lbs. [kg]	190 [86]
	Package Weight	Lbs. [kg]	210 [95]
	Outdoor Unit Operating Temperature Range	Cooling Air Temp [Maximum / Minimum]*	°F
Heating Air Temp [Maximum / Minimum]		°F	70 DB, 59 WB / -13 DB, -13 WB
Heating Thermal Lock-out / Re-start Temperatures**		°F	-22 / -13
Refrigerant	Type		R410A
	Pre-Charged Refrigerant Amount	Lbs, oz	7.0, 11.0
	Maximum Pre-Charged Piping Length	Ft. [m]	70.0 [21.0]
	Additional Refrigerant Charge Per Additional Piping Length	oz./Ft. [g/m]	0.7 [65]
Piping	Gas Pipe Size O.D. [Flared]	In.[mm]	5/8 [15.88]
	Liquid Pipe Size O.D. [Flared]	In.[mm]	3/8 [9.52]
	Maximum Piping Length	Ft. [m]	165 [50]
	Maximum Height Difference	Ft. [m]	100 [30]
	Maximum Number of Bends		15

NOTES:

AHRI Rated Conditions

(Rated data is determined at a fixed compressor speed)

¹Cooling (Indoor // Outdoor) °F 80 DB, 67 WB // 95 DB, 75 WB

²Heating at 47°F (Indoor // Outdoor) °F 70 DB, 60 WB // 47 DB, 43 WB

³Heating at 17°F (Indoor // Outdoor) °F 70 DB, 60 WB // 17 DB, 15 WB

Conditions

⁴Heating at 5°F (Indoor // Outdoor) °F 70 DB, 60 WB // 5 DB, 4 WB

⁷Heating at -13°F (Indoor // Outdoor) °F 70 DB, 60 WB // -13 DB, -14 WB

* Indoor/Outdoor Unit Operating Temperature Range (Cooling Air Temp [Maximum / Minimum]):

- Wind baffles required to operate below 23°F DB in cooling mode.
- Refer to wind baffle documentation for further information.

**Outdoor Unit Operating Temperature Range (Cooling Thermal Lock-out / Re-start Temperatures; Heating Thermal Lock-out / Re-start Temperatures):

- System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

INDOOR UNIT ACCESSORIES: PVA-A24AA7

Control Interface	Airzone Wired Blueface Controller (White)	AZZBSBLUEZEROCB
	Airzone Wired Lite Controller (White)	AZZBSLITECB
	Airzone Wireless Lite Controller (White)	AZZBSLITERB
	Airzone Wireless Think Controller (White)	AZZBSTHINKRB
	Backup Heat Relay Kit Adapter for CN24 or CN152 on ducted models	CN24RELAY-KIT-CM3
	kumo station™ for kumo cloud®	PAC-WHS01HC-E
	On/Off and Error Status Output Adapter for CN51 or CN52	PAC-SA88HA-EP
	On/Off Input Adapter for CN32 and Forced Fan Operation Input Adapter for SWE	PAC-715AD
	Operation and Error Status Output Adapter	PAC-SF40RM-E
	Procon BACnet® and Modbus® Interface	PAC-UKPRC001-CN-1
	Thermostat Interface for 3rd Party Thermostats	PAC-US445CN-1
	USNAP Adapter for Demand Response	PAC-WHS01UP-E
Remote Sensor	Flush Mount Remote Temperature Sensor for SEZ, SLZ, SVZ and all P-Series models	PAC-USSEN002-FM-1
	Wall Mount Remote Temperature Sensor	PAC-SE41TS-E
	Wireless temperature and humidity sensor for kumo cloud®	PAC-USWHS003-TH-1
Wired Remote Controller	Simple Ductless Wired Remote Controller	PAC-SDW01RC-1
	Simple MA Remote Controller	PAC-YT53CRAU-J
	Touch MA Wired Remote Controller	PAR-CT01MAU-SB
Wireless Remote Controller	kumo touch™ RedLINK™ Wireless Controller & Receiver kit	MHK2
	Lockdown Bracket for Wireless Handheld Remote Controllers	RCMKP1CB
	Portable Central Controller	MCCH1
	Universal Wireless MA Handheld Remote Controller	PAR-FL32MA-E
	Universal Wireless Receiver for PAR-FL32MA-E	PAR-FA32MA-W
Condensate	Blue Diamond (Advanced) Mini Condensate Pump w/ Reservoir & Sensor (208/230V) [recommended]	X87-721
	Blue Diamond (MegaBlue Advanced) Condensate Pump w/ Reservoir & Sensor	X87-835
	Blue Diamond Sensor Extension Cable — 15 Ft.	C13-103
	Refco Condensate Pump (100-240 VAC) up to 120,000 BTU/H	COMBI
Control Wire	20/2PR, 1PR shielded + 1PR plenum wire for Airzone, 100 ft reel	CW2042S2-100
	20/2PR, shielded + 1PR plenum wire for Airzone, 500 ft reel	CW2042S2-500
Disconnect Switch	(30A/600V/UL) [fits 2" X 4" utility box] - Black	TAZ-MS303
	(30A/600V/UL) [fits 2" X 4" utility box] - White	TAZ-MS303W
Downflow Kit	Condensate Management Kit for downflow installation	CMA-1
Electric Heat Lockout	Electric Heat Lockout	ETC-211020-MIT
Electric Kit Heats	10kW Electric Heater	EH10-MPA-MB
	3kW Electric Heater	EH03-MPA-MB
	5kW Electric Heater	EH05-MPA-MB
	8kW Electric Heater	EH08-MPA-MB
Lineset		Lineset 3/8x5/8
	10' x 3/8" x 10' x 5/8" Lineset (Twin-Tube Insulation)	MPLS385812T-10
	100' x 3/8" x 100' x 5/8" Lineset (Twin-Tube Insulation)	MPLS385812T-100
	15' x 3/8" x 15' x 5/8" Lineset (Twin-Tube Insulation)	MPLS385812T-15
	30' x 3/8" x 30' x 5/8" Lineset (Twin-Tube Insulation)	MPLS385812T-30
	50' x 3/8" x 50' x 5/8" Lineset (Twin-Tube Insulation)	MPLS385812T-50
Terminal Block	65' x 3/8" x 65' x 5/8" Lineset (Twin-Tube Insulation)	MPLS385812T-65
	Separate Terminal Power Block	SPTB1

NOTES:

*PAC-SF40RM-E (Unable to use with wireless remote controller)

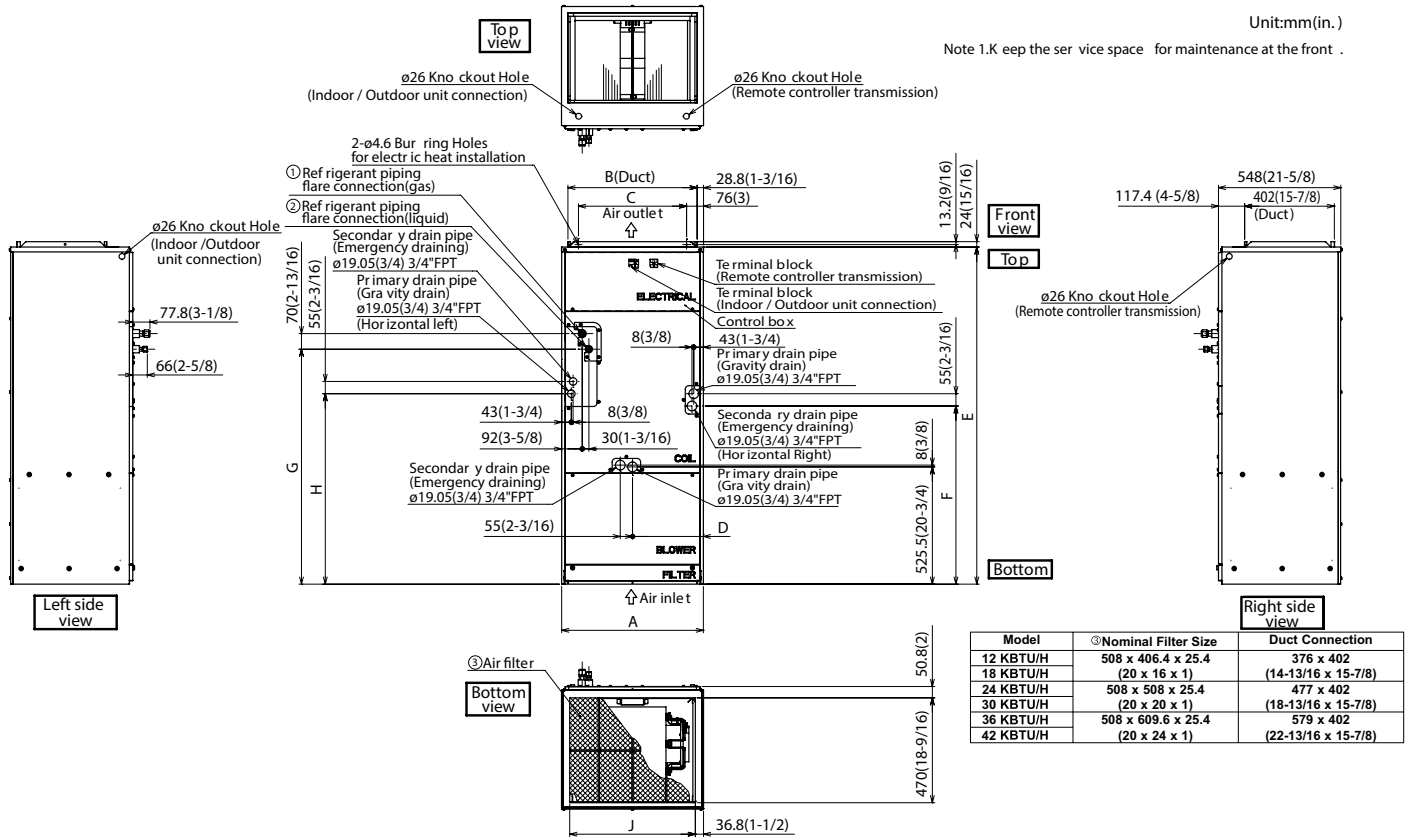
OUTDOOR UNIT ACCESSORIES: PUZ-HA24NHA1-R1

Air Outlet Guide	Air Outlet Guide (1 Piece)	PAC-SG59SG-E
Control/Service Tool	Control/Service Tool	PAC-SK52ST
Hail Guards	Hail Guard	HG-A6
Lineset		Lineset 1/4x1/2
		Lineset 3/8x5/8
M-NET Converter	M-NET Converter	PAC-SJ95MA-E
	M-NET Interface for PUZ-A-NKA7 12 & 18 outdoor units	PAC-SJ96MA-E
Mini-Split Wire	14 Gauge, 4 wire MiniSplit Cable—250 ft. roll	S144-250
	14 Gauge, 4 wire MiniSplit Cable—250 ft. roll	SW144-250
	14 Gauge, 4 wire MiniSplit Cable—50 ft. roll	S144-50
	14 Gauge, 4 wire MiniSplit Cable—50 ft. roll	SW144-50
	16 Gauge, 4 wire MiniSplit Cable—250 ft. roll	S164-250
	16 Gauge, 4 wire MiniSplit Cable—250 ft. roll	SW164-250
	16 Gauge, 4 wire MiniSplit Cable—50 ft. roll	S164-50
	16 Gauge, 4 wire MiniSplit Cable—50 ft. roll	SW164-50
Mounting Pad	Condensing Unit Mounting Pad: 24" x 42" x 3"	ULTRILITE2
Snow/Rain Diverter	Snow/Rain Diverter	SRD-4
Stand	18" Single Fan Stand	QSMS1801M
	24" Single Fan Stand	QSMS2401M
	Condenser Wall Bracket	QSWB2000M-1
	Condenser Wall Bracket - Stainless Steel Finish	QSWBSS
	Outdoor Unit Stand — 12" High	QSMS1201M
Wind Baffle	Front Wind Baffle	WB-PA5
	Rear Wind Baffle	WB-RE5
	Side Advanced Wind Baffle	WB-SD5

INDOOR UNIT DIMENSIONS: PVA-A24AA7

Unit:mm(in.)

Note 1.Keep the service space for maintenance at the front.

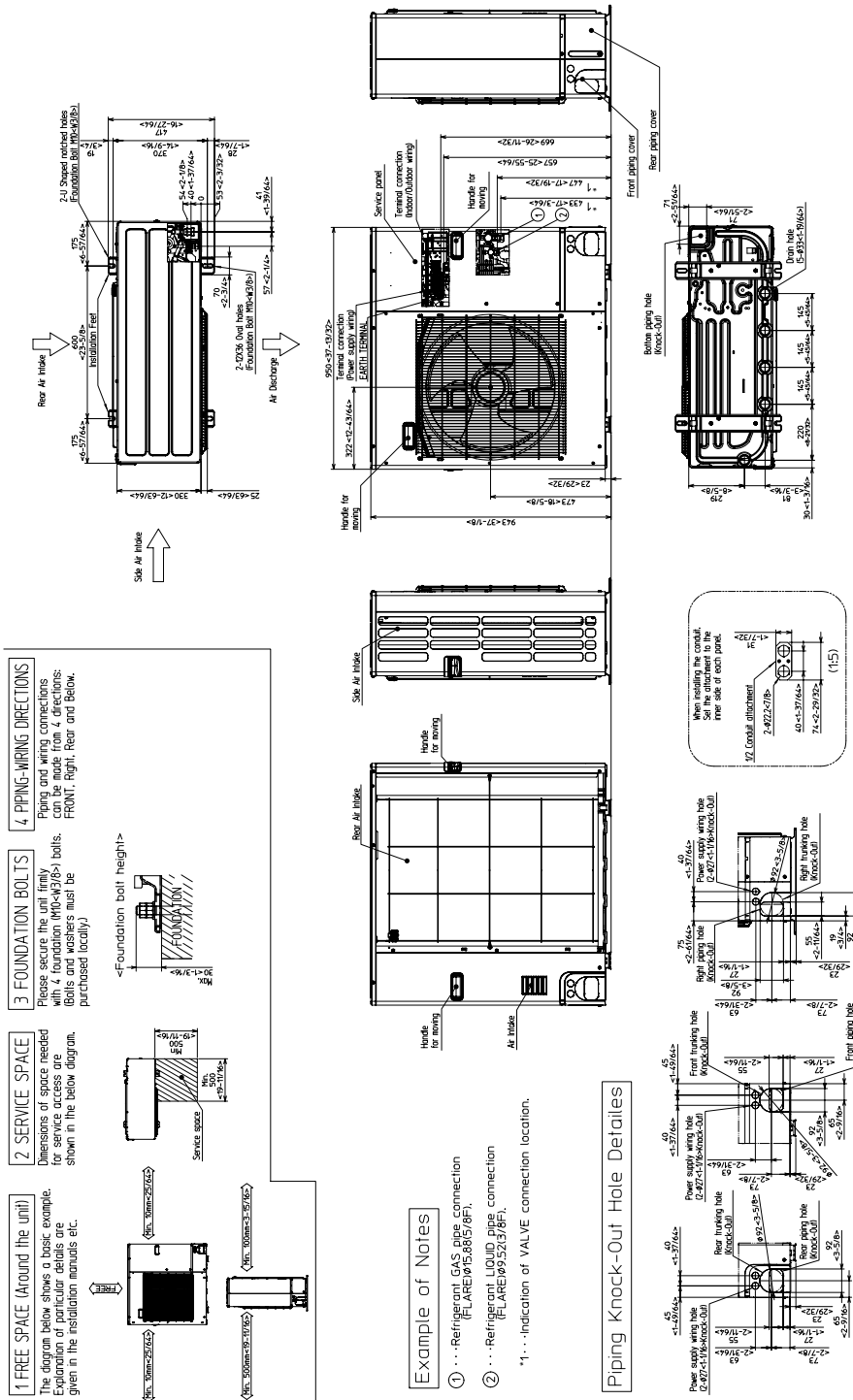


Model	①Nominal Filter Size	Duct Connection
12 KBTU/H	508 x 406.4 x 25.4	376 x 402
18 KBTU/H	(20 x 16 x 1)	(14-13/16 x 15-7/8)
24 KBTU/H	508 x 508 x 25.4	477 x 402
30 KBTU/H	(20 x 20 x 1)	(18-13/16 x 15-7/8)
36 KBTU/H	508 x 609.6 x 25.4	579 x 402
42 KBTU/H	(20 x 24 x 1)	(22-13/16 x 15-7/8)

Model	Unit: mm (in.)									①Gas Pipe	②Liquid Pipe
	A	B	C	D	E	F	G	H	J		
12 KBTU/H	432 (17)	376 (14-13/16)	281 (11-1/8)	224 (8-7/8)	1275 (50-1/4)	680 (26-13/16)	823 (32-7/16)	735.5 (29)	360 (14-3/16)	Φ 12.7 (1/2)	Φ 6.35 (1/4)
18 KBTU/H											
24 KBTU/H	534 (21)	477 (18-13/16)	382.6 (15-1/8)	266.5 (10-1/2)	1378 (54-1/4)	737 (29-1/16)	953.5 (37-9/16)	792 (31-3/16)	461 (18-3/16)	Φ 15.88 (5/8)	Φ 9.52 (3/8)
30 KBTU/H											
36 KBTU/H	635 (25)	579 (22-13/16)	484.6 (19-1/8)	317.5 (12-1/2)	1511 (59-1/2)	798.5 (31-7/16)	1053 (41-1/2)	853.5 (33-5/8)	563 (22-3/16)		
42 KBTU/H											

OUTDOOR UNIT DIMENSIONS: PUZ-HA24NHA1-R1

Unit: mm<in>



PVA-A12AA7 & PUZ-A12NKA7
12,000 BTU/H MULTI-POSITION AIR HANDLER
12,000 BTU/H HEAT PUMP UNIVERSAL OUTDOOR



Job Name:

System Reference:

Date:

Indoor Unit.....PVA-A12AA7

Outdoor Unit.....PUZ-A12NKA7



INDOOR UNIT FEATURES

- Ducted air handler provides a solution to cool and heat large zones
- Highly efficient totally enclosed ECM motor
- Selectable external static pressure: 0.30, 0.50 and 0.80 in.WG with 3 fan speeds at each static setting
- 1 inch R4.2 fiberglass free insulation reduces condensation and boosts efficiency
- Positive pressure cabinet with air leakage of less than 1.0% at 1.0 in.WG
- Unique blow through design allows simple coil cleaning when the blower is removed
- Multi-position installation: horizontal (left or right), vertical (up or down). For downflow configurations, the CMA-1 is recommended for proper management of condensate to prevent water blow-off in certain conditions
- Optional electric heat kit for additional heat capacity
- Optional humidifier control and ERV control
- Multiple control options available:
 - kumo cloud® smart device app for remote access
 - Third-party interface options
 - Wired or wireless controllers

OUTDOOR UNIT FEATURES

- Variable speed INVERTER-driven compressor
- Pre-charged with refrigerant volume for piping length up to 70 ft
- Low ambient cooling down to 0°F providing 100% capacity
- 24-hour continuous operation (cooling mode)
- High pressure protection
- Fast restart
- Superior energy and operational efficiency
- Seacoast protection*
 - External Outer Panel: Phosphate coating + Acrylic-Enamel coating
 - Fan Motor Support: Epoxy resin coating (at edge face)
 - Separator Assembly Valve Bed: Epoxy resin coating (at edge face)
 - Blue Fin treatment is an anti-corrosion treatment that is applied to the Heat exchanger coil to protect it against airborne contaminants.
 - Heat exchanger coil and base panel rated for 2,000 hours in accordance with ASTM B117 testing

*Seacoast protection standard from 2022 production

SPECIFICATIONS: PVA-A12AA7 & PUZ-A12NKA7

Cooling at 95°F ¹	Maximum Capacity	BTU/H	12,000
	Rated Capacity	BTU/H	12,000
	Minimum Capacity	BTU/H	4,800
	Maximum Power Input	W	890
	Rated Power Input	W	890
	Moisture Removal	Pints/h	1.2
	Sensible Heat Factor		0.77
Heating at 47°F ²	Power Factor [208V / 230V]	%	87.9 / 87.9
	Maximum Capacity	BTU/H	19,000
	Rated Capacity	BTU/H	14,000
	Minimum Capacity	BTU/H	5,700
	Maximum Power Input	W	1,730
	Rated Power Input	W	1,070
Heating at 17°F ³	Power Factor [208V / 230V]	%	96.4 / 96.4
	Maximum Capacity	BTU/H	12,000
	Rated Capacity	BTU/H	9,900
	Maximum Power Input	W	1,440
Efficiency	Rated Power Input	W	1,400
	SEER2		22.0
	EER2 ¹		13.4
	HSPF2 [IV]		8.9
	COP at 47°F ²		3.82
Electrical	COP at 17°F at Maximum Capacity ³		2.45
	Voltage, Phase, Frequency		208/230, 1, 60
	Guaranteed Voltage Range	V AC	198 - 253
	Voltage: Indoor - Outdoor, S1-S2	V AC	208/230
	Voltage: Indoor - Outdoor, S2-S3	V DC	24
	Short-circuit Current Rating [SCCR]	kA	5
	Recommended Fuse/Breaker Size (Outdoor)	A	15
	Recommended Wire Size [Indoor - Outdoor]	AWG	14
	Power Supply		Indoor unit is powered by the outdoor unit
Indoor Unit	MCA	A	3.0
	Fan Motor Full Load Amperage	A	2.4
	Fan Motor Type		DC Motor
	Airflow Rate at Cooling, Dry	CFM	280–340–400
	Airflow Rate at Heating, Dry	CFM	280–340–400
	Sound Pressure Level [Cooling]	dB[A]	27–31–35
	Sound Pressure Level [Heating]	dB[A]	27–31–35
	External Static Pressure	in.WG	0.30–0.5–0.8
	Drain Pipe Size	In. [mm]	3/4 FPT [19.05]
	Coating on Heat Exchanger		—
	External Finish Color		Galvanized steel cabinet-Powder coated Slate Gray
	Unit Dimensions	W x D x H: In. [mm]	17 x 21-5/8 x 50-1/4 [432 x 548 x 1,275]
	Package Dimensions	W x D x H: In. [mm]	13-7/16 x 34-11/16 x 45-5/16 [340 x 880 x 1,150]
Unit Weight	Lbs. [kg]	113 [51]	
Indoor Unit Operating Temperature Range	Cooling Intake Air Temp [Maximum / Minimum]*	°F	90 DB, 72 WB / 66 DB, 61 WB
	Heating Intake Air Temp [Maximum / Minimum]	°F	77 DB / 59 DB

NOTES:

AHRI Rated Conditions (Rated data is determined at a fixed compressor speed)

¹ Cooling (Indoor // Outdoor)	°F	80 DB, 67 WB // 95 DB, 75 WB
² Heating at 47°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 47 DB, 43 WB
³ Heating at 17°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 17 DB, 15 WB

Conditions ⁴Heating at 5°F (Indoor // Outdoor) °F 70 DB, 60 WB // 5 DB, 4 WB

*Indoor/Outdoor Unit Operating Temperature Range (Cooling Air Temp [Maximum / Minimum]):

- Applications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.
 - » Wind baffles required to operate below 23°F DB in cooling mode.
 - » Heat pump system with wind baffle: 0°F - 115°F.
 - » Refer to wind baffle documentation for further information.

**Outdoor Unit Operating Temperature Range (Cooling Thermal Lock-out / Re-start Temperatures; Heating Thermal Lock-out / Re-start Temperatures):

- System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

***Blue Fin Coating Standard from 2022 production:

- PU(Y/Z)-A(12/18)NKA7 - Beginning with serial number 12U*****
- PU(Y/Z)-A(24/30/36/42)NKA7 - Beginning with serial number 12U*****

INDOOR UNIT ACCESSORIES: PVA-A12AA7

Control Interface	3-Pin Connector	PAC-715AD
	Airzone ZBS Wired Blueface Principal Controller White	AZZBSBLUEFACECB
	Airzone ZBS Wired Blueface Principal Controller White	AZZBSBLUEZEROCB
	Airzone ZBS Wired Lite Controller White	AZZBSLITECB
	Airzone ZBS Wireless Lite Controller White	AZZBSLITERB
	Airzone ZBS Wireless Think Controller White	AZZBSTHINKRB
	CN24 Relay Kit	CN24RELAY-KIT-CM3
	Connector cable for remote display	PAC-SA88HA-EP
	IT Extender	PAC-WHS01IE-E
	kumo station® for kumo cloud®	PAC-WHS01HC-E
	Procon BACnet® and Modbus® Interface	PAC-UKPRC001-CN-1
	Remote Operation Adapter†	PAC-SF40RM-E
	Thermostat Interface	PAC-US444CN-1
	Thermostat Interface	PAC-US445CN-1
USNAP Adapter	PAC-WHS01UP-E	
Remote Sensor	Flush Mount Remote Temperature Sensor	PAC-USSEN002-FM-1
	Flush Mount Temperature Sensor	PAC-USSEN001-FM-1
	Remote Temperature Sensor	PAC-SE41TS-E
	Wireless temperature and humidity sensor for kumo cloud®	PAC-USWHS003-TH-1
Wired Remote Controller	Deluxe Wired MA Remote Controller†	PAR-40MAAU
	Simple Ductless Wired Remote Controller	PAC-SDW01RC-1
	Simple MA Remote Controller†	PAC-YT53CRAU-J
	Touch MA Controller†	PAR-CT01MAU-SB
Wireless Remote Controller	kumo touch™ RedLINK™ Wireless Controller	MHK2
	Lockdown bracket for remote controller	RCMKP1CB
	Wireless MA Receiver	PAR-FA32MA-W
	Wireless MA Remote Controller	PAR-FL32MA-E
Condensate	Blue Diamond (Advanced) Mini Condensate Pump w/ Reservoir & Sensor (208/230V) [recommended]	X87-721
	Blue Diamond (MicroBlue) Mini Condensate Pump (110/208/230V) up to 18,000 BTU/H	X86-003
	Blue Diamond Sensor Extension Cable — 15 Ft.	C13-103
	Refco Condensate Pump (100-240 VAC) up to 120,000 BTU/H	COMBI
Control Wire	20/2PR, 1PR shielded + 1PR plenum wire for Airzone, 100 ft reel	CW2042S2-100
	20/2PR, shielded + 1PR plenum wire for Airzone, 500 ft reel	CW2042S2-500
Disconnect Switch	(30A/600V/UL) [fits 2" X 4" utility box] - Black	TAZ-MS303
	(30A/600V/UL) [fits 2" X 4" utility box] - White	TAZ-MS303W
Downflow Kit	Condensate Management Kit for downflow installation	CMA-1
Electric Heat Lockout	Electric Heat Lockout	ETC-211020-MIT
Electric Kit Heats	3kW Electric Heater	EH03-MPA-SB
	5kW Electric Heater	EH05-MPA-SB
Lineset	100' x 1/4" x 100' / 1/2" Lineset (Twin-Tube Insulation)	MLS141212T-100
	15' x 1/4" x 15' / 1/2" Lineset (Twin-Tube Insulation)	MLS141212T-15
	30' x 1/4" x 30' / 1/2" Lineset (Twin-Tube Insulation)	MLS141212T-30
	50' x 1/4" x 50' / 1/2" Lineset (Twin-Tube Insulation)	MLS141212T-50
	65' x 1/4" x 65' / 1/2" Lineset (Twin-Tube Insulation)	MLS141212T-65
Terminal Block	Separate Terminal Power Block	SPTB1

NOTES:

†PAC-SF40RM-E (Unable to use with wireless remote controller)

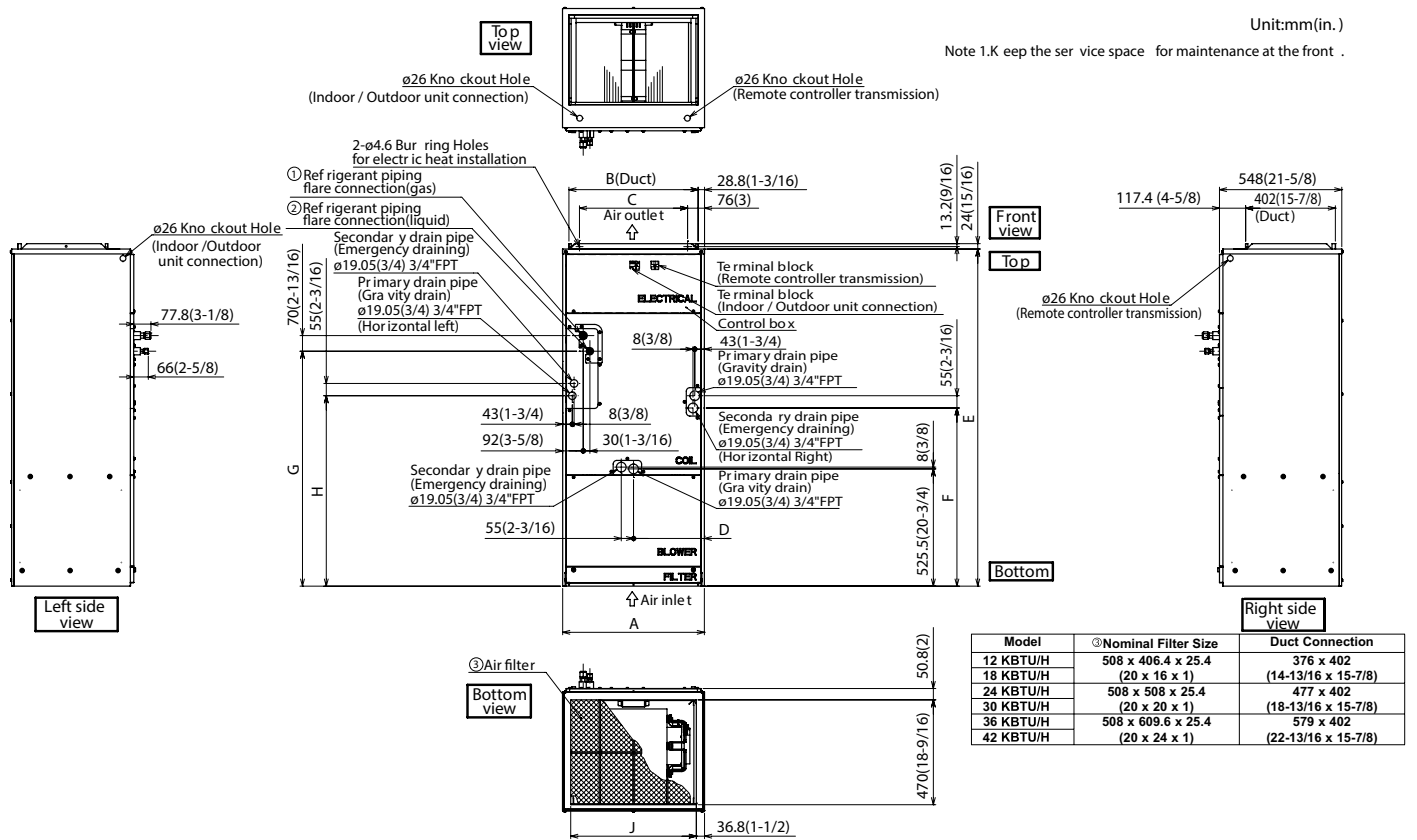
OUTDOOR UNIT ACCESSORIES: PUZ-A12NKA7

Air Outlet Guide	Air Outlet Guide	PAC-SJ07SG-E
Centralized Drain Pan	Centralized Drain Pan	PAC-SG63DP-E
	Drain Pan	PAC-SG64DP-E
Control/Service Tool	Control/Service Tool	PAC-SK52ST
	M- & P-Series Maintenance Tool Cable Set	M21EC0397
	USB/UART Conversion Cable (Required for all laptop connection)	M21EC1397
Drain Socket	Drain Socket	MAC-871DS
Hail Guards	Hail Guard	HG-A5
M-NET Converter	M-NET Converter	PAC-SJ96MA-E
Mini-Split Wire	14 Gauge, 4 wire MiniSplit Cable—250 ft. roll	S144-250
	14 Gauge, 4 wire MiniSplit Cable—50 ft. roll	S144-50
	16 Gauge, 4 wire MiniSplit Cable—250 ft. roll	S164-250
	16 Gauge, 4 wire MiniSplit Cable—50 ft. roll	S164-50
Mounting Pad	Condensing Unit Mounting Pad: 16" x 36" x 3"	ULTRILITE1
Stand	18" Single Fan Stand	QSMS1801M
	24" Single Fan Stand	QSMS2401M
	Condenser Wall Bracket	QSWB2000M-1
	Condenser Wall Bracket - Stainless Steel Finish	QSWBSS
Wind Baffle	Outdoor Unit Stand — 12" High	QSMS1201M
	Front Wind Baffle	WB-PA4
	Rear Wind Baffle	WB-RE4
	Side Advanced Wind Baffle	WB-SD4

INDOOR UNIT DIMENSIONS: PVA-A12AA7

Unit:mm(in.)

Note 1.Keep the service space for maintenance at the front.

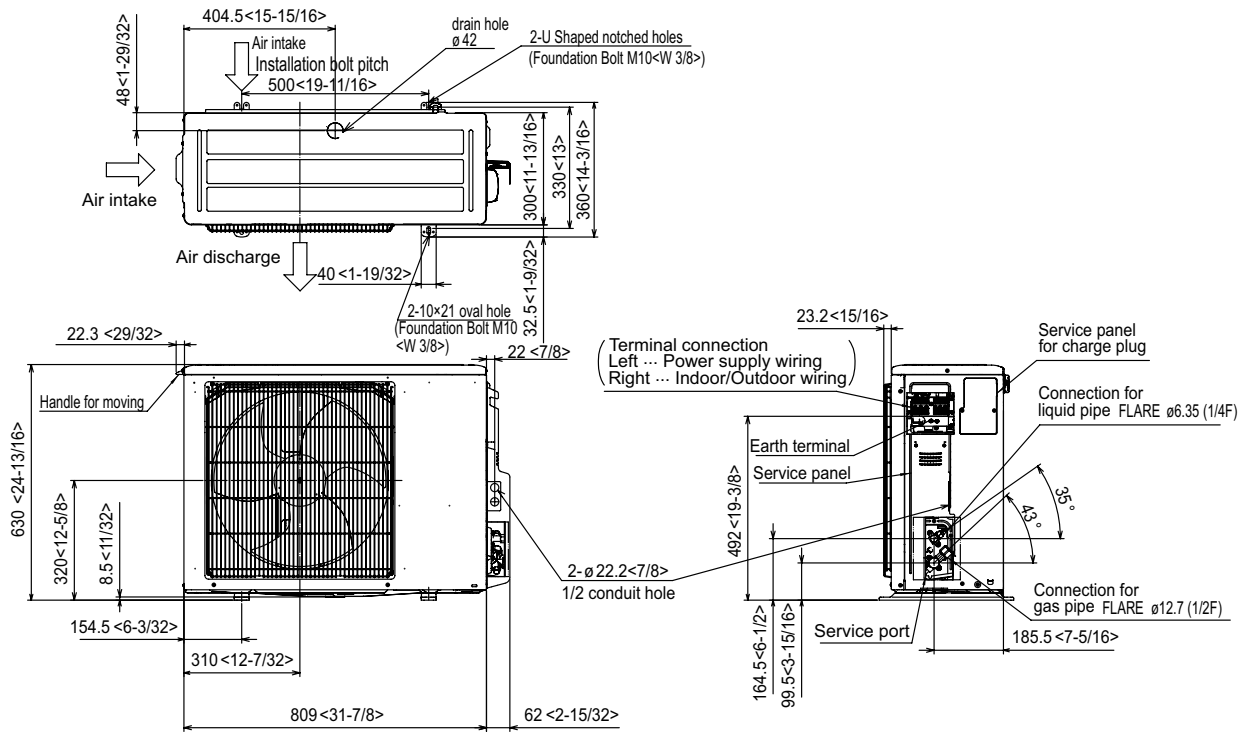


Model	①Nominal Filter Size	Duct Connection
12 KBTU/H	508 x 406.4 x 25.4 (20 x 16 x 1)	376 x 402 (14-13/16 x 15-7/8)
18 KBTU/H	508 x 508 x 25.4 (20 x 20 x 1)	477 x 402 (18-13/16 x 15-7/8)
24 KBTU/H	508 x 508 x 25.4 (20 x 20 x 1)	579 x 402 (22-13/16 x 15-7/8)
30 KBTU/H	508 x 609.6 x 25.4 (20 x 24 x 1)	579 x 402 (22-13/16 x 15-7/8)
36 KBTU/H	508 x 609.6 x 25.4 (20 x 24 x 1)	579 x 402 (22-13/16 x 15-7/8)
42 KBTU/H	508 x 609.6 x 25.4 (20 x 24 x 1)	579 x 402 (22-13/16 x 15-7/8)

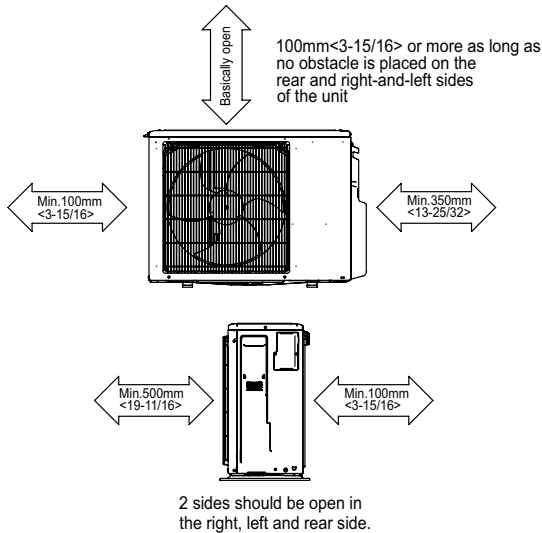
Model	A	B	C	D	E	F	G	H	J	①Gas Pipe	②Liquid Pipe
12 KBTU/H	432 (17)	376 (14-13/16)	281 (11-1/8)	224 (8-7/8)	1275 (50-1/4)	680 (26-13/16)	823 (32-7/16)	735.5 (29)	360 (14-3/16)	Φ 12.7 (1/2)	Φ 6.35 (1/4)
18 KBTU/H	432 (17)	376 (14-13/16)	281 (11-1/8)	224 (8-7/8)	1275 (50-1/4)	680 (26-13/16)	823 (32-7/16)	735.5 (29)	360 (14-3/16)	Φ 12.7 (1/2)	Φ 6.35 (1/4)
24 KBTU/H	534 (21)	477 (18-13/16)	382.6 (15-1/8)	266.5 (10-1/2)	1378 (54-1/4)	737 (29-1/16)	953.5 (37-9/16)	792 (31-3/16)	461 (18-3/16)	Φ 15.88 (5/8)	Φ 9.52 (3/8)
30 KBTU/H	534 (21)	477 (18-13/16)	382.6 (15-1/8)	266.5 (10-1/2)	1378 (54-1/4)	737 (29-1/16)	953.5 (37-9/16)	792 (31-3/16)	461 (18-3/16)	Φ 15.88 (5/8)	Φ 9.52 (3/8)
36 KBTU/H	635 (25)	579 (22-13/16)	484.6 (19-1/8)	317.5 (12-1/2)	1511 (59-1/2)	798.5 (31-7/16)	1053 (41-1/2)	853.5 (33-5/8)	563 (22-3/16)	Φ 15.88 (5/8)	Φ 9.52 (3/8)
42 KBTU/H	635 (25)	579 (22-13/16)	484.6 (19-1/8)	317.5 (12-1/2)	1511 (59-1/2)	798.5 (31-7/16)	1053 (41-1/2)	853.5 (33-5/8)	563 (22-3/16)	Φ 15.88 (5/8)	Φ 9.52 (3/8)

OUTDOOR UNIT DIMENSIONS: PUZ-A12NKA7

Unit: mm<in>



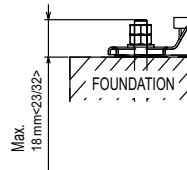
Free space around the outdoor unit (basic example)



FOUNDATION BOLTS

Please secure the unit firmly with 4 foundation (M10<W3/8>) bolts. (Bolts, washers and nut must be purchased locally).

<Foundation bolt height>



PIPING-WIRING DIRECTION

Piping and wiring connection can be made from the rear direction only.

1340 Satellite Boulevard Suwanee, GA 30024
Toll Free: 800-433-4822 www.mehvac.com

PVA-A24AA7 & PUZ-HA24NHA1-R1
24,000 BTU/H MULTI-POSITION AIR HANDLER
24,000 BTU/H HYPER-HEATING UNIVERSAL OUTDOOR



Job Name:

System Reference:

Date:

Indoor Unit.....PVA-A24AA7

Outdoor Unit.....PUZ-HA24NHA1-R1



INDOOR UNIT FEATURES

- Ducted air handler provides a solution to cool and heat large zones
- Highly efficient totally enclosed ECM motor
- Selectable external static pressure: 0.30, 0.50 and 0.80 in.WG with 3 fan speeds at each static setting
- 1 inch R4.2 fiberglass free insulation reduces condensation and boosts efficiency
- Positive pressure cabinet with air leakage of less than 1.0% at 1.0 in.WG
- Unique blow through design allows simple coil cleaning when the blower is removed
- Multi-position installation: horizontal (left or right), vertical (up or down). For downflow configurations, the CMA-1 is recommended for proper management of condensate to prevent water blow-off in certain conditions
- Optional electric heat kit for additional heat capacity
- Optional humidifier control and ERV control
- Multiple control options available:
 - kumo cloud® smart device app for remote access
 - Third-party interface options
 - Wired or wireless controllers

OUTDOOR UNIT FEATURES

- Variable speed INVERTER-driven compressor
- Wide heating range: heating performance down to -13°F (average of 80% heating capacity)
- High speed heating at start up: Hyper-Heating INVERTER® reduces the time for heating at start up by about half compared to standard models
- Pre-charged with refrigerant volume for piping length up to 70 ft.
- High pressure/temperature protection
- Built-in base pan heater

SPECIFICATIONS: PVA-A24AA7 & PUZ-HA24NHA1-R1

Cooling at 95°F ¹	Maximum Capacity	BTU/H	24,000
	Rated Capacity	BTU/H	24,000
	Minimum Capacity	BTU/H	10,000
	Maximum Power Input	W	2,100
	Rated Power Input	W	2,100
	Moisture Removal	Pints/h	3.7
	Sensible Heat Factor		0.83
Heating at 47°F ²	Power Factor [208V / 230V]	%	90.0 / 90.0
	Maximum Capacity	BTU/H	28,000
	Rated Capacity	BTU/H	26,000
	Minimum Capacity	BTU/H	10,000
	Maximum Power Input	W	2,200
	Rated Power Input	W	1,980
Heating at 17°F ³	Power Factor [208V / 230V]	%	89.0 / 89.0
	Maximum Capacity	BTU/H	26,000
	Rated Capacity	BTU/H	17,500
	Maximum Power Input	W	3,550
Heating at 5°F ⁴	Rated Power Input	W	2,126
	Maximum Capacity	BTU/H	26,000
Heating at -13°F ⁷	Maximum Power Input	W	3,986
	Maximum Capacity	BTU/H	20,800
Efficiency	SEER ²		19.0
	EER ² ¹		11.4
	HSPF ² [IV]		9.4
	COP at 47°F ²		3.8
	COP at 17°F at Maximum Capacity ³		2.1
	COP at 5°F at Maximum Capacity ⁴		1.9
	ENERGY STAR [®] Certified		Yes
Electrical	Voltage, Phase, Frequency		208/230, 1, 60
	Guaranteed Voltage Range	V AC	198 - 253
	Voltage: Indoor - Outdoor, S1-S2	V AC	208/230
	Voltage: Indoor - Outdoor, S2-S3	V DC	24
	Short-circuit Current Rating [SCCR]	kA	5
	Recommended Fuse/Breaker Size (Outdoor)	A	25
	Recommended Wire Size [Indoor - Outdoor]	AWG	12
	Power Supply		Indoor unit is powered by the outdoor unit
Indoor Unit	MCA	A	4.13
	Fan Motor Full Load Amperage	A	3.3
	Fan Motor Type		DC Motor
	Airflow Rate at Cooling, Dry	CFM	613–744–875
	Airflow Rate at Heating, Dry	CFM	613–744–875
	Sound Pressure Level [Cooling]	dB[A]	30–34–38
	Sound Pressure Level [Heating]	dB[A]	30–34–38
	External Static Pressure	in.WG	0.30–0.5–0.8
	Drain Pipe Size	In. [mm]	3/4 FPT [19.05]
	Coating on Heat Exchanger		—
	External Finish Color		Galvanized steel cabinet-Powder coated Slate Gray
	Unit Dimensions	W x D x H: In. [mm]	21 x 21-5/8 x 54-1/4 [534 x 548 x 1,378]
	Package Dimensions	W x D x H: In. [mm]	28-3/4 x 22 x 58-5/8 [730 x 560 x 1,490]
	Unit Weight	Lbs. [kg]	141 [64]
Package Weight	Lbs. [kg]	163 [74]	
Indoor Unit Operating Temperature Range	Cooling Intake Air Temp [Maximum / Minimum]*	°F	90 DB, 72 WB / 66 DB, 61 WB
	Heating Intake Air Temp [Maximum / Minimum]	°F	77 DB / 59 DB

NOTES:

AHRI Rated Conditions

(Rated data is determined at a fixed compressor speed)

¹Cooling (Indoor // Outdoor)

°F 80 DB, 67 WB // 95 DB, 75 WB

²Heating at 47°F (Indoor // Outdoor)

°F 70 DB, 60 WB // 47 DB, 43 WB

³Heating at 17°F (Indoor // Outdoor)

°F 70 DB, 60 WB // 17 DB, 15 WB

Conditions

⁴Heating at 5°F (Indoor // Outdoor)

°F 70 DB, 60 WB // 5 DB, 4 WB

⁷Heating at -13°F (Indoor // Outdoor)

°F 70 DB, 60 WB // -13 DB, -14 WB

* Indoor/Outdoor Unit Operating Temperature Range (Cooling Air Temp [Maximum / Minimum]):

- Wind baffles required to operate below 23°F DB in cooling mode.
- Refer to wind baffle documentation for further information.

**Outdoor Unit Operating Temperature Range (Cooling Thermal Lock-out / Re-start Temperatures; Heating Thermal Lock-out / Re-start Temperatures):

- System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

SPECIFICATIONS: PVA-A24AA7 & PUZ-HA24NHA1-R1

Outdoor Unit	MCA	A	17.0
	MOCP	A	27
	Fan Motor Output	W	74
	Airflow Rate [Cooling / Heating]	CFM	1940 / 1940
	Refrigerant Control		Linear expansive valve
	Defrost Method		Reverse Cycle
	Sound Pressure Level, Cooling ¹	dB(A)	52
	Sound Pressure Level, Heating ²	dB(A)	53
	Compressor Type		Scroll
	Compressor Model		DNB28FBAMT
	Compressor Rated Load Amps	A	9
	Compressor Locked Rotor Amps	A	18.0
	Compressor Oil [Type // Charge]	oz.	FVC68D // 34
	External Finish Color		Ivory Munsell 3Y 7.8/1.1
	Base Pan Heater		Built-in
	Unit Dimensions	W x D x H: In. [mm]	37-13/32 x 13 (+1-3/16) x 37-1/8 [950 x 330 (+30) x 943]
	Package Dimensions	W x D x H: In. [mm]	41 x 18 x 41 [1040 x 450 x 1033]
	Unit Weight	Lbs. [kg]	190 [86]
	Package Weight	Lbs. [kg]	210 [95]
	Outdoor Unit Operating Temperature Range	Cooling Air Temp [Maximum / Minimum]*	°F
Heating Air Temp [Maximum / Minimum]		°F	70 DB, 59 WB / -13 DB, -13 WB
Heating Thermal Lock-out / Re-start Temperatures**		°F	-22 / -13
Refrigerant	Type		R410A
	Pre-Charged Refrigerant Amount	Lbs, oz	7.0, 11.0
	Maximum Pre-Charged Piping Length	Ft. [m]	70.0 [21.0]
	Additional Refrigerant Charge Per Additional Piping Length	oz./Ft. [g/m]	0.7 [65]
Piping	Gas Pipe Size O.D. [Flared]	In.[mm]	5/8 [15.88]
	Liquid Pipe Size O.D. [Flared]	In.[mm]	3/8 [9.52]
	Maximum Piping Length	Ft. [m]	165 [50]
	Maximum Height Difference	Ft. [m]	100 [30]
	Maximum Number of Bends		15

NOTES:

AHRI Rated Conditions

(Rated data is determined at a fixed compressor speed)

¹Cooling (Indoor // Outdoor) °F 80 DB, 67 WB // 95 DB, 75 WB

²Heating at 47°F (Indoor // Outdoor) °F 70 DB, 60 WB // 47 DB, 43 WB

³Heating at 17°F (Indoor // Outdoor) °F 70 DB, 60 WB // 17 DB, 15 WB

Conditions

⁴Heating at 5°F (Indoor // Outdoor) °F 70 DB, 60 WB // 5 DB, 4 WB

⁷Heating at -13°F (Indoor // Outdoor) °F 70 DB, 60 WB // -13 DB, -14 WB

* Indoor/Outdoor Unit Operating Temperature Range (Cooling Air Temp [Maximum / Minimum]):

- Wind baffles required to operate below 23°F DB in cooling mode.
- Refer to wind baffle documentation for further information.

**Outdoor Unit Operating Temperature Range (Cooling Thermal Lock-out / Re-start Temperatures; Heating Thermal Lock-out / Re-start Temperatures):

- System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

INDOOR UNIT ACCESSORIES: PVA-A24AA7

Control Interface	Airzone Wired Blueface Controller (White)	AZZBSBLUEZEROCB
	Airzone Wired Lite Controller (White)	AZZBSLITECB
	Airzone Wireless Lite Controller (White)	AZZBSLITERB
	Airzone Wireless Think Controller (White)	AZZBSTHINKRB
	Backup Heat Relay Kit Adapter for CN24 or CN152 on ducted models	CN24RELAY-KIT-CM3
	kumo station™ for kumo cloud®	PAC-WHS01HC-E
	On/Off and Error Status Output Adapter for CN51 or CN52	PAC-SA88HA-EP
	On/Off Input Adapter for CN32 and Forced Fan Operation Input Adapter for SWE	PAC-715AD
	Operation and Error Status Output Adapter	PAC-SF40RM-E
	Procon BACnet® and Modbus® Interface	PAC-UKPRC001-CN-1
	Thermostat Interface for 3rd Party Thermostats	PAC-US445CN-1
	USNAP Adapter for Demand Response	PAC-WHS01UP-E
Remote Sensor	Flush Mount Remote Temperature Sensor for SEZ, SLZ, SVZ and all P-Series models	PAC-USSEN002-FM-1
	Wall Mount Remote Temperature Sensor	PAC-SE41TS-E
	Wireless temperature and humidity sensor for kumo cloud®	PAC-USWHS003-TH-1
Wired Remote Controller	Simple Ductless Wired Remote Controller	PAC-SDW01RC-1
	Simple MA Remote Controller	PAC-YT53CRAU-J
	Touch MA Wired Remote Controller	PAR-CT01MAU-SB
Wireless Remote Controller	kumo touch™ RedLINK™ Wireless Controller & Receiver kit	MHK2
	Lockdown Bracket for Wireless Handheld Remote Controllers	RCMKP1CB
	Portable Central Controller	MCCH1
	Universal Wireless MA Handheld Remote Controller	PAR-FL32MA-E
	Universal Wireless Receiver for PAR-FL32MA-E	PAR-FA32MA-W
Condensate	Blue Diamond (Advanced) Mini Condensate Pump w/ Reservoir & Sensor (208/230V) [recommended]	X87-721
	Blue Diamond (MegaBlue Advanced) Condensate Pump w/ Reservoir & Sensor	X87-835
	Blue Diamond Sensor Extension Cable — 15 Ft.	C13-103
	Refco Condensate Pump (100-240 VAC) up to 120,000 BTU/H	COMBI
Control Wire	20/2PR, 1PR shielded + 1PR plenum wire for Airzone, 100 ft reel	CW2042S2-100
	20/2PR, shielded + 1PR plenum wire for Airzone, 500 ft reel	CW2042S2-500
Disconnect Switch	(30A/600V/UL) [fits 2" X 4" utility box] - Black	TAZ-MS303
	(30A/600V/UL) [fits 2" X 4" utility box] - White	TAZ-MS303W
Downflow Kit	Condensate Management Kit for downflow installation	CMA-1
Electric Heat Lockout	Electric Heat Lockout	ETC-211020-MIT
Electric Kit Heats	10kW Electric Heater	EH10-MPA-MB
	3kW Electric Heater	EH03-MPA-MB
	5kW Electric Heater	EH05-MPA-MB
	8kW Electric Heater	EH08-MPA-MB
Lineset		Lineset 3/8x5/8
	10' x 3/8" x 10' x 5/8" Lineset (Twin-Tube Insulation)	MPLS385812T-10
	100' x 3/8" x 100' x 5/8" Lineset (Twin-Tube Insulation)	MPLS385812T-100
	15' x 3/8" x 15' x 5/8" Lineset (Twin-Tube Insulation)	MPLS385812T-15
	30' x 3/8" x 30' x 5/8" Lineset (Twin-Tube Insulation)	MPLS385812T-30
	50' x 3/8" x 50' x 5/8" Lineset (Twin-Tube Insulation)	MPLS385812T-50
	65' x 3/8" x 65' x 5/8" Lineset (Twin-Tube Insulation)	MPLS385812T-65
Terminal Block	Separate Terminal Power Block	SPTB1

NOTES:

*PAC-SF40RM-E (Unable to use with wireless remote controller)

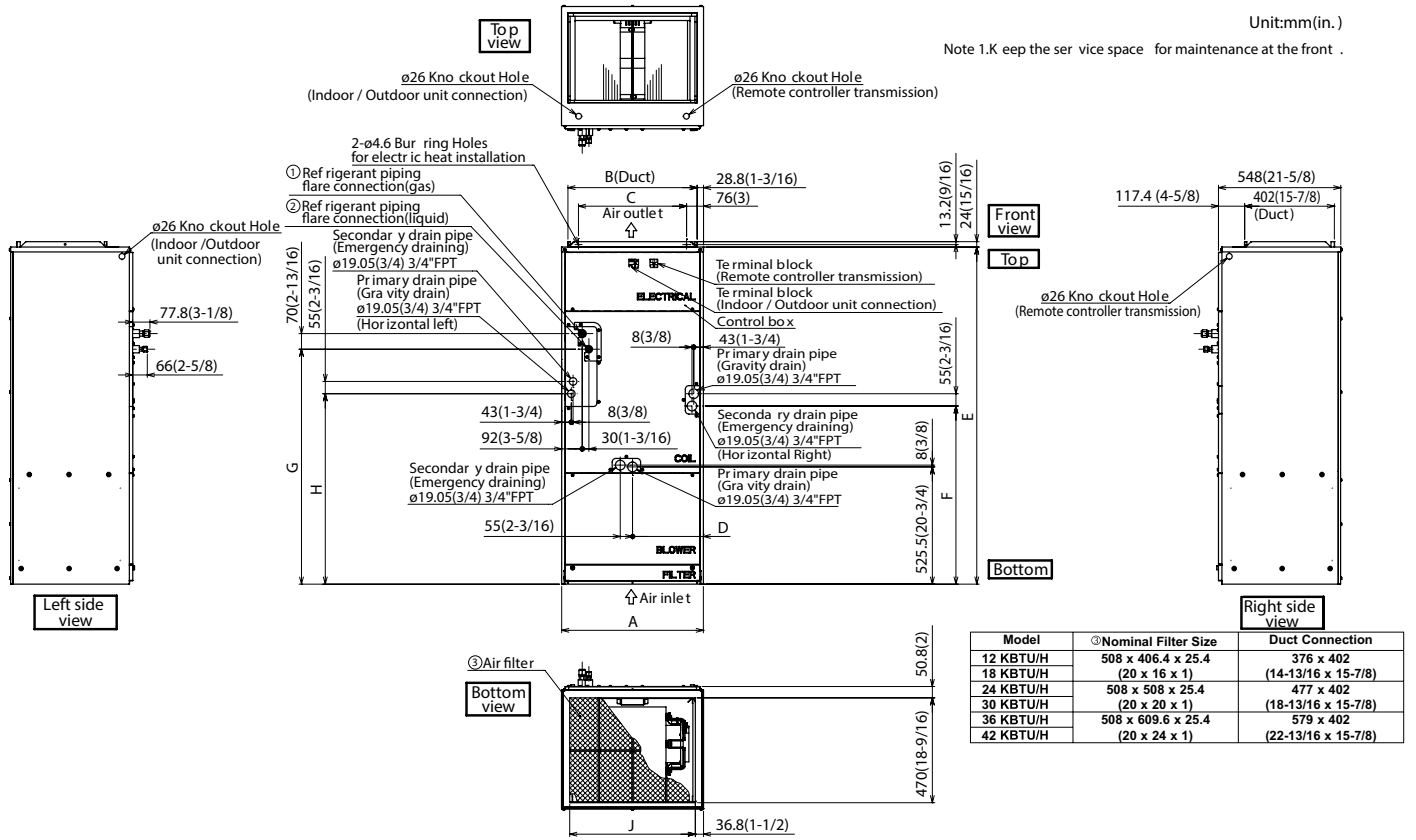
OUTDOOR UNIT ACCESSORIES: PUZ-HA24NHA1-R1

Air Outlet Guide	Air Outlet Guide (1 Piece)	PAC-SG59SG-E
Control/Service Tool	Control/Service Tool	PAC-SK52ST
Hail Guards	Hail Guard	HG-A6
Lineset		Lineset 1/4x1/2
		Lineset 3/8x5/8
M-NET Converter	M-NET Converter	PAC-SJ95MA-E
	M-NET Interface for PUZ-A-NKA7 12 & 18 outdoor units	PAC-SJ96MA-E
Mini-Split Wire	14 Gauge, 4 wire MiniSplit Cable—250 ft. roll	S144-250
	14 Gauge, 4 wire MiniSplit Cable—250 ft. roll	SW144-250
	14 Gauge, 4 wire MiniSplit Cable—50 ft. roll	S144-50
	14 Gauge, 4 wire MiniSplit Cable—50 ft. roll	SW144-50
	16 Gauge, 4 wire MiniSplit Cable—250 ft. roll	S164-250
	16 Gauge, 4 wire MiniSplit Cable—250 ft. roll	SW164-250
	16 Gauge, 4 wire MiniSplit Cable—50 ft. roll	S164-50
	16 Gauge, 4 wire MiniSplit Cable—50 ft. roll	SW164-50
Mounting Pad	Condensing Unit Mounting Pad: 24" x 42" x 3"	ULTRILITE2
Snow/Rain Diverter	Snow/Rain Diverter	SRD-4
Stand	18" Single Fan Stand	QSMS1801M
	24" Single Fan Stand	QSMS2401M
	Condenser Wall Bracket	QSWB2000M-1
	Condenser Wall Bracket - Stainless Steel Finish	QSWBSS
	Outdoor Unit Stand — 12" High	QSMS1201M
Wind Baffle	Front Wind Baffle	WB-PA5
	Rear Wind Baffle	WB-RE5
	Side Advanced Wind Baffle	WB-SD5

INDOOR UNIT DIMENSIONS: PVA-A24AA7

Unit:mm(in.)

Note 1.Keep the service space for maintenance at the front.

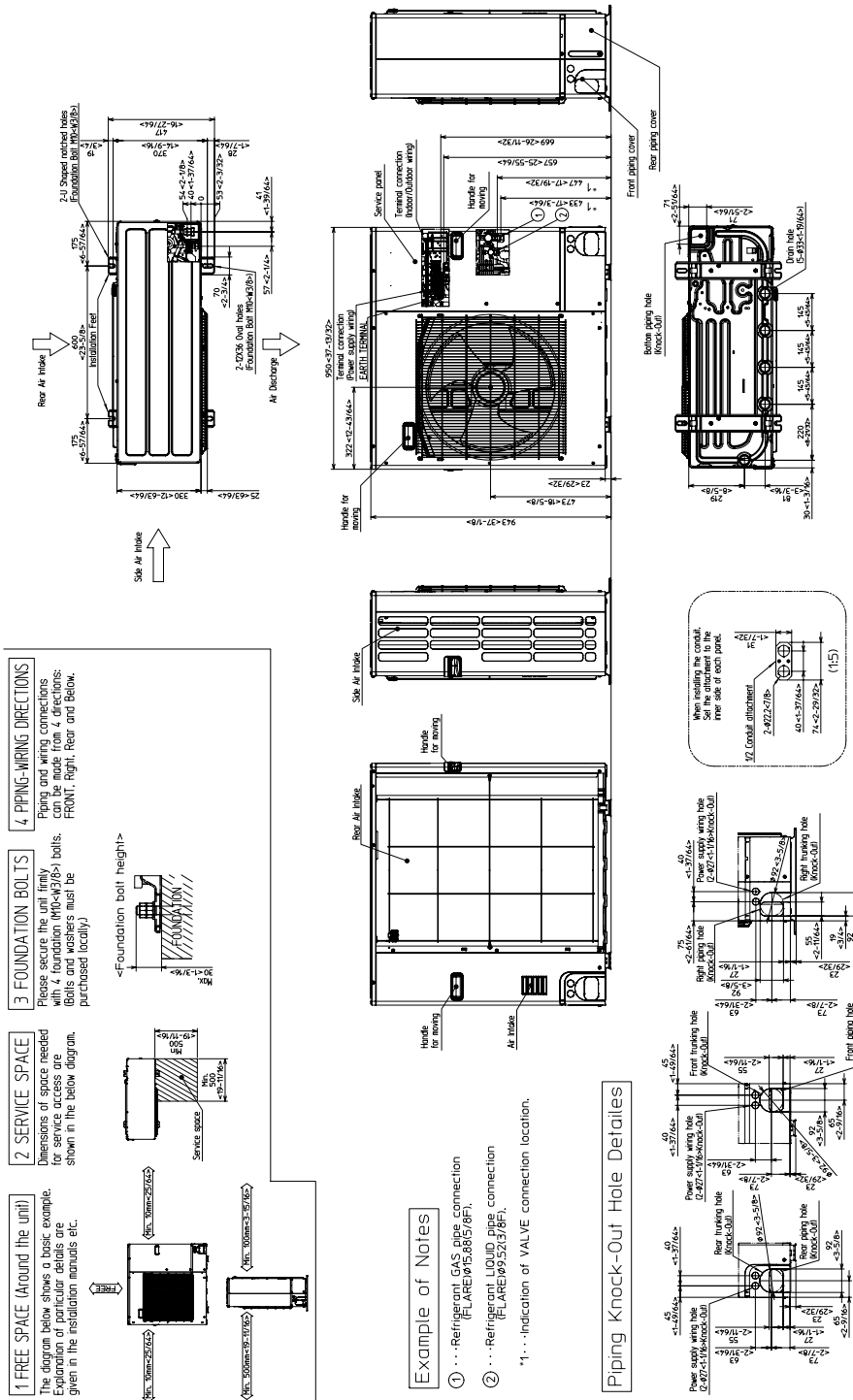


Model	⊙Nominal Filter Size	Duct Connection
12 KBTU/H	508 x 406.4 x 25.4	376 x 402
18 KBTU/H	(20 x 16 x 1)	(14-13/16 x 15-7/8)
24 KBTU/H	508 x 508 x 25.4	477 x 402
30 KBTU/H	(20 x 20 x 1)	(18-13/16 x 15-7/8)
36 KBTU/H	508 x 609.6 x 25.4	579 x 402
42 KBTU/H	(20 x 24 x 1)	(22-13/16 x 15-7/8)

Model	Unit: mm (in.)									⊙Gas Pipe	⊙Liquid Pipe
	A	B	C	D	E	F	G	H	J		
12 KBTU/H	432 (17)	376 (14-13/16)	281 (11-1/8)	224 (8-7/8)	1275 (50-1/4)	680 (26-13/16)	823 (32-7/16)	735.5 (29)	360 (14-3/16)	Φ 12.7 (1/2)	Φ 6.35 (1/4)
18 KBTU/H											
24 KBTU/H	534 (21)	477 (18-13/16)	382.6 (15-1/8)	266.5 (10-1/2)	1378 (54-1/4)	737 (29-1/16)	953.5 (37-9/16)	792 (31-3/16)	461 (18-3/16)	Φ 15.88 (5/8)	Φ 9.52 (3/8)
30 KBTU/H											
36 KBTU/H	635 (25)	579 (22-13/16)	484.6 (19-1/8)	317.5 (12-1/2)	1511 (59-1/2)	798.5 (31-7/16)	1053 (41-1/2)	853.5 (33-5/8)	563 (22-3/16)		
42 KBTU/H											

OUTDOOR UNIT DIMENSIONS: PUZ-HA24NHA1-R1

Unit: mm<in>



1340 Satellite Boulevard Suwanee, GA 30024
Toll Free: 800-433-4822 www.mehvac.com



PKA-A12HA7 & PUZ-A12NKA7(-BS)
12,000 BTU/H WALL-MOUNTED INDOOR UNIT
12,000 BTU/H HEAT PUMP UNIVERSAL OUTDOOR



Job Name:

System Reference:

Date:



Indoor Unit.....PKA-A12HA7

Outdoor Unit

Standard Model.....PUZ-A12NKA7

Seacoast Model.....PUZ-A12NKA7-BS



INDOOR UNIT FEATURES

- Sleek, compact design
- Simple installation
- Vane setting for air flow direction control
- Auto fan speed mode
- Ideal for spaces such as server rooms, daycare centers, classrooms, churches, small offices, and more
- Multiple control options available:
 - kumo cloud® smart device app for remote access
 - Third-party interface options
 - Wired or wireless controllers

OUTDOOR UNIT FEATURES

- Variable speed INVERTER-driven compressor
- Power receiver pre-charged with refrigerant volume for piping length up to 70 ft
- Low ambient cooling down to 0°F providing 100% capacity
- 24-hour continuous operation (cooling mode)
- High pressure protection
- Fast restart
- Superior energy and operational efficiency

SPECIFICATIONS: PKA-A12HA7 & PUZ-A12NKA7(-BS)

Cooling at 95°F ¹	Maximum Capacity	BTU/H	12,000
	Rated Capacity	BTU/H	12,000
	Minimum Capacity	BTU/H	5,800
	Maximum Power Input	W	1,000
	Rated Power Input	W	1,000
	Moisture Removal	Pints/h	2.0
	Sensible Heat Factor		0.81
Heating at 47°F ²	Maximum Capacity	BTU/H	18,000
	Rated Capacity	BTU/H	14,000
	Minimum Capacity	BTU/H	5,500
	Maximum Power Input	W	1,600
	Rated Power Input	W	950
	Power Factor	%	20.0/20.0
Heating at 17°F ³	Maximum Capacity	BTU/H	11,100
	Rated Capacity	BTU/H	9,200
	Maximum Power Input	W	1,050
	Rated Power Input	W	1,020
Efficiency	SEER		20.8
	EER ¹		12.0
	HSPF [IV]		10.2
	COP at 47°F ²		4.31
	COP at 17°F at Maximum Capacity ³		3.1
	ENERGY STAR [®] Certified		No
Electrical	Voltage, Phase, Frequency		208/230, 1, 60
	Guaranteed Voltage Range	V AC	198 - 253
	Voltage: Indoor - Outdoor, S1-S2	V AC	208/230
	Voltage: Indoor - Outdoor, S2-S3	V DC	24
	Short-circuit Current Rating [SCCR]	kA	5
	Recommended Fuse/Breaker Size (Outdoor)	A	15
	Recommended Wire Size [Indoor - Outdoor]	AWG	14
	Power Supply	Indoor unit is powered by the outdoor unit	
Indoor Unit	MCA	A	1.0
	Fan Motor Full Load Amperage	A	0.33
	Fan Motor Output	W	30
	Fan Motor Type	DC Motor	
	Airflow Rate at Cooling, Dry	CFM	320–370–425
	Airflow Rate at Cooling, Wet	CFM	290–335–380
	Airflow Rate at Heating, Dry	CFM	320–370–425
	Sound Pressure Level [Cooling]	dB[A]	36–40–43
	Sound Pressure Level [Heating]	dB[A]	36–40–43
	Drain Pipe Size	In. [mm]	5/8 [16]
	Coating on Heat Exchanger	—	
	External Finish Color	White Munsell 1.0Y 9.2/0.2	
	Unit Dimensions	W x D x H: In. [mm]	35-3/8 x 9-13/16 x 11-5/8 [898 x 249 x 295]
	Package Dimensions	W x D x H: In. [mm]	39-3/8 x 15-3/4 x 13-3/8 [1000 x 400 x 340]
	Unit Weight	Lbs. [kg]	29 [13]
Package Weight	Lbs. [kg]	33 [15]	
Indoor Unit Operating Temperature Range	Cooling Intake Air Temp [Maximum / Minimum]*	°F	90 DB, 72 WB / 66 DB, 61 WB
	Heating Intake Air Temp [Maximum / Minimum]	°F	77 DB / 59 DB

NOTES:

AHRI Rated Conditions

(Rated data is determined at a fixed compressor speed)

¹Cooling (Indoor // Outdoor) °F 80 DB, 67 WB // 95 DB, 75 WB

²Heating at 47°F (Indoor // Outdoor) °F 70 DB, 60 WB // 47 DB, 43 WB

³Heating at 17°F (Indoor // Outdoor) °F 70 DB, 60 WB // 17 DB, 15 WB

Conditions

⁴Heating at 5°F (Indoor // Outdoor) °F 70 DB, 60 WB // 5 DB, 4 WB

⁵Heating at -4°F (Indoor // Outdoor) °F 70 DB, 60 WB // -4 DB, -5 WB

⁶Heating at -5°F (Indoor // Outdoor) °F 70 DB, 60 WB // -5 DB, -6 WB

⁷Heating at -13°F (Indoor // Outdoor) °F 70 DB, 60 WB // -13 DB, -14 WB

*Outdoor Unit Operating Temperature Range (Cooling Air Temp (Maximum / Minimum)):

- Wind baffles required to operate below 23°F DB in cooling mode.
- Heat pump system with wind baffle: 0°F - 115°F.
- Refer to wind baffle documentation for further information.

**Outdoor Unit Operating Temperature Range (Cooling Thermal Lock-out / Re-start Temperatures; Heating Thermal Lock-out / Re-start Temperatures):

- System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

SEACOAST PROTECTION (-BS MODELS)

- External Outer Panel: Phosphate coating + Acrylic-Enamel coating
- Fan Motor Support: Epoxy resin coating (at edge face)
- Separator Assembly Valve Bed: Epoxy resin coating (at edge face)
- Blue Fin treatment is an anti-corrosion treatment that is applied to the condenser coil to protect it against airborne contaminants.

SPECIFICATIONS: PKA-A12HA7 & PUZ-A12NKA7(-BS)

Outdoor Unit	MCA	A	11.0
	MOCP	A	28
	Fan Motor Full Load Amperage	A	0.5
	Fan Motor Output	W	46
	Airflow Rate	CFM	1590/1590
	Refrigerant Control		LEV
	Defrost Method		Reverse Cycle
	Coating on Heat Exchanger		Blue Fin Coating (BS Model only)
	Sound Pressure Level, Cooling ¹	dB(A)	44
	Sound Pressure Level, Heating ²	dB(A)	46
	Compressor Type		INVERTER-driven twin rotary
	Compressor Model		SNB092FQCMC
	Compressor Rated Load Amps	A	7
	Compressor Locked Rotor Amps	A	12.0
	Compressor Oil Type // Charge	oz.	FV50S // 12
	External Finish Color		Ivory Munsell 3Y 7.8/1.1
	Base Pan Heater		N/A
	Unit Dimensions	W x D x H: In. [mm]	31-13/16 (2+7/16) x 11-13/16 x 24-13/16 [809 (+62) x 300 x 630]
	Package Dimensions	W x D x H: In. [mm]	37-1/16 x 16-3/16 x 27-7/16 [941 x 411 x 697]
	Unit Weight	Lbs. [kg]	93 [42]
Package Weight	Lbs. [kg]	104 [47]	
Outdoor Unit Operating Temperature Range	Cooling Air Temp [Maximum / Minimum]*	°F	115 DB / 0 DB
	Heating Air Temp [Maximum / Minimum]	°F	70 DB, 59 WB / 12 DB, 14 WB
	Heating Thermal Lock-out / Re-start Temperatures**	°F	8 / 12
Refrigerant	Type		R410A
	Charge	Lbs, oz	4, 7.0
	Chargeless Piping Length	Ft. [m]	70.0 [21.0]
	Additional Refrigerant Charge Per Additional Piping Length	oz./Ft. [g/m]	0.2 [19]
Piping	Gas Pipe Size O.D. [Flared]	In.[mm]	1/2 [12.7]
	Liquid Pipe Size O.D. [Flared]	In.[mm]	1/4 [6.35]
	Maximum Piping Length	Ft. [m]	100 [30]
	Maximum Height Difference	Ft. [m]	100 [30]
	Maximum Number of Bends		15

NOTES:

AHRI Rated Conditions	¹ Cooling (Indoor // Outdoor)	°F	80 DB, 67 WB // 95 DB, 75 WB
(Rated data is determined at a fixed compressor speed)	² Heating at 47°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 47 DB, 43 WB
	³ Heating at 17°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 17 DB, 15 WB
Conditions	⁴ Heating at 5°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 5 DB, 4 WB
	⁵ Heating at -4°F (Indoor // Outdoor)	°F	70 DB, 60 WB // -4 DB, -5 WB
	⁶ Heating at -5°F (Indoor // Outdoor)	°F	70 DB, 60 WB // -5 DB, -6 WB
	⁷ Heating at -13°F (Indoor // Outdoor)	°F	70 DB, 60 WB // -13 DB, -14 WB

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- Fan Motor Support: Epoxy resin coating (at edge face)
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- Blue Fin treatment is an anti-corrosion treatment that is applied to the condenser coil to protect it against airborne contaminants.

INDOOR UNIT ACCESSORIES: PKA-A12HA7

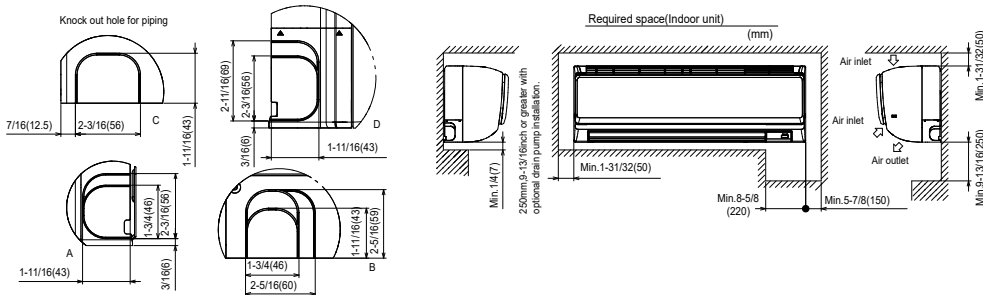
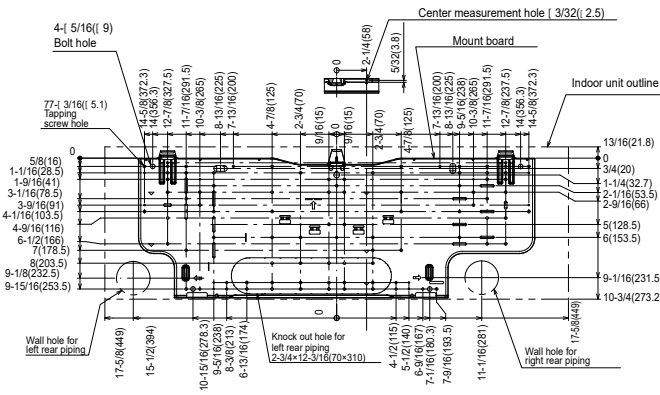
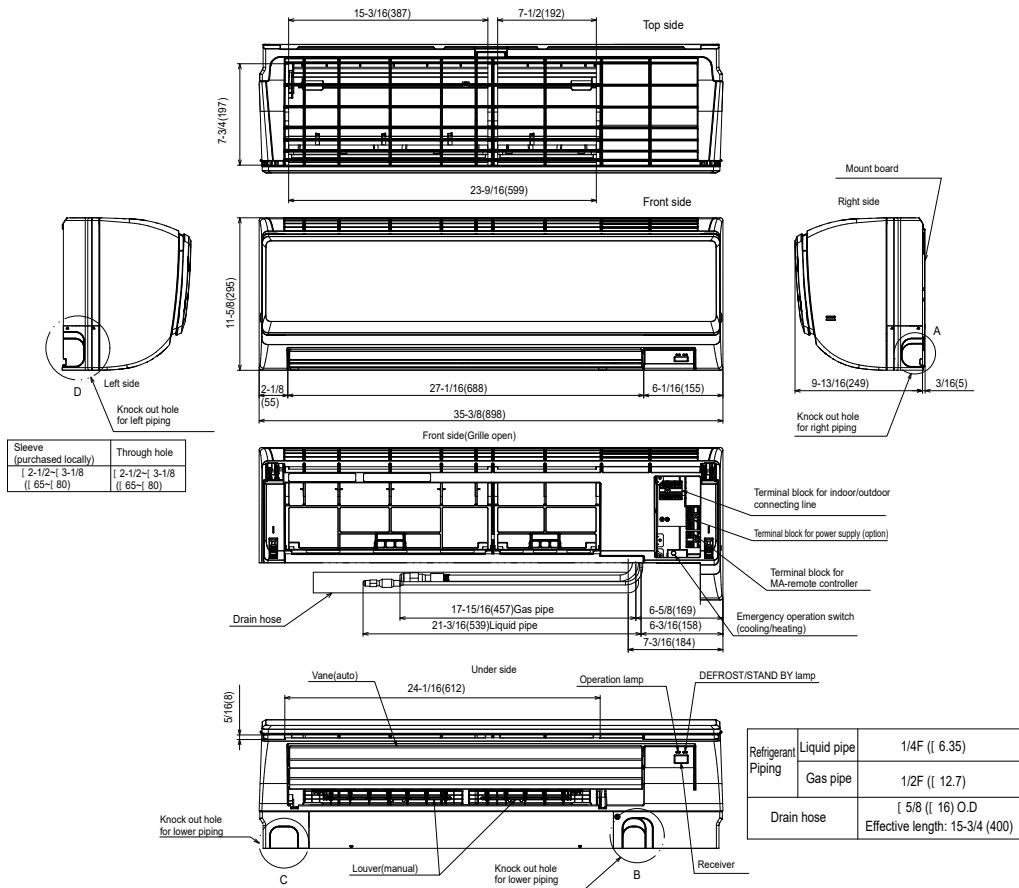
Control Interface	3-Pin Connector	PAC-715AD
	BACnet® and Modbus® Interface	PAC-UKPRC001-CN-1
	IT Extender	PAC-WHS01IE-E
	kumo station® for kumo cloud®	PAC-WHS01HC-E
	Lockdown bracket for remote controller	RCMKP1CB
	Thermostat Interface	PAC-US444CN-1
	USNAP Adapter	PAC-WHS01UP-E
	Wireless Interface for kumo cloud®	PAC-USWHS002-WF-2
Remote Sensor	Flush Mount Temperature Sensor	PAC-USSEEN001-FM-1
	Remote Temperature Sensor	PAC-SE41TS-E
	Wireless temperature and humidity sensor for kumo cloud®	PAC-USWHS003-TH-1
Wired Remote Controller	Deluxe Wired MA Remote Controller†	PAR-40MAAU
	Simple MA Remote Controller†	PAC-YT53CRAU-J
	Touch MA Controller†	PAR-CT01MAU-SB
Wireless Remote Controller	kumo touch™ RedLINK™ Wireless Controller	MHK2
	Wireless MA Controller	PAR-FA32MA-W
	Wireless MA Remote Controller	PAR-FL32MA-E
Condensate	Blue Diamond (Advanced) Mini Condensate Pump w/ Reservoir & Sensor (208/230V) [recommended]	X87-721
	Blue Diamond (MicroBlue) Mini Condensate Pump (110/208/230V) up to 18,000 BTU/H	X85-003
	Blue Diamond Sensor Extension Cable — 15 Ft.	C13-103
	Drain Pan Level Sensor/Control	SS610E
	Fascia Kit for MicroBlue Pump, mounts the MicroBlue and sensor directly beneath indoor unit	T18-016
	Sauermann Condensate Pump	SI30-230
Disconnect Switch	(30A/600V/UL) [fits 2" X 4" utility box] - Black	TAZ-MS303
	(30A/600V/UL) [fits 2" X 4" utility box] - White	TAZ-MS303W
Lineset	100' x 1/4" x 100' / 1/2" Lineset (Twin-Tube Insulation)	MLS141212T-100
	15' x 1/4" x 15' / 1/2" Lineset (Twin-Tube Insulation)	MLS141212T-15
	30' x 1/4" x 30' / 1/2" Lineset (Twin-Tube Insulation)	MLS141212T-30
	50' x 1/4" x 50' / 1/2" Lineset (Twin-Tube Insulation)	MLS141212T-50
	65' x 1/4" x 65' / 1/2" Lineset (Twin-Tube Insulation)	MLS141212T-65

OUTDOOR UNIT ACCESSORIES: PUZ-A12NKA7(-BS)

Air Outlet Guide	Air Outlet Guide	PAC-SJ07SG-E
Centralized Drain Pan	Centralized Drain Pan	PAC-SG63DP-E
	Drain Pan	PAC-SG64DP-E
Control/Service Tool	Control/Service Tool	PAC-SK52ST
	M- & P-Series Maintenance Tool Cable Set	M21EC0397
	USB/UART Conversion Cable (Required for all laptop connection)	M21EC1397
Drain Socket	Drain Socket	MAC-871DS
Hail Guards	Hail Guard	HG-A5
M-NET Converter	M-NET Converter	PAC-SJ96MA-E
Mini-Split Wire	14 Gauge, 4 wire MiniSplit Cable—250 ft. roll	S144-250
	14 Gauge, 4 wire MiniSplit Cable—50 ft. roll	S144-50
	16 Gauge, 4 wire MiniSplit Cable—250 ft. roll	S164-250
	16 Gauge, 4 wire MiniSplit Cable—50 ft. roll	S164-50
Mounting Pad	Condensing Unit Mounting Pad: 16" x 36" x 3"	ULTRILITE1
Stand	18" Single Fan Stand	QSMS1801M
	24" Single Fan Stand	QSMS2401M
	Condenser Wall Bracket	QSWB2000M-1
	Condenser Wall Bracket -Stainless Steel Finish	QSWBSS
	Outdoor Unit Stand — 12" High	QSMS1201M
Wind Baffle	Front Wind Baffle	WB-PA4
	Rear Wind Baffle	WB-RE4
	Side Advanced Wind Baffle	WB-SD4

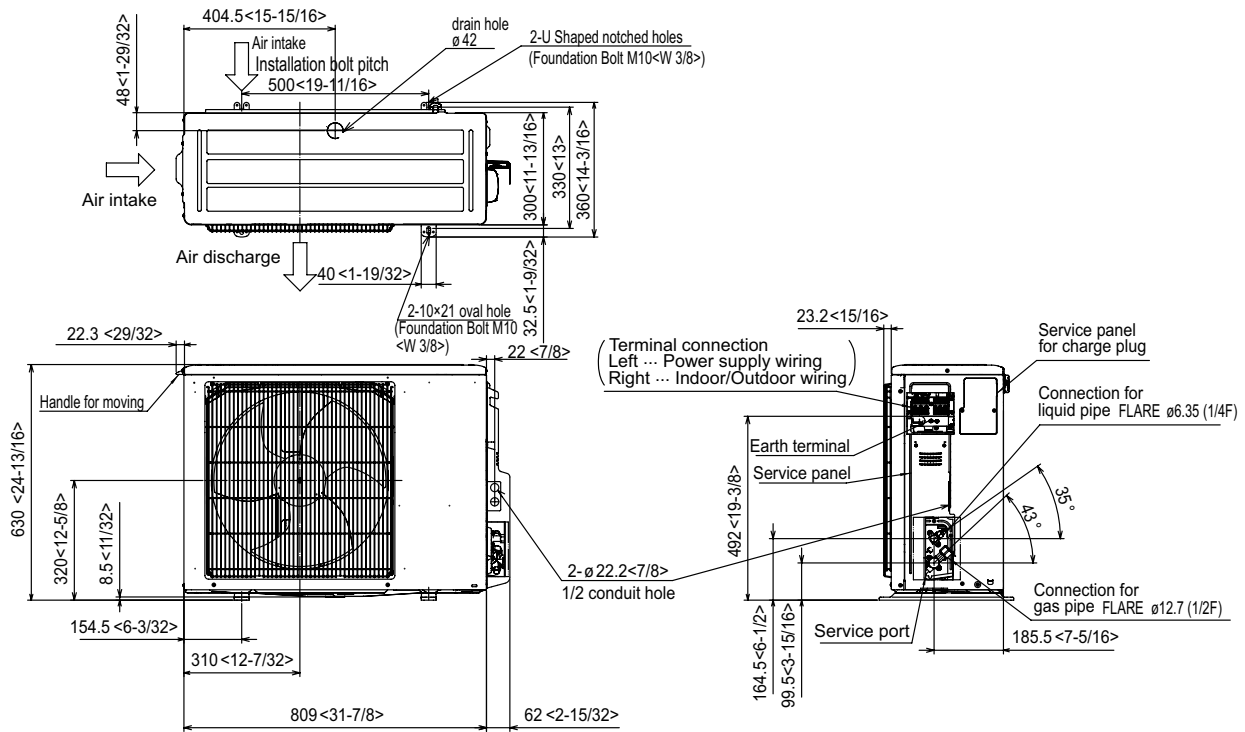
INDOOR UNIT DIMENSIONS: PKA-A12HA7

Unit: inch (mm)

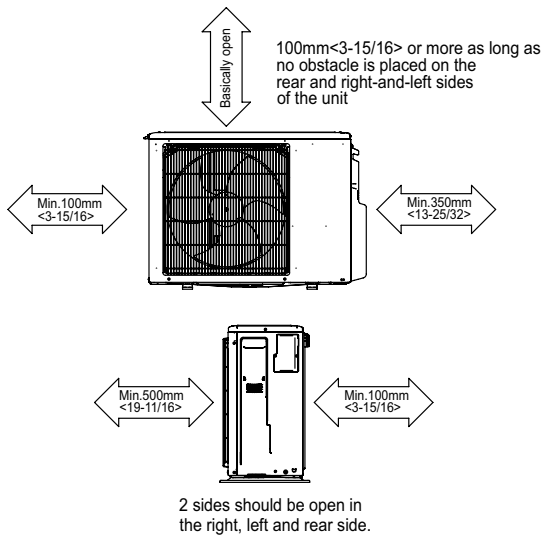


OUTDOOR UNIT DIMENSIONS: PUZ-A12NKA7(-BS)

Unit: mm<in>



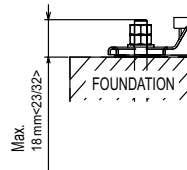
Free space around the outdoor unit (basic example)



FOUNDATION BOLTS

Please secure the unit firmly with 4 foundation (M10<W3/8>) bolts. (Bolts, washers and nut must be purchased locally).

<Foundation bolt height>



PIPING-WIRING DIRECTION

Piping and wiring connection can be made from the rear direction only.

City of Rohnert Park

Public Works Utilities Administration Building

201 J Rogers Lane, Rohnert Park, CA

Luminaire Catalog Pages

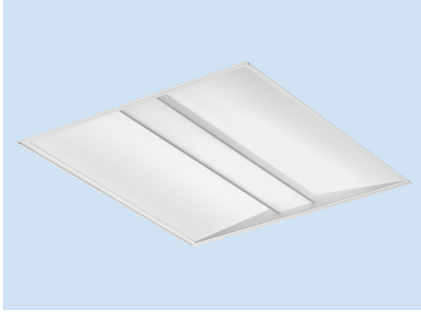
Permit Submittal

March 17, 2025

O'MAHONY & MYER
ELECTRICAL ENGINEERING & LIGHTING DESIGN
4340 Redwood Hwy., Suite 245, San Rafael CA 94903

Note:

The information contained within this luminaire product data package is for reference only. Not all features or options shown on the luminaire product data sheets are included in this project. Please refer to the luminaire schedule for specified product features and options.



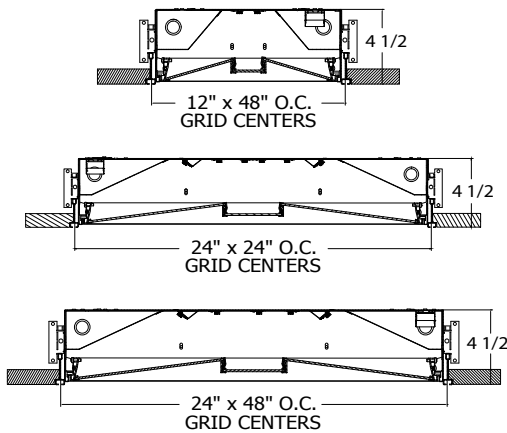
WHISPER

LED TROFFER

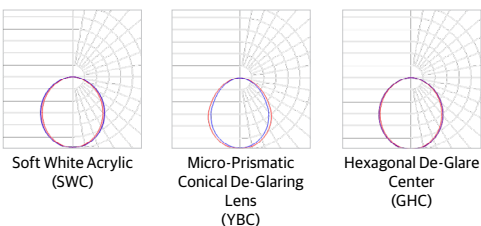
HIGHLIGHTS

- Clean, simple design with sloping side panels
- 2000 to 9000 lumen packages available
- From 114 to 143 lumens per watt (LPW), depending on size, lens, lumen combination
- 1X4, 2X2, and 2X4 sizes available
- Three center shielding options
- UGR data on page 4

DIMENSIONS



DISTRIBUTION



FIXTURE PERFORMANCE

Size	Nominal Lumens	Delivered Lumens	Input Watts	LPW
1x4	2000LM	1946	16	122
	2500LM	2516	21	123
	3000LM	3039	25	120
	3300LM	3327	28	119
	3500LM	3526	30	118
	4000LM	3903	33	117
	4500LM	4529	38	120
	4800LM	4812	41	119
	5000LM	5035	41	122
	5500LM	5546	46	121
	6000LM	6051	51	119
	6500LM	6550	56	118
	7000LM	7042	61	116
	7200LM	7232	63	116
	7500LM	7546	62	121
	8000LM	7808	65	120
2x2	2000LM	2013	16	129
	2500LM	2494	20	127
	3000LM	2969	24	125
	3300LM	3264	27	123
	3500LM	3468	28	123
	4000LM	3960	32	123
	4500LM	4473	38	118
	4800LM	4755	40	118
	5000LM	4951	42	119
	5500LM	5422	46	117
	6000LM	5913	52	114
	6500LM	6433	52	124
	7000LM	6912	56	123
	7200LM	7107	58	122
	7500LM	7412	61	122
	8000LM	7880	66	120
8200LM	8098	68	120	
2x4	3000LM	3014	21	143
	3500LM	3554	26	137
	4000LM	4326	31	140
	4500LM	4546	34	132
	4800LM	4838	37	131
	5000LM	5012	38	131
	5500LM	5527	42	131
	6000LM	6033	47	129
	6500LM	6529	51	127
	7000LM	7052	56	127
	7200LM	7214	57	126
	7500LM	7535	60	125
	8000LM	8032	65	123
	8500LM	8542	70	122
	9000LM	10106	77	131

*Based on 35K 80CRI with SWC center shielding



ds Design Select options indicated by this color background.

Ordering

Example: WHSPR 2X4 80CRI 35K 4000LM MIN1 MVOLT SWC ZT

Series	Size	LED Color Rendering	LED Color Temp	LED Output ¹
WHSPR Whisper LED	2X2 2' x 2' 2X4 2' x 4' 1x4 1' x 4'	80CRI >80 CRI 90CRI >90 CRI	27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	2000LM² 2000 Lumens 2500LM² 2500 Lumens 3000LM 3000 Lumens 3300LM² 3300 Lumens 3500LM 3500 Lumens 4000LM 4000 Lumens 4500LM 4500 Lumens 4800LM 4800 Lumens 5000LM 5000 Lumens 5500LM 5500 Lumens 6000LM 6000 Lumens 6500LM 6500 Lumens 7000LM 7000 Lumens 7200LM 7200 Lumens 7500LM 75000 Lumens 8000LM 8000 Lumens 8200LM² 8200 Lumens 8500LM² 8500 Lumens 9000LM² 9000 Lumens

1. Nominal values. Consult Fixture Performance table for actual delivered lumens.
2. Not available with 2X4
3. Not available with 1X4
4. Not available with 1X4 or 2X2

Minimum Dimming Level	Voltage	Center Shielding	Finish	Emergency Options	Trim
NODIM¹ Non Dimming MINI Constant Current, Dimming to 1% MINIO² Constant Current, Dimming to 10% DARK Constant Current, Dimming to 0.1%	MVOLT 120-277 Volt 120 120 Volt 277 277 Volt 347 347 Volt	SWC Soft White Acrylic YBC Microprismatic Conical De-Glaring Lens GHC¹ Hexagonal De-Glare Lens <i>1. Not Declare listed.</i>	(blank) Standard White paint AMF² Anti-Microbial White RALTB^{1,2} RAL Paint Finishes <i>1. RALTB is for pricing only. Replace with applicable RAL number & finish when placing order. 2. Not available with SMK.</i>	(blank) No Emergency Required E10WLCP^{1,4} 10 Watt Battery Pack, Constant Power with Self Diagnostics, T20 Compliant EMG² Emergency nLight Device for Use with EM Power Circuit BGTD³ Generator Transfer Device <i>1. Not available with 6000LM, 6500LM, 7000LM, 7200LM, 7500LM, 8000LM, 8500LM, or 9000LM. Test switch located on internal reflector behind diffuser. Glow of test switch visible from below. 2. Requires NLTAIR2 or NLIGHT. nLight EMG option requires a connection to an existing nLight network. Power is provided from a separate nLight device. 3. Not available with MVOLT or 347. Must select 120 or 277 option, not available with E10WLCP or NLTAIR2 options. 4. Not available with 347.</i>	(blank) No Trim AR¹ Air Return <i>1. Not available with 1X4, NLIGHT, DMX, CP, AMF, or SMK.</i>

1. If NODIM is selected, do not select a value from the Control Input category.
2. Only available with ZT

Control Input	Primary Sensors ^{1,2}	Pre-Wire Whips	Options
(blank) Use with NODIM Option ZT 0-10V NLIGHT¹ nLight Wired NLTAIR2^{1,4} nLight Air (wireless) Enabled DALP² DALI DMX^{2,5,6} DMX ECOD³ Lutron Ecosystem Driver <i>1. Only available with MINI or DARK 2. Only available with DARK 3. Only available with MINI 4. If sensor required, must select API or APD. 5. Not available with 7000LM, 7200LM, 7500LM, 8000LM, 8500LM, or 9000LM. 6. Not available in 2X4 with 6500LM. For additional ordering assistance consult 'Intelligent Luminaire Technology Guide'.</i>	(blank) No Sensor PIR⁴ Occupancy Sensor- Passive Infrared PDT⁴ Occupancy Sensor- Dual Technology (Passive Infrared & Microphonics) APP⁴ PIR Occupancy Sensor & Photocell APD⁴ PDT Occupancy Sensor & Photocell <i>1. Not available with NODIM or MINIO. 2. Not available with ECOD, DMX, or DALI. 3. If paired with ZT, sensor will be integral but not nLight enabled. All sensors are factory-installed onboard sensors. 4. Requires NLIGHT. For additional ordering assistance consult 'Intelligent Luminaire Technology Guide'.</i>	(blank) No Pre-Wire PWS1836 6' pre-wire, 3/8" diameter, 18 gauge, 1 circuit PWS1846 6' pre-wire, 3/8" diameter, 18 gauge, 2 circuit PWS1846PWSLV^{1,2} Two cables: one 6' pre-wire, 3/8" diameter, 18 gauge, 2 circuits; one 6' pre-wire, 3/8" diameter, 18 gauge, purple and gray PWS1856LV^{1,2} 6' pre-wire, 3/8" diameter, 18 gauge, 1 circuit w/low voltage purple and grey wires <i>1. Not available with NODIM, NLIGHT, or NLTAIR2. 2. Not available with PIR, PDT, API, or APD sensors.</i>	(blank) No Options CP¹ Chicago Plenum GLR² Fast-Blow Fuse GMF² Slow-Blow Fuse LATC Earthquake Clips BAA Buy America(n) Act and/or Build America Buy America Qualified SMK³ Surface Mount Kit <i>1. Not available with NLIGHT. 2. Specific 120 or 277 voltage required. 3. Not available with AMF or RALTB finishes.</i>

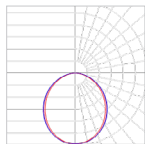


Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect.

*See ordering tree for details

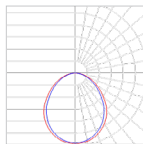
Maximum order quantity for Design Select lead times is 250 luminaires.

PHOTOMETRICS



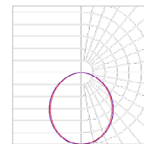
SWC
Test Report: ISF 231930P82
IES LM79-08
Catalog #: WHSPR 2X4 35K 80CRI 8000LM SWC
Lumens: 8032
Wattage: 65.1
Efficacy: 123

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	2,309.50	28.80%
0-40	3,729.60	46.40%
0-60	6,425.10	80.00%
60-90	1,606.90	20.00%
70-100	665.6	8.30%
90-120	0	0%
0-90	8,032.00	100%
90-180	0	0%
0-180	8,032.00	100%



YBC
Test Report: ISF 231931P82
IES LM79-08
Catalog #: WHSPR 2X4 35K 80CRI 8000LM YBC
Lumens: 7829.7
Wattage: 65.1
Efficacy: 120

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	2,377.90	30.40%
0-40	3,831.90	48.90%
0-60	6,392.30	81.60%
60-90	1,437.30	18.40%
70-100	601.6	7.70%
90-120	0	0%
0-90	7,829.70	100%
90-180	0	0%
0-180	7,829.70	100%



GHC
Test Report: ISF 231929P82
IES LM79-08
Catalog #: WHSPR 2X4 35K 80CRI 8000LM GHC
Lumens: 7887.2
Wattage: 65.1
Efficacy: 121

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	2,267.50	28.70%
0-40	3,663.60	46.50%
0-60	6,314.80	80.10%
60-90	1,572.30	19.90%
70-100	649.2	8.20%
90-120	0	0%
0-90	7,887.20	100%
90-180	0	0%
0-180	7,887.20	100%

PROJECTED LED LUMEN MAINTENANCE

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	10,000	60,000	100,000
Lumen Maintenance Factor	1	0.98	0.91	0.86

CCT/CRI SCALING CHART

CCT	CRI	MULTIPLIER	
27K	80CRI	0.94	
30K	80CRI	0.97	
35K	80CRI	1.00	
40K	80CRI	1.02	
50K	80CRI	1.04	R9
27K	90CRI	0.79	57.35
30K	90CRI	0.81	52.70
35K	90CRI	0.83	56.18
40K	90CRI	0.84	58.38
50K	90CRI	0.89	55.60

Lumen scaling charts can be used to approximate the lumen values at different Kelvin temperatures, color rendering indices, optics, or shielding.

Example: Calculating the lumen change from 80CRI 35K to 80CRI 40K = Lumen output for WHSPR 2X4 35K 80CRI 8000LM SWC (8032) x 1.02 multiplier = 8193 lumens

SHIELDING SCALING CHART

Shielding	Multiplier
SWC	1.000
YBC	0.999
GHC	0.989

*Based upon Soft White Acrylic (SWC) shielding

UGR CHART

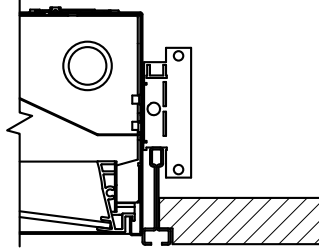
		UGR (70% 50% 20% reflectance using a 4H x 8H room size)					
		Crosswise			Endwise		
SIZE	LUMEN PACKAGE	SWC	YBC	GHC	SWC	YBC	GHC
1x4	2000LM	18.0	17.3	18.0	16.8	16.3	16.9
	2500LM	18.9	18.2	18.9	17.7	17.2	17.8
	3000LM	19.6	18.8	19.5	18.3	17.8	18.5
	3300LM	19.9	19.1	19.9	18.7	18.2	18.8
	3500LM	20.1	19.3	20.1	18.9	18.4	19.0
	4000LM	20.4	19.7	20.4	19.2	18.7	19.4
	4500LM	21.0	20.2	20.9	19.7	19.2	19.9
	4800LM	21.2	20.4	21.1	19.9	19.4	20.1
	5000LM	21.3	20.6	21.3	20.1	19.6	20.2
	5500LM	21.7	20.9	21.6	20.4	19.9	20.6
	6000LM	22.0	21.2	21.9	20.7	20.2	20.9
	6500LM	22.2	21.5	22.2	21.0	20.5	21.2
	7000LM	22.5	21.7	22.5	21.3	20.8	21.4
	7200LM	22.6	21.8	22.6	21.4	20.9	21.5
7500LM	22.7	22.0	22.7	21.5	21.0	21.7	
8000LM	22.9	22.1	22.8	21.6	21.1	21.8	
2x2	2000LM	17.6	16.6	17.6	17.5	17.5	17.6
	2500LM	18.3	17.4	18.3	18.2	18.2	18.3
	3000LM	18.9	18.0	18.9	18.8	18.8	18.9
	3300LM	19.2	18.3	19.2	19.1	19.1	19.3
	3500LM	19.4	18.5	19.5	19.4	19.3	19.5
	4000LM	19.9	19.0	19.9	19.8	19.8	19.9
	4500LM	20.3	19.4	20.3	20.2	20.2	20.4
	4800LM	20.5	19.6	20.6	20.4	20.4	20.6
	5000LM	20.7	19.8	20.7	20.6	20.6	20.7
	5500LM	21.0	20.1	21.0	20.9	20.9	21.0
	6000LM	21.3	20.4	21.3	21.2	21.2	21.3
	6500LM	21.6	20.7	21.6	21.5	21.5	21.6
	7000LM	21.8	20.9	21.9	21.7	21.7	21.9
	7200LM	21.9	21.0	22.0	21.8	21.8	22.0
7500LM	22.1	21.2	22.1	22.0	22.0	22.1	
8000LM	22.3	21.4	22.3	22.2	22.2	22.3	
8200LM	22.4	21.5	22.4	22.3	22.3	22.4	
2x4	3000LM	17.3	15.9	17.0	16.6	16.6	16.6
	3500LM	17.8	16.4	17.6	17.1	17.2	17.1
	4000LM	18.5	17.1	18.3	17.8	17.9	17.8
	4500LM	18.7	17.3	18.4	18.0	18.1	18.0
	4800LM	18.9	17.5	18.6	18.2	18.3	18.2
	5000LM	19.0	17.6	18.8	18.3	18.4	18.3
	5500LM	19.4	18.0	19.1	18.7	18.8	18.7
	6000LM	19.7	18.3	19.4	19.0	19.1	19.0
	6500LM	20.0	18.5	19.7	19.2	19.3	19.2
	7000LM	20.2	18.8	20.0	19.5	19.6	19.5
	7200LM	20.3	18.9	20.0	19.6	19.7	19.6
	7500LM	20.5	19.0	20.2	19.7	19.8	19.7
8000LM	20.7	19.3	20.4	20.0	20.1	20.0	
8500LM	20.9	19.5	20.6	20.2	20.3	20.2	
9000LM	21.5	20.1	21.2	20.8	20.8	20.8	

*UGR varies based on luminaire options and is affected by application dependent parameters. Numbers depicted here are considered "Luminaire-UGR" and/ or "Point-UGR" values. To determine a more precise maximum UGR value ("Application-UGR"), a full lighting design layout should be completed with the selected luminaire configuration for each application.

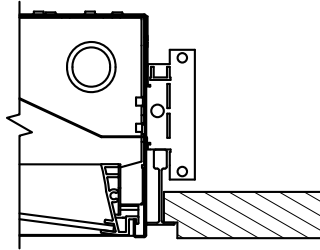
For more information on UGR see [UGR FAQ](#)

MOUNTING

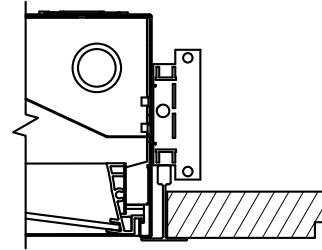
Recessed, lay-in formed steel trim. Universal trim accommodates 9/16" slot grid or 15/16" inverted tee, or 9/16" inverted tee.



UNIV
(9/16" Slot Grid)



UNIV
(9/16" Grid)

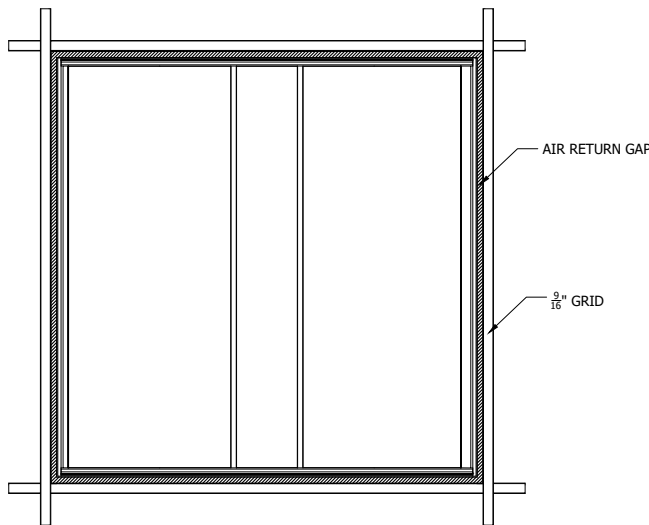


UNIV
(15/16" Grid)

For recessed mounting in hard ceiling applications, use one of the following drywall grid adapters (ordered separately).

Fixture	Drywall Grid Adapter (DGA)
WHSPR 2X2	DGA22
WHSPR 2X4	DGA24
WHSPR 1X4	DGA14WHS

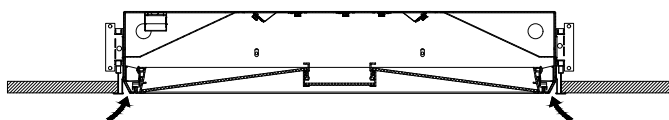
AIR RETURN



Use total area of the air returns shown below in conjunction with the pressure differential between the plenum and room space to calculate your flow rate.

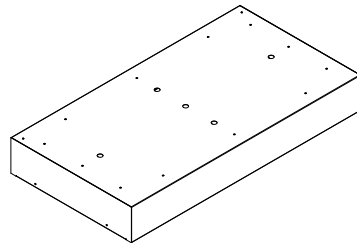
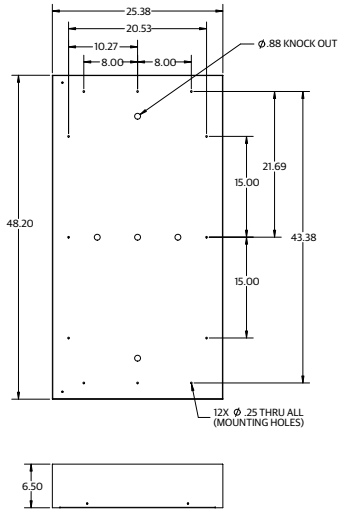
WHSPR 2X2	
Grid Type	Air Return Area (in ²)
Flat 9/16	29.5
Flat 15/16	12.2
Slotted 9/16	29.5

WHSPR 2X4	
Grid Type	Air Return Area (in ²)
Flat 9/16	44.9
Flat 15/16	18.5
Slotted 9/16	44.9

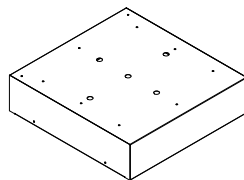
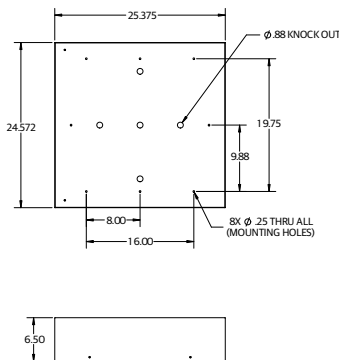


SURFACE MOUNT KIT

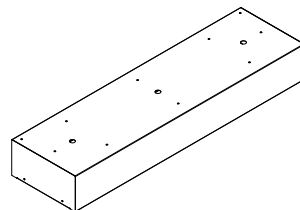
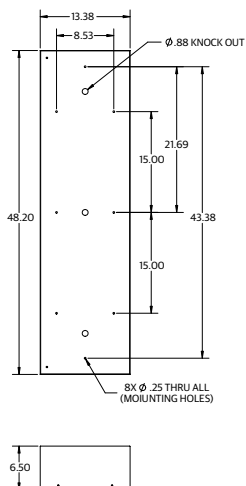
Formed and welded 20 gauge steel housing with (2) outer end plates (shipped separate from housing). Available in standard white paint finish.



Size: 2x4
Approx Weight: 38 lbs.

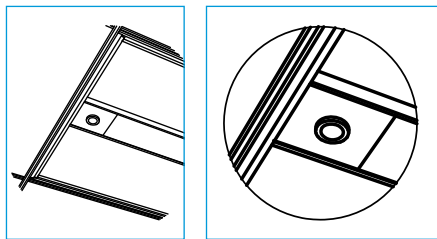


Size: 2x2
Approx Weight: 25 lbs.



Size: 1x4
Approx Weight: 30 lbs.

INTEGRATED SENSORS



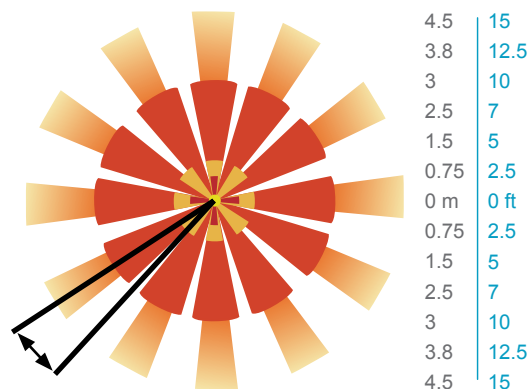
Pictured with Occupancy Sensor and Photocell

COVERAGE PATTERN

MICRO 360° Lens

- At the 7.5 ft (2.29 m) hanging height of a typical pendant mount fixture the sensor provides 10 ft (3.05 m) radial detection of small motion. At a 9 ft (2.74 m) hanging height the radius is 12 ft (3.66 m) for small motion.
- Adequate for walking motion detection from mounting heights between 7.5 ft (2.29 m) and 20 ft (6.10 m).
- Initial detection will occur earlier when walking across sensor's field of view than when walking directly at sensor.
- Initial detection of walking motion into long coverage segment will occur at distances of 2x the mounting height up to 15 ft (4.57 m) and 1.75x up to 20 ft (6.10 m). Lens assembly rotates 15° to enable adjustment in order to line up long segments.

7.5 ft Mounting Height



Lens rotates 15° to enable adjustment

EMERGENCY OPTION

How to Estimate Delivered Lumens in Emergency Mode

Use the formula below to estimate the delivered lumens in emergency mode

Delivered Lumens = 1.25 x P x LPW

P = 10 watts for PS1055LCP

LPW - Lumens per watt rating of the luminaire. This information is available on page 1 of this spec sheet or appropriate IES file.

UL924 Sequence of Operation

The below information applies to all nLight AIR devices with an EM option.

- EM devices will remain at their high-end trim and ignore wireless lighting control commands, unless a normal-power-sensed (NPS) broadcast is received at least every 8 seconds.
- Using the CLAIRITY+mobile app, EM devices must be associated with a group that includes a normal power sensing device to receive NPS broadcasts.
- Only non-emergency rPP20, rLSXR, rSBOR, rSDGR, and nLight AIR luminaires with version 3.4 or later firmware can provide normal power sensing for EM devices. See specification sheets for control devices and luminaires for more information on options that support normal power sensing.

CONTROL ACCESSORIES

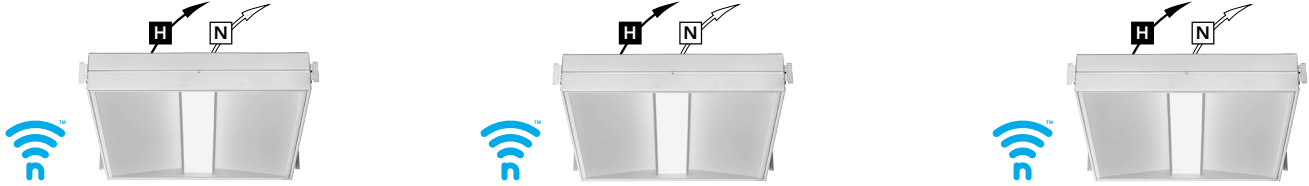
nLight® Wired Control Accessories <i>Order as separate catalog number</i>	
Wall Switches	Model Number
On/Off single pole	nPODMA (color)
On/Off two pole	nPODMA 2P (color)
On/Off single pole, dimming	nPODMA DX (color)
On/Off two pole, dimming	nPODMA 2P DX (color)
On/Off, two level	nPODMA 2L (color)
Graphic touchscreen	nPOD TOUCH (color)

For more information see nPOD and nPOD TOUCH spec sheets

nLight AIR® Control Accessories <i>Order as separate catalog number</i>	
Wall Switches	Model Number
On/Off single pole	rPODBA (color)
On/Off two pole	rPODBA 2P (color)
On/Off single pole, dimming	rPODBA DX (color)
On/Off two pole, dimming	rPODBA 2P DX (color)
On/Off, 4 scene control	rPODBA 4S (color)

For more information see rPOD spec sheets

nLIGHT AIR WIRELESS



Simple as 1,2,3

1. Install the nLight® AIR fixtures with embedded smart sensor
2. Install the wireless battery-powered wall switch
3. With our CLAIRITY app, pair the fixtures with the wall switch and if desired, customize the sensor settings for the intended outcome



For more information, please consult our technical guides for [nLight](#) or [nLight Air](#).

INTELLIGENT LUMINAIRE TECHNOLOGY GUIDE

Choose nomenclature from these columns						
Driver Configuration (MVOLT)	Minimum Dimming Level	Control Input	Dimming Range	Notes		
	NODIM	+	(blank)	-	No 0-10V leads from driver	
	MIN10	+	ZT	100% to 10%	Linear Dimming, supplied with leads for 0-10V control	
	MIN1	+	ZT	100% to 1%	Linear Dimming, supplied with leads for 0-10V control	
	MIN1	+	NLIGHT	100% to 1%	Linear Dimming, NIO EZ PH, included with luminaire	
	MIN1	+	NLTAIR2	100% to 1%	Linear Dimming, internal RIO EZDL 90D G2 included with luminaire	
	MIN1	+	ECOD	100% to 1%	Lutron Hi-Lume 1% EcoSystem (LDE1)	
	DARK	+	ZT	100% to 0.1%	Logarithmic Dimming, supplied with leads for 0-10V control	
	DARK	+	NLIGHT	100% to 0.1%	Logarithmic Dimming, NIO EZ PH included with luminaire	
	DARK	+	NLTAIR2	100% to 0.1%	Logarithmic Dimming, RIO EZDL 90D G2 included with luminaire	
	DARK	+	DALI	100% to 0.1%	Logarithmic Dimming, DALI controls by others	
	DARK	+	DMX	100% to 0.1%	Compatible with DMX / RDM (Remote Device Management), DMX controls by others	

Choose nomenclature from these columns						
Control/Sensor Configurations	Control Input	Sensor	Emergency	Integral Component Description		
	ZT	+	API	(blank)	Sensor Switch MSD 7 EZ ADC	
	ZT	+	APD	(blank)	Sensor Switch MSD PDT 7 EZ ADC	
	NLIGHT	+	PIR	(blank)	nLight NES 7	
	NLIGHT	+	PIR	+	EMG	nLight NES 7 with NIO EZ PH ER
	NLIGHT	+	PDT	(blank)	nLight NES PDT 7	
	NLIGHT	+	PDT	+	EMG	nLight NES PDT 7 with NIO EZ PH ER
	NLIGHT	+	API	(blank)	nLight NES 7 ADCX	
	NLIGHT	+	API	+	EMG	nLight NES 7 ADCX with NIO EZ PH ER
	NLIGHT	+	APD	(blank)	nLight NES PDT 7 ADCX	
	NLIGHT	+	APD	+	EMG	nLight NES PDT 7 ADCX with NIO EZ PH ER
	NLIGHT	+	(blank)	(blank)	nLight NIO EZ PH	
	NLIGHT	+	(blank)	+	EMG	nLight NIO EZ PH ER
	NLTAIR2	+	API	(blank)	nLight RES7 G2	
	NLTAIR2	+	API	+	EMG	nLight RES7 EM 90D G2
	NLTAIR2	+	APD	(blank)	nLight RES7 PDT G2	
	NLTAIR2	+	APD	+	EMG	nLight RES7 PDT EM 90D G2
	NLTAIR2	+	(blank)	(blank)	nLightRIO EZDL 90D G2	
NLTAIR2	+	(blank)	+	EMG	nLight RIO EZDL EM 90D G2	

For more information, please consult our technical guides for [nLight](#) or [nLight Air](#).

SPECIFICATIONS

Housing

Nominal 1'x4', 2'x2' or 2'x4' housings fabricated from 22-gauge, cold-rolled steel. Air return option available.

Door Frame

The hinged door frame is constructed of extruded aluminum center and side rails with cold-rolled steel end caps capturing three individual optical panels to form a single unit. The hinged door frame can be positioned on either side of the fixture housing to provide easy room side access for maintenance.

Finish

Matte white polyester powder paint standard for trim. Consult factory for custom colors or specify RAL colors from Architectural brochure.

Inner Housing Reflector

Formed steel with highly reflective white polyester powder paint.

Lenses/Shielding

Center Panel: Soft-White Acrylic (SWC) or Micro-Prismatic Conical De-Glaring Acrylic Lens (YBC) or Hexagonal De-Glare Lens (GHC) options available.

Side Panels: Soft-White Acrylic only.

Mounting

Recessed ceiling for grid or inaccessible sheetrock ceiling.

Grid: Accommodates 9/16" slot grid or 15/16" inverted tee or 9/16" inverted tee.

Sheetrock: Use a Drywall Grid Adapter (DGA22, DGA24, or DGA14WHS). Ordered separately.

LED Components

Multiple lumen packages available with 2700K, 3000K, 3500K, 4000K and 5000K CCT in either 80CRI or 90CRI. The Acuity Brands circuit boards use a precise binning algorithm which creates a consistent color temperature from board to board. The color a variation of no greater than a 2.5 Step MacAdam (2.55DECM) along the black body locus from board to board.

Electrical

Long-life LEDs, coupled with high-efficiency drivers, provide superior quantity and quality of illumination for extended service life. 90% LED lumen maintenance at 60,000 hours (L90/60,000).

Dimming Drivers

Factory tuned constant current electronic dimming driver is standard. Flicker free dimming available down to <1%. LED drivers perform within the recommended operating areas for flicker as a function of frequency and modulation (%) IEEE Standard 1789-2015 (IEEE Recommended Practices for Modulating Current in High-Brightness LEDs for Mitigating Health Risks to Viewers), in typical operating conditions at representative dimming levels. Electrical specifications at maximum driver load: PF > 0.9 and THD <20%. Meets FCC Title 47 Class A or Class B. Other available drivers include Lutron, DALI, and DMX protocol drivers. All drivers are RoHS compliant.

Controls and System Networking Options

Optional integrated nLight® controls make each fixture addressable - allowing it to digitally communicate with other nLight enabled controls such as dimmers, switches, occupancy sensors, and photocontrols. Connection to nLight is simple. It can be accomplished with remote nLight AIR wireless or through standard Cat-5 cabling. (cabling "by others") nLight offers unique plug-and-play convenience as devices and luminaires automatically discover each other, while nLight AIR is commissioned easily through an intuitive mobile app.

Emergency Battery (Optional)

Integral emergency battery (E10WLCP) for 90 minutes of operation. Emergency battery pack, 10W, Linear Constant Power. Certified in CA Title 20 MAEDBS.

Remote generator transfer device (BGTD) works in conjunction with an auxiliary generator or a central inverter system to power fixtures for safe egress lighting.

Voltage

120 thru 277v/50-60Hz: 347v/50-60Hz (optional)

Ambient Operating Temperature

-20°C (-4°F) to +25°C (+77°F).

Ambient Operating Humidity

90% relative humidity non-condensing maximum.

Environment

Suitable for damp locations. Indoor use only.

Certification

CSA certified to meet U.S. and Canadian standards (UL1598 and UL8750). This product is IC rated. Chicago plenum rating (option) available.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

Fixture Weight (Without emergency or packaging)

1x4: 22lbs.

2x2: 28lbs.

2x4: 38lbs.

Government Procurement

BAA - Buy America(n) Act: Product qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product also qualifies as manufactured in the United States under DOT Buy America regulations.

BABA - Build America Buy America: Product qualifies as produced in the United States under the definitions of the Build America, Buy America Act.

Please refer to www.acuitybrands.com/buy-american for additional information.

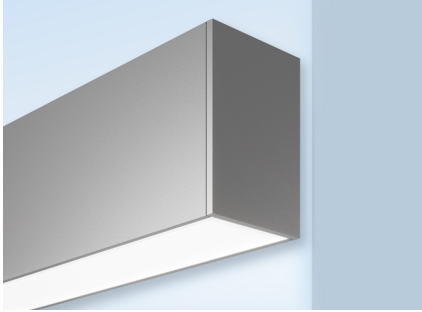
Warranty

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.



SLOT 4

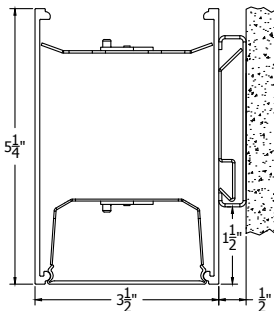
WALL INDIRECT/DIRECT

HIGHLIGHTS

- 600 to 3000 total lumens per foot
- 300 to 1500 lumens per foot Direct or Indirect
- Up to 166 Lumens per Watt
- 2 direct distributions: Lambertian, Wall Graze
- 2 indirect distributons: Lambertian or Asymmetric
- Multiple lens treatment options include Continuous, Drop, in 1/2", 1" or 1 1/2", Top Glow and Edge View
- Shielding provided by optional deep cell baffle
- Integrated control with optional nLight or nLight Air for system networking
- Driver options for Dim to Dark, 1% or 10% minimum dimming
- White, black or silver paint with satin finish
- Declare listed
- UGR data available on page 3

DIMENSIONS

See page 5 for additional details.



FIXTURE PERFORMANCE

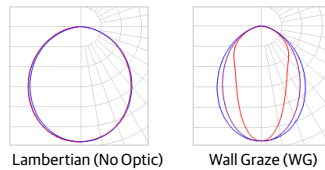
	Direct							
Nominal Lumens/Foot	300LMF	400LMF	600LMF	800LMF	1000LMF	1200LMF	1400LMF	1500LMF
Delivered Lumens/Foot	292	394	575	791	973	1192	1352	1442
Input Watts/Foot	2.39	3.14	4.68	6.33	7.96	10.00	11.93	13.01
Lumens/Watt	122	126	123	125	122	119	113	111

	Indirect							
Nominal Lumens/Foot	300LMF	400LMF	600LMF	800LMF	1000LMF	1200LMF	1400LMF	1500LMF
Delivered Lumens/Foot	325	405	610	797	1027	1225	1484	1580
Input Watts/Foot	1.95	2.55	3.82	4.85	6.19	7.54	8.98	9.78
Lumens/Watt	166	159	160	164	166	163	165	162

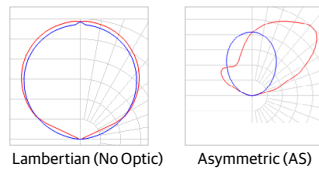
Based on a 4ft 35K fixture with standard lambertian distribution



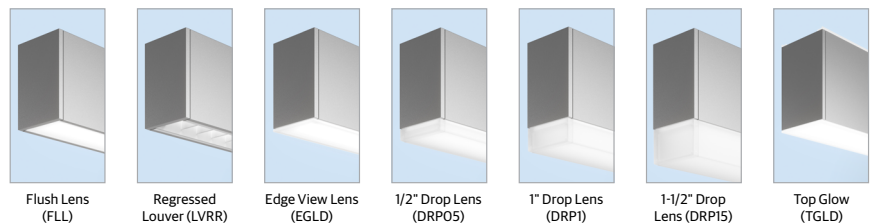
DIRECT DISTRIBUTION



INDIRECT DISTRIBUTION



DIFFUSERS/SHIELDING



ORDERING

Example: S4WID LLP 32FT MSL8 90CRI 35K 800LMF I90CRI I35K I1200LMF MIN1 FLL SCT MVOLT WHTT ZT

Series	Linear Plan	Total Run Length	Max Section Length	Direct Light Source Color Rendering	Direct LED Color Temp	Direct LED Light Output	Direct Distribution (Optics)
S4WID SLOT 4 Wall Indirect/Direct (Formerly S4LWID)	LLP Linear Longest Possible LCB Linear Center Balanced LSL Longest Same Length For more information on linear plans, see page 4.	_FT Specify Continuous Run Length (in 1" increments, 2' minimum) Unit length may affect available options. For runs longer than 8FT: ALWAYS order the run by the TOTAL RUN LENGTH. Ordering the sections individually will not provide the correct joining hardware to allow connection in the field.	MSL2 2FT Length MSL3 3FT Length MSL4 4FT Length MSL5 5FT Length MSL6 6FT Length MSL7 7FT Length MSL8 8FT Length	80CRI 80 CRI 90CRI 90 CRI	27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	300LMF 300 Lumens per Foot 400LMF 400 Lumens per Foot 600LMF 600 Lumens per Foot 800LMF 800 Lumens per Foot 1000LMF 1000 Lumens per Foot 1200LMF 1200 Lumens per Foot 1400LMF 1400 Lumens per Foot 1500LMF 1500 Lumens per Foot _LMF Specify Lumens between 300LMF - 1500LMF in 50LMF increments	(blank) Lambertian WG Wall Graze Distribution Direct Distribution options are only available with FLL lens.

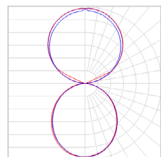
Indirect Light Source Color Rendering	Indirect LED Color Temp	Indirect LED Light Output	Indirect Distribution	Switching	Minimum Dimming Level	Direct Shielding	Indirect Shielding
80CRI 80CRI 90CRI 90CRI	127K 2700K 130K 3000K 135K 3500K 140K 4000K 150K 5000K	300LMF 300 Lumens per FT 400LMF 400 Lumens per FT 600LMF 600 Lumens per FT 800LMF 800 Lumens per FT 1000LMF 1000 Lumens per FT 1200LMF 1200 Lumens per FT 1400LMF 1400 Lumens per FT 1500LMF 1500 Lumens per FT _LMF Specify Lumens between 300LMF - 1500LMF in 50LMF increments	(blank) Lambertian AS¹ Asymmetrical Distribution 1. Asymmetric Distribution is only available in whole foot increments. It is not available with E10WLCP, GTD or sensors.	SCT Single Circuit DCT¹ Dual Circuit 1. DCT is not available with sensors or NLTAIR2. Not available on fixtures under 4'. DCT with E10WLCP is not available in units under 5'.	NODIM¹ Non Dimming MINI Constant Current, Dimming To 1% MINIO² Constant Current, Dimming To 10% DARK Constant Current, Dimming To 0.1% 1. Not available with Control Input options. 2. MINI is not available with DALI, ECOD or ECOD2.	FLL Flush Lens (Default) LVRR¹ Regressed Louver LVRRRA¹ Regressed Louver, Natural Aluminum EGLD² Edge Glow, Direct DRP05³ Drop Lens, 1/2" DRP1³ Drop Lens, 1" DRP15³ Drop Lens, 1-1/2" CLL⁴ Continuous Flush Lens 1. LVRR & LVRRRA are not available with NLTAIR2. Only available in whole foot increments. 2. EGLD is not available with E10WLCP, NLTAIR2 or sensors. Only available in whole foot increments. 3. Drop lenses are only available in whole foot increments. 4. CLL is not available with WW, WG, or DBW.	(blank) No Indirect Shielding TGLD¹ Top Glow Lens DC Dust Cover, Clear DCF Dust Cover, Frosted 1. TGLD is only available in whole foot increments. It's not available with E10WLCP or NLTAIR2.

Voltage	Finish	Emergency Options	Control Input	Primary Sensor	Secondary Zone
MVOLT Multi-Volt, 120-277 120 120V 277 277V 347¹ 347V 1. 347 & DCT are not available under 4'. 347 is only available with ZT. 347 is not available with emergency options or sensors.	WHTT White (Satin) BLKT Black (Satin) SLVT Silver (Satin) RALTBDD¹ RAL Paint Finish RALTBDD is for pricing only. Replace with applicable RAL number & finish when placing order.	(blank) No Emergency Options _E10WLCP¹ # of 10W Battery Packs, Constant Power, Self Diagnostics, T20 Compliant WEC² Emergency Circuit for Entire Run _EC # of Emergency Circuits GTD³ Generator Transfer Device (Remote mounted) 1. E10WLCP is not available in units under 7'. E10WLCP with NLTAIR2 is only available in units 7'-8'. 2. WEC is not available with sensors. 3. GTD is remote mounted. (See more information on page 9.) GTD is not available with MVOLT or 347.	(blank) Non-Dimming ZT 0-10V NLIGHT Embedded wired controls by nLight NLTAIR2¹ Embedded wireless controls by nLight DALI² DALI ECOD³ Lutron EcoSystem Digital Driver 1. NLTAIR2 can be used as a normal power sensing device for nLight Air devices and luminaires with EM emergency options. It is not available with NODIM or DCT with EC or GTD. Not available on units under 4'. 2. DALI is only available with DARK. DALI is not available with sensors. 3. ECOD is only available with MIN1. It is not available with E10WLCP. It is only available with 300LMF, 600LMF, 1000LMF or 1500LMF.	(blank) No sensors NS_¹ Primary Zone with No Sensor (Specify length in feet) ADC¹ Daylight Dimming Sensor PDT¹ Dual Technology Occupancy Sensor, PIR and Microphonics Sensor APIR² Passive Infrared Occupancy and Daylight Dimming Sensor APDT² Dual Technology Occupancy and Daylight Dimming Sensor Sensors are only available with FLL and fixtures 4' and above. Please see page 8 for more details. 1. ADC & PDT are available with ZT or NLIGHT. 2. APIR & APDT are available with ZT, NLIGHT or NLTAIR2.	(blank) No Sensors or Secondary Zone SNS_¹ Secondary Zone with No Sensor (Specify length in feet) SADC¹ Daylight Dimming Sensor, Secondary Zone SPDT¹ Dual Technology Occupancy Sensor, PIR and Microphonics Sensor, Secondary Zone SAPIR² Passive Infrared Occupancy and Daylight Dimming Sensor, Secondary Zone SAPDT² Dual Technology Occupancy and Daylight Dimming Sensor, Secondary Zone Sensors are only available with FLL and fixtures 4' and above. Please see page 8 for more details. 1. ADC & PDT are available with ZT or NLIGHT/ 2. APIR & APDT are available with ZT, NLIGHT or NLTAIR2.

Tertiary Zone	Options
(blank) No Tertiary Zone TNS_¹ Tertiary Zone (Specify length in feet)	(blank) No Options BAA Buy America(n) Act and/or Build America Buy America Qualified

Note: Unit length and lumen outputs may affect available options.

PHOTOMETRICS



Test Report: ISF222300-ISF 221790PI445
IES LM79-08
S4PID U4 80CRI 35K 1000LMF I1000LMF
Lumens: 7990.3
Wattage: 56.61
Efficacy: 141.15

EXPECTED LIFE: L90 @ 60,000 HOURS
CALCULATED LIFE: L80 @ 120,000 HOURS

CCT SCALING CHART

CCT	CRI	MULTIPLIER
27K	80CRI	0.94
30K	80CRI	0.97
35K	80CRI	1.00
40K	80CRI	1.02
50K	80CRI	1.04
27K	90CRI	0.79
30K	90CRI	0.81
35K	90CRI	0.83
40K	90CRI	0.84
50K	90CRI	0.88

Lumen scaling charts can be used to approximate the lumen values at different Kelvin temperatures, color rendering indices, optics or shielding.

Example: Find base lumen value x multiplier value = new lumen value

OPTICAL SCALING CHARTS

DOWNLIGHT	
DISTRIBUTIONS	MULTIPLIER
WG	0.85

*Base fixture with Lambertian distribution and flush lens

UPLIGHT	
DISTRIBUTIONS	MULTIPLIER
AS	0.79
SHIELDING	MULTIPLIER
TGLD	0.91
DC	0.91
DCF	0.86

UGR CHART

Lumen Package	UGR (70% 50% 20% reflectance using a 4H x 8H room size)										
	Crosswise										
	Lambertian	DBW	WG	WW	CLL	DPRO5	DRP1	DRP15	EGLD	LVRR	LVRRA
300LMF	11.4	7.5	8.8	6.1	11.7	11	9.6	8.7	11.7	0	0
400LMF	13.4	9.5	10.8	8.1	13.7	13	11.6	10.7	13.6	0.7	0.6
600LMF	15.8	12	13.3	10.6	16.2	15.5	14	13.2	16.1	3.2	3.1
800LMF	17.9	14	15.4	12.7	18.2	17.5	16.1	15.2	18.1	5.3	5.2
1000LMF	19.2	15.4	16.7	14	19.5	18.8	17.4	16.5	19.4	6.6	6.5
1200LMF	20.4	16.6	18	15.2	20.7	20	18.6	17.8	20.6	7.9	7.8
1400LMF	21.2	17.4	18.7	16	21.5	20.8	19.4	18.5	21.4	8.7	8.6
1500LMF	21.5	17.8	19.1	16.4	21.9	21.1	19.7	18.9	21.8	9.1	9
Lumen Package	Endwise										
	Lambertian	DBW	WG	WW	CLL	DPRO5	DRP1	DRP15	EGLD	LVRR	LVRRA
	300LMF	11.2	9	7.8	3.9	10.7	13.2	13.8	13.9	11.4	3.7
400LMF	13.1	11	9.8	5.9	12.6	15.1	15.8	15.9	13.4	5.7	5.6
600LMF	15.6	13.5	12.3	8.4	15.1	17.6	18.2	18.4	15.9	8.2	8.1
800LMF	17.7	15.5	14.4	10.4	17.1	19.6	20.3	20.4	17.9	10.3	10.2
1000LMF	18.9	16.8	15.7	11.8	18.4	20.9	21.6	21.7	19.2	11.6	11.5
1200LMF	20.2	18.1	17	13	19.7	22.2	22.8	23	20.4	12.9	12.8
1400LMF	20.9	18.9	17.8	13.8	20.4	22.9	23.6	23.7	21.2	13.7	13.6
1500LMF	21.3	19.3	18.2	14.2	20.8	23.3	23.9	24.1	21.5	14.1	14

Indirect Lumens	UGR Scaling Factors
I300LMF	1.24
I400LMF	1.21
I600LMF	1.16
I800LMF	1.12
I1000LMF	1.08
I1200LMF	1.05
I1400LMF	1.01
I1500LMF	1

*Calculations based on a 4 foot fixture @ 35K 80CRI using I1500LMF indirect lumens. Decreases in indirect lumens will increase UGR numbers. See UGR multiplier chart for guidance. UGR numbers calculated this way are for reference only, refer to IES files for the exact numbers.

**UGR varies based on luminaire options and is affected by application dependent parameters. Numbers depicted here are considered "Luminaire-UGR" and/or "Point-UGR" values. To determine a more precise maximum UGR value ("Application-UGR"), a full lighting design layout should be completed with the selected luminaire

*** Click here from more information: [UGR FAQ](#)

LINEAR PLAN

Mark Lighting offers the ability to provide a continuous run plan to suit your requirements by optionally offering three different methods of configuration.

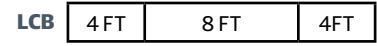
LLP- Linear Longest Possible

In this configuration, the longest length available is optimized, resulting in the fewest segments and mounting locations. Caution should be used where balanced appearance is a concern. Example: 20 FT run would have 2, 8 FT segments and 1, 4 FT segment at the end of the run.



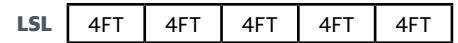
LCB- Linear Center Balanced:

This configuration incorporates the longest center segment(s) along with any additional lengths required to fill the run length, added to the run ends. Example: 16 FT run would have 2, 4 FT segments (one at each end) and 1, 8 FT segment in the center.



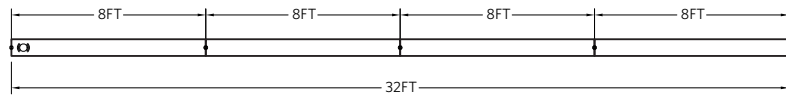
LSL- Linear Same Length:

In this configuration, each segment is the same length and is standardized based on the longest length available and is the only option provided. Because it is dependent on one segment length and there are mathematical limitations on what overall row lengths can be achieved. Example: 20 FT row would be achieved with 5, 4 FT long segments equaling 20 FT (nominal).

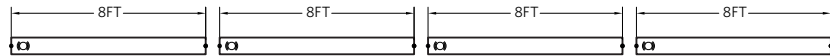


Total Run Length

This system is not modular. Runs longer than 8FT will be automatically configured with left, intermediate and right sections, based on how you specify the TOTAL RUN LENGTH and MAXIMUM SECTION LENGTH parameters in the ordering information. Always order the total run length, not the individual sections.



Example: This run must be ordered as 1pc "S4WID LLP 32FT MSL8..."



Example: If you order as 4pcs "S4WID LLP 8FT MSL8... you will receive these INDIVIDUAL sections that cannot be joined together

Maximum Section Length

The run will be broken out using as many sections at the chosen maximum section length as possible. Shorter sections will then complete the desired run length.

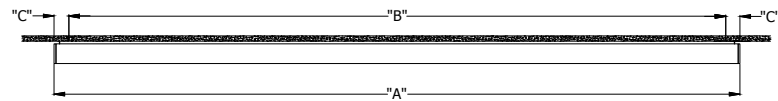
Examples:

S4WID LLP 21FT MSL5... = 5FT / 4FT / 4FT / 4FT / 4FT

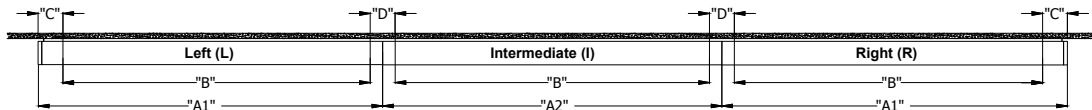
S4WID LLP 21FT MSL6... = 6FT / 6FT / 5FT / 4FT

S4WID LLP 21FT MSL7... = 7FT / 7FT / 7FT

S4WID LLP 21FT MSL8... = 8FT / 8FT / 5FT



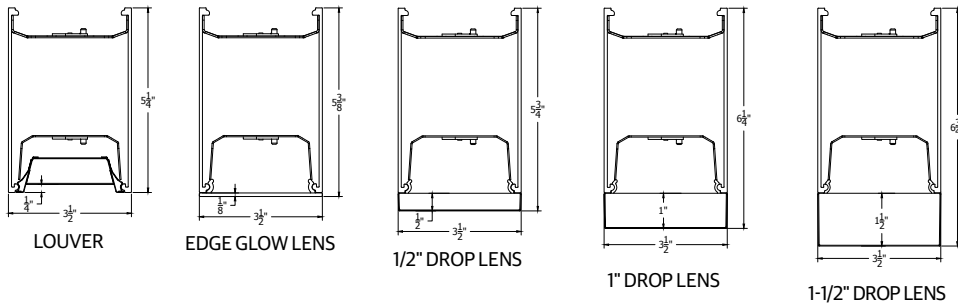
INDIVIDUAL FIXTURES				
ORDERED LENGTH	"A" O.A.L.	"B" O.C.	"C" FROM END	APPROX. WEIGHT
2FT	2'- 0 9/16"	1'- 0"	6 1/4"	2.76
3FT	3'- 0 9/16"	2'- 0"	6 1/4"	4.14
4FT	4'- 0 9/16"	3'- 0"	6 1/4"	5.52
5FT	5'- 0 9/16"	4'- 0"	6 1/4"	6.9
6FT	6'- 0 9/16"	5'- 0"	6 1/4"	8.28
7FT	7'- 0 9/16"	6'- 0"	6 1/4"	9.66
8FT	8'- 0 9/16"	7'- 0"	6 1/4"	11.04



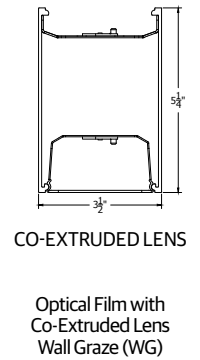
RUN LAYOUT						
ORDERED LENGTH	"A1" O.A.L.	"A2" O.A.L.	"B"	"C" FROM END	"D"	APPROX. WEIGHT
4FT	4'- 0 1/4"	4'- 0"	3'- 0"	6 1/4"	1'- 0"	5.52
5FT	5'- 0 1/4"	5'- 0"	4'- 0"	6 1/4"	1'- 0"	6.9
6FT	6'- 0 1/4"	6'- 0"	5'- 0"	6 1/4"	1'- 0"	8.28
7FT	7'- 0 1/4"	7'- 0"	6'- 0"	6 1/4"	1'- 0"	9.66
8FT	8'- 0 1/4"	8'- 0"	7'- 0"	6 1/4"	1'- 0"	11.04

SHIELDING, OPTICS & CONNECTORS

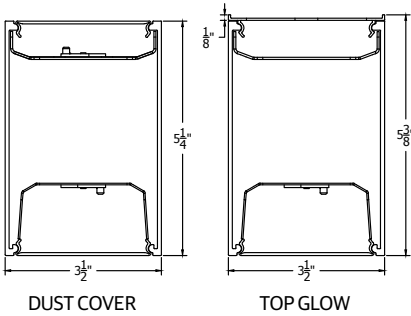
Direct Shielding



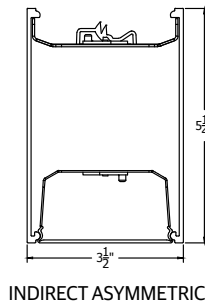
Direct Optics



Indirect Shielding

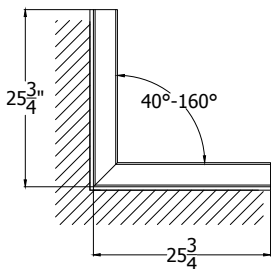


Indirect Optics

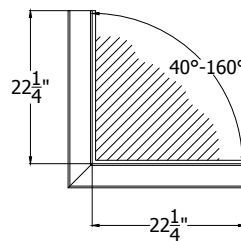


Run Patterns, Corners and Junction

Patterns can be configured in 1' increments with illuminated L connectors with standard 2' corner. L connectors are available in 40-160 degrees in 1 degree increments. For custom angles, corner or junction lengths, consult factory. See separate pattern spec sheet for more details.



Inside Corner (IC)



Outside Corner (OC)

INTELLIGENT LUMINAIRE TECHNOLOGY GUIDE

Choose nomenclature from these columns					
Driver Configurations	Minimum Dimming Level	Control Input	Dimming Range	Notes	
	NO DIM	+	(blank)	-	No 0-10V leads from the driver.
	MINIO	+	ZT	100 to 10%	
	MIN1	+	ZT	100 to 1%	
	MIN1	+	NLIGHT	100 to 1%	
	MIN1		ECOD	100 to 1%	Lutron Hi-lume 1% EcoSystem LED Driver with Soft-on, Fade-to-Black (model LDE1)
	DARK		ZT	100 to 0.1%	
	DARK		NLIGHT	100 to 0.1%	
	DARK		DALI	100 to 0.1%	"Compatible with DALI. Formerly (EDB & EDAB) nomenclature." Logarithmic dimming

Choose nomenclature from these columns						
Control / Sensor Configurations	Control Input	Sensor	Sensor	Notes		
	ZT	+	ADC	=	MSD ADC	Automatic dimming control integral photocell.
	ZT	+	PDT	=	MSD PDT 7	Dual technology integral occupancy sensor.
	ZT	+	APIR	=	MSD 7 ADC	PIR integral occupancy sensor with automatic dimming control photocell.
	ZT	+	APDT	=	MSD PDT 7 ADC	Dual technology integral occupancy sensor with automatic dimming control photocell.
	NLIGHT	+	(blank)	=	nIO EZ PH	nLight enabled only. No onboard sensor.
	NLIGHT	+	ADC	=	nIO EZ PH + nES ADCX	Automatic dimming control integral photocell. nLight enabled.
	NLIGHT	+	PDT	=	nIO EZ PH + nES PDT 7	360° Dual technology integral occupancy sensor. nLight enabled.
	NLIGHT	+	APIR	=	nIO EZ PH + nES 7 ADCX	360° PIR integral occupancy sensor with automatic dimming control photocell. nLight enabled.
	NLIGHT	+	APDT	=	nIO EZ PH + nES PDT 7 ADCX	360° Dual technology integral occupancy sensor with automatic dimming control photocell. nLight enabled.
	NLTAIR2	+	(blank)	=	RIO EZDL EXT900 ACWH 90D G2	nLight AIR enabled only. No onboard sensor.
	NLTAIR2	+	APIR	=	RES7 EXT900 ACWH 90D G2	PIR integral occupancy sensor with automatic dimming control photocell. nLight AIR enabled.
	NLTAIR2	+	APDT	=	RES7 PDT EXT900 ACWH 90D G2	Dual technology integral occupancy sensor with automatic dimming control photocell. nLight AIR enabled.

For more information, please consult our technical guides for [nLight](#) or [nLight Air](#).

UL924 Sequence of Operation
The below information applies to all nLight AIR devices with an EM option.
<ul style="list-style-type: none"> EM devices will remain at their high-end trim and ignore wireless lighting control commands, unless a normal-power-sensed (NPS) broadcast is received at least every 8 seconds. Using the CLAIRITY+ mobile app, EM devices must be associated with a group that includes a normal power sensing device to receive NPS broadcasts. Only non-emergency rPP20, rLSXR, rSBOR, rSDGR, and nLight AIR luminaires with version 3.4 or later firmware can provide normal power sensing for EM devices. See specification sheets for control devices and luminaires for more information on options that support normal power sensing.

nLight® Wired Control Accessories <i>Order as separate catalog number</i>	
Wall Switches	Model Number
On/Off single pole	nPODMA (color)
On/Off two pole	nPODMA 2P (color)
On/Off single pole, dimming	nPODMA DX (color)
On/Off two pole, dimming	nPODMA 2P DX (color)
On/Off, two level	nPODMA 2L (color)
Graphic touchscreen	nPOD TOUCH (color)

For more information see [nPOD](#) and [nPOD TOUCH](#) spec sheets

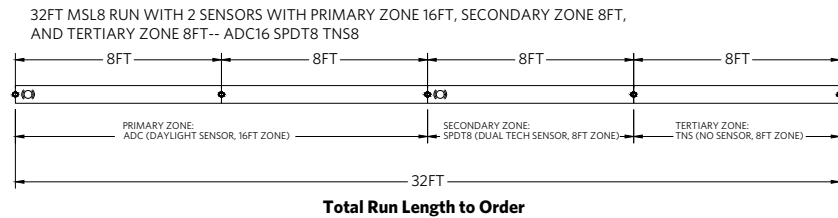
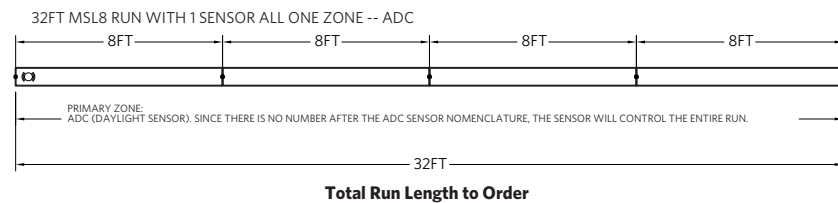
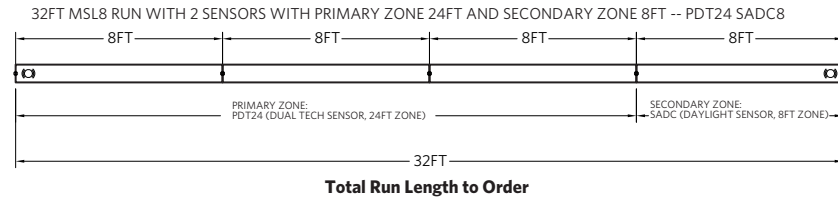
nLight AIR® Control Accessories <i>Order as separate catalog number</i>	
Wall Switches	Model Number
On/Off single pole	rPODBA (color)
On/Off two pole	rPODBA 2P (color)
On/Off single pole, dimming	rPODBA DX (color)
On/Off two pole, dimming	rPODBA 2P DX (color)
On/Off, 4 scene control	rPODBA 4S (color)

For more information see [rPOD](#) spec sheets

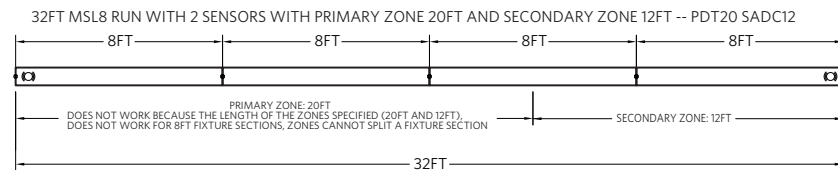
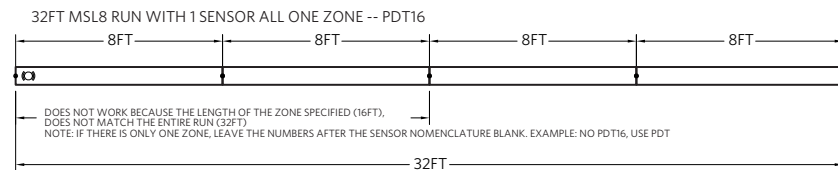
INTEGRATED SENSOR LAYOUT

For runs longer than 8FT:
ALWAYS order the run by the TOTAL RUN LENGTH. Ordering the sections individually will not provide the correct joining hardware to allow connection in the field.

CORRECT:



INCORRECT:



Notes:

- Only one sensor per zone
- At the most, the entire run can only have 2 sensors (thus 2 sensors zones at the most)
- Sensor zone can not split fixture sections
- No overlapping zones

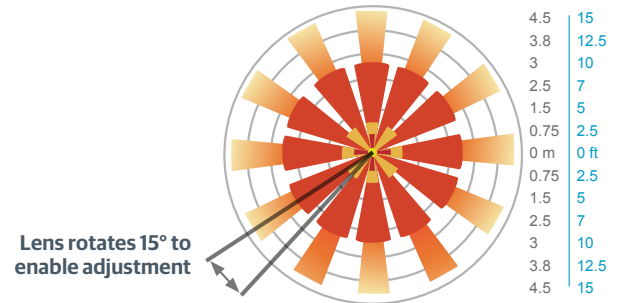
OCCUPANCY DETECTION COVERAGE

At the 7.5 ft (2.9 m) hanging height of a typical pendant mount fixture the sensor provides 10 ft (3.05 m) radial detection of small motion. At a 9 ft (2.74 m) hanging height the radius is 12 ft (3.66 m) for small motion.

Adequate for walking motion detection from mounting heights between 7.5 ft (2.29 m) and 20 ft (6.10 m).

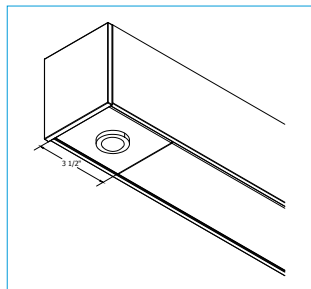
Initial detection will occur earlier when walking across sensor's field of view than when walking directly at sensor.

Initial detection of walking motion into long coverage segment will occur at distances of 2x the mounting height up to 15 ft (4.57 m) and 1.75x up to 20 ft (6.10 m). Lens assembly rotates 15° to enable adjustment in order to line up long segments.



Integrated Controls

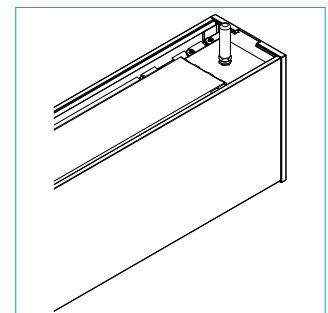
Optional nLight® integrated controls make Slot LED luminaires addressable- allowing them to digitally communicate with other nLight enabled controls such as dimmers, switches, occupancy sensors and photocontrols. Simply connect all the nLight enabled control devices using standard CAT5 Cabling (included).



Occupancy Sensor and/or Photocell

nLight Air Wireless Antenna Location

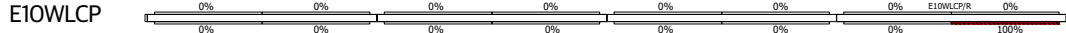
Note: Antenna will be shipped separately and will need to be attached to the coax connector.



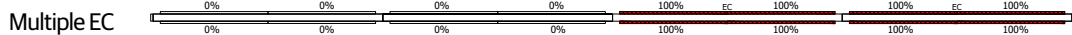
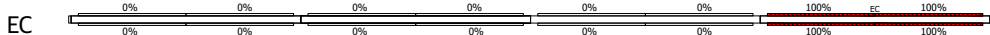
EMERGENCY OPTIONS

Emergency Battery Packs

The PS1055LCP battery is integral to the fixture and comes standard with a remote test switch and self-diagnostics. Only direct light portion operated by emergency, as indicated below.



Emergency Circuits



Note: Whole run on emergency circuit



Note: Whole run on emergency circuit nltAIR2/nLight PP in first fixture



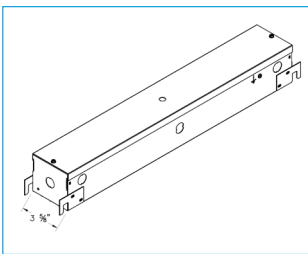
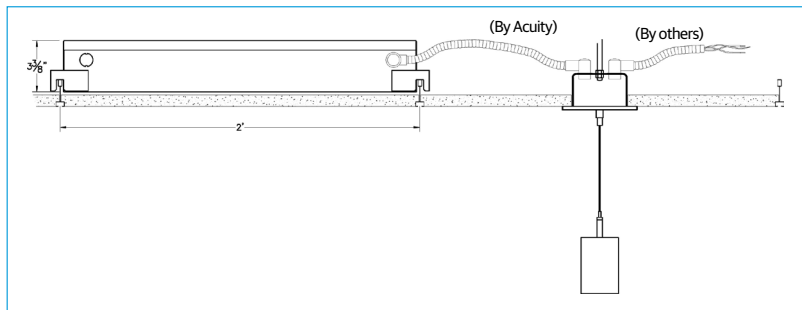
Note: Whole run on emergency circuit nltAIR2/nLight PP in second fixture

How to Estimate Delivered Lumens in Emergency Mode
Use the formula below to estimate the delivered lumens in emergency mode
Delivered Lumens = 1.25 x P x LPW
P = 10W for PS1055LCP
LPW = Lumen per watt rating of the luminaire This information is available on page 1 of this spec sheet or appropriate IES file.

Section Length	E10WLCP	EC
U2	None	Entire unit
U3	None	Entire unit
U4	Entire unit	Entire unit
U5	Last 3'	Entire unit
U6	Last 3'	Entire unit
U7	Last 4'	Entire unit
U8	Last 4'	Entire unit

Remote GTD Mounting Option

Recessed in ceiling. Consult factory for other ceiling types or canopy options. 6 foot flexible conduit included, GTD option should be mounted within 6 feet of junction box above fixture.



Accessible Ceiling

SPECIFICATIONS

Housing

One-piece extruded aluminum housing

Finish

Standard colors for fixtures and end caps are polyester powder coated white, black, or silver with satin sheen. Consult factory for custom colors and RAL color options.

Optics (Distribution)

Wall Graze (WG) incorporate co-extruded lenses and films. Asymmetric (AS) distributions incorporate injection molded, optical grade, UV-resistant acrylic optic.

Lenses/Shielding

Indirect: Clear acrylic, dust cover (DC), frosted, acrylic dust cover (DCF), Extruded acrylic top glow lens (TGLD).

Direct: Wall Graze (WG) distribution option incorporates co-extruded lenses and films.

LED Components

Multiple lumen packages available with 2700K, 3000K, 3500K, 4000K and 5000K CCT. The Acuity Brands circuit boards for the linear LED components use a precise binning algorithm which creates a consistent color temperature from board to board. The color a variation of no greater than a 2.5 Step MacAdam (2.55DECM) along the black body locus from board to board.

Electrical

Long-life LEDs, coupled with high-efficiency drivers, provide superior quantity and quality of illumination for extended service life. 90% LED lumen maintenance at 60,000 hours (L90/60,000).

Circuits

Single and dual switching options available. Dual switching offered with shared neutral.

Controls System Networking Options

Optional integrated nLight® controls make each fixture addressable - allowing it to digitally communicate with other nLight enabled controls such as dimmers, switches, occupancy sensors, and photocontrols. Connection to nLight is simple. It can be accomplished with remote nLight AIR wireless or through standard Cat-5 cabling. (cabling "by others") nLight offers unique plug-and-play convenience as devices and luminaires automatically discover each other, while nLight AIR is commissioned easily through an intuitive mobile app.

Emergency Battery (Optional)

Integral emergency battery (E10WLCP) for 90 minutes of operation. Emergency battery pack, 10W, Linear Constant Power Certified in CA Title 20 MAEDBS.

Remote generator transfer device (GTD) works in conjunction with an auxiliary generator or a central inverter system to power fixtures for safe egress lighting.

Dimming Drivers

Factory tuned constant current electronic dimming driver is standard. Flicker free dimming available down to <1%. LED drivers perform within the recommended operating areas for flicker as a function of frequency and modulation (%) IEEE Standard 1789-2015 (IEEE Recommended Practices for Modulating Current in High-Brightness LEDs for Mitigating Health Risks to Viewers), in typical operating conditions at representative dimming levels. Electrical specifications at maximum driver load: PF > 0.9 and THD <20%. Meets FCC Title 47 Class A or Class B. Other available drivers include Lutron and DALI protocol drivers. All drivers are RoHS compliant.

Environment

Suitable for damp location. Indoor use only.

Certification

CSA certified to meet U.S. and Canadian standards (UL1598 and UL8750).

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

Ambient Operating Temperature

-20°C (-4° F) to +25°C (+77°F).

Government Procurement

BAA - Buy America(n) Act: Product qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product also qualifies as manufactured in the United States under DOT Buy America regulations.

BABA - Build America Buy America: Product qualifies as produced in the United States under the definitions of the Build America, Buy America Act. Please refer to www.acuitybrands.com/buy-american for additional information.

Fixture Weight

1 lb per foot, less packaging.

Warranty

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

IVO™ 4" Round Downlight New Construction

TRIM STYLES AND COLORS



Parabolic



4.5" x 8.2" x 11.0"

New construction housing shown. Please see page 6 for full set of dimensional drawings.

Flange Styles



Flanged



Flangeless

Reflector Colors



Clear Alzak



Gold



Pewter



Wheat



Black



White



White
Anti-Microbial



Soft White

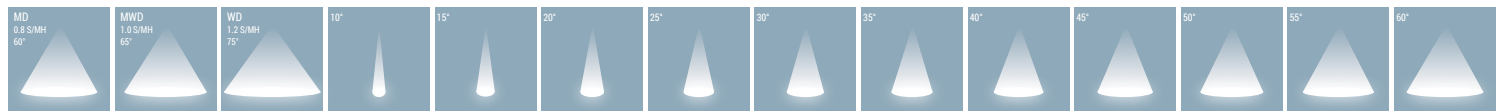


Bronze

Feature Set

- Perfect Color™ consistency within 1/2-step MacAdam Ellipse
- Exceptional color rendering with 80 CRI, 90 CRI, or 95 CRI minimum
- Bounding Ray™ optical design delivers low brightness apertures for a comfortable lighting experience
- 45° visual cut-off angle to source
- Up to 90% lumen maintenance at 55,000 hours
- Wet Location optional, covered ceiling
- Easy installation and servicing with snap-in Driver
- Batwing distributions with feathered edges to provide even illumination fixture-to-fixture
- Clean beams with soft transitions from narrow spot up to wide flood distributions
- Field changeable optics available every 5°

Distribution / Beam Angles



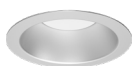
Superior Performance*

Nominal Lumens	05LM	07LM	10LM	15LM	20LM	25LM	30LM	35LM	40LM	45LM
Delivered Lumens	493	735	991	1486	1968	2447	2732	3313	3796	4236
Wattage	5.1	7.3	9.8	15.0	20.5	26.8	29.7	34.4	41.8	45.3
Lumens per Watt	96	100	101	99	96	91	92	96	91	94

*Based on 3500K MWD 80CRI P AR LSS

QUICK SPECIFICATIONS

IVO 4" Round Product Family



Downlight



Lensed WW



Surface Cylinder



Pendant Cylinder



Wall Cylinder



Wall Adjustable Cylinder





Design Select options indicated by this color background.
Maximum order quantity for design select lead times is 100

Luminaire Type:

Catalog Number:

EXAMPLE: IVO4 D 10LM 35K 80CRI MWD MIN10 MVOLT ZT NCH P AR LSS F

ORDERING INFORMATION

Series	Function	Lumen Packages	Kelvin Temperature	Color Rendering Index	Distribution
IVO4 Round Recessed	D Downlight	05LM ¹ 500 Lumens 07LM 750 Lumens 10LM 1000 Lumens 15LM 1500 Lumens 20LM 2000 Lumens 25LM 2500 Lumens 30LM 3000 Lumens 35LM 3500 Lumens 40LM ¹⁶ 4000 Lumens 45LM ¹⁷ 4500 Lumens	27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	80CRI 80+ CRI 90CRI ² 90+ CRI 95CRI ² 95+ CRI	Narrow / Flood 10D 10° 30D 30° 50D 50° 15D 15° 35D 35° 55D 55° 20D 20° 40D 40° 60D 60° 25D 25° 45D 45° General Illumination / Batwing MD Medium Batwing (0.8 s/mh, 60°) MWD Medium Wide Batwing (1.0 s/mh, 65°) WD Wide Batwing (1.2 s/mh, 75°)

Dimming Level	Voltage	Control Input	Emergency Option
MIN10 Min 10% Dim Level MIN1 Min 1% Dim Level DARK Min 0.1% Dim Level, Dim-to-Dark	MVOLT Multi-Volt input, 120V-277V 120 120V input 347 ³ 347V input	ZT ⁴ Generic 0-10V EZT EidoLED 0-10V ELV ⁵ Phase Dimming (Forward/Reverse) (120V only) DMX ⁶ DMX DALI ⁶ DALI-2 nLIGHT Embedded wired controls by nLight nLTAIR2 Embedded wireless controls by nLight nLIGHTER Embedded wired controls by nLight with UL924 listed emergency operation nLTAIREM2 Embedded wireless controls by nLight with UL924 listed emergency operation	(Blank) No Emergency Pack E7W ⁸ IOTA 7W Emergency battery pack, Constant Power, Title 20 compliant, integrated test switch. E7WR ^{7,8} IOTA 7W Emergency battery pack, Constant Power, Title 20 compliant, remote test switch. E10W ⁹ IOTA 10W Emergency battery pack, Constant Power, Title 20 compliant, integrated test switch E10WR ⁹ IOTA 10W Emergency battery pack, Constant Power, Title 20 compliant, remote test switch. GTD ^{9,10} Generator Transfer Device

Housing Style	Options	Trim Style	Trim Color	Trim Finish	Flange Style
NCH Non-IC Housing (new construction only) ICAT IC/Airtight Housing (new construction only)... 1500LM max. CP Chicago Plenum CCEA Housing (new construction only)	SF Single Fuse (no 347V) WL Wet Location	P Open Reflector	AR Clear Anodized BR Black Anodized GR Gold Anodized PR Pewter Anodized WTR Wheat Anodized WR ^{11,15} White Gloss (painted) WMR ¹¹ Soft White Matte (painted) WRAMF ¹¹ White Gloss with Anti-Microbial (painted) BZR ^{11,15} Dark Bronze (painted) TRALTBD ¹² Trim RAL # (TBD for pricing only) TCPC Trim Custom Paint Color	LD Matte Diffuse LS Specular LSS Semi Specular	F Self Flanged (color matches trim) FL Flangeless (Drywall) FBL ¹³ Flange Only Black FWR ¹⁴ Flange Only White FRALTBD ¹² Flange Only RAL FCPC Flange Only Custom Paint Color

ACCESSORIES – order as separate catalog numbers (shipped separately)

GRA4/6.5IVO JZ	Round goof ring adapter 4" ID, 6.5" OD
SCA4	Sloped ceiling adaptor. Degree of slope must be specified (5D, 10D, 15D, 20D, 25D, 30D). Ex: SCA4 10D. Refer to TECH-190 for details.
CTAIVODL20	Trim ceiling thickness adaptors for 1-1/4" to 2" thick ceilings and ≤ 30LM (includes set of two for one trim).
CTAIVODL27	Trim ceiling thickness adaptors for 2" to 2-3/4" thick ceilings and ≤ 30LM (includes set of two for one trim).
CTAIVODL30	Trim ceiling thickness adaptors for 2-3/4" to 3" thick ceilings and ≤ 30LM (includes set of two for one trim).

ORDERING NOTES

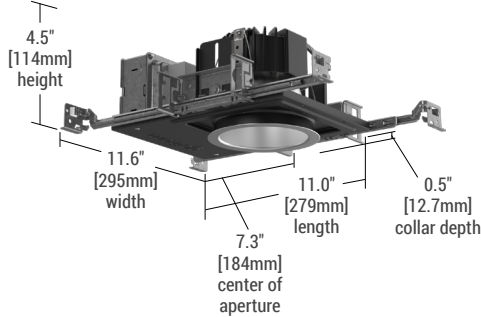
- | | |
|---|--|
| <ol style="list-style-type: none"> 1. 05LM only available with ELV or ZT. Not available with 347V. 2. 90CRI not available with 50K, 95CRI not available with 35K, 40K or 50K. 3. 347 only available with ZT and MIN1 or MIN10. Not available with nLight or Emergency options. 40LM max. 4. ZT is not available with DARK. 5. ELV only available with MIN1 and 120V. 6. DMX and DALI are only available with DARK. 7. E7WR is not available with CP housings. 8. E7W and E7WR and not available with ICAT. 9. E10W, E10WR and GTD not available with ICAT or CP. 10. GTD only available with NCH and ZT, ELV, or EZT. | <ol style="list-style-type: none"> 11. Not available with Trim Finishes. 12. Replace with applicable RAL number and finish when ready to order. See RAL BROCHURE for available color options. 13. For use with different reflector flange color only (i.e AR, BZR, GR, PR, WR, WTR, WMR, WRAMF). Not available with BR (black reflector) or FL or FLM (flangeless) options. 14. For use with different reflector flange color only (i.e AR, BR, BZR, GR, PR, WTR). Not available with WR, WMR, WRAMF (white reflector) or FL or FLM (flangeless) options. 15. Corrosion Resistant Powder Coat. 16. 40LM and CP requires Marked Spacing. 17. 45LM and NCH requires Marked Spacing. |
|---|--|



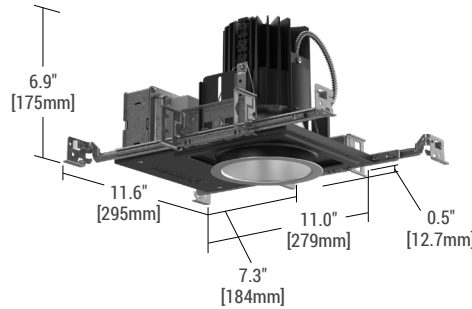
New Construction Dimensions

- Dimensions in inches [millimeters] are overall width and height (including mounting hardware Butterfly Brackets / Hanger Bars), length excludes extendable Hanger Bars.
- ½" clearance on all sides from non-combustible materials for non-IC applications required, unless marked spacing is noted otherwise.
- nLight Air Antenna extends 1.5" off the end of the j-box (lengthwise).
- Ceiling cutout for Flanged Trim is 5.13", ceiling cutout for Flangeless Trim is 5.25".
- Fixture with Marked Spacing require the following clearances (min): 24" center-to-center, 12" center to side building member, 2" overhead to building member
- Hanger Bars are extendable from 8.5" to 24".

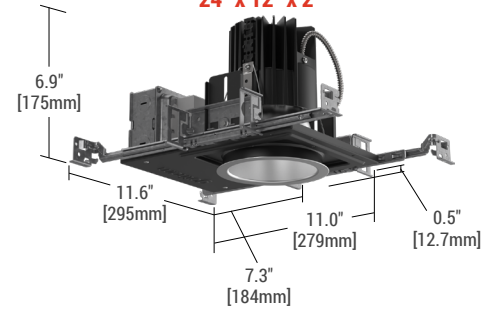
**Non-IC Housing (NCH)
For 05LM to 30LM**



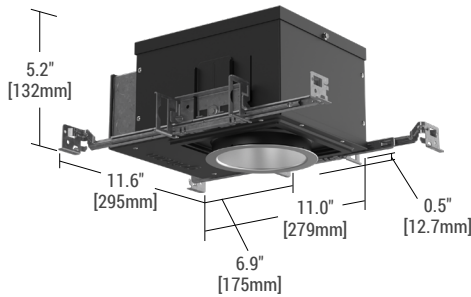
**Non-IC Housing (NCH)
For 35LM to 40LM**



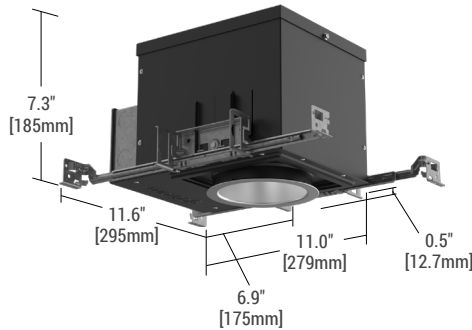
**Non-IC Housing (NCH)
For 45LM – MARKED SPACING
24" x 12" x 2"**



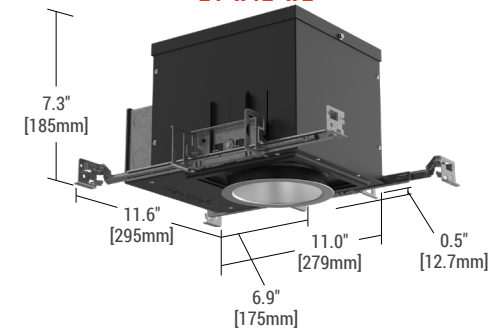
**Chicago Plenum Housing (CP)
For 05LM to 25LM**



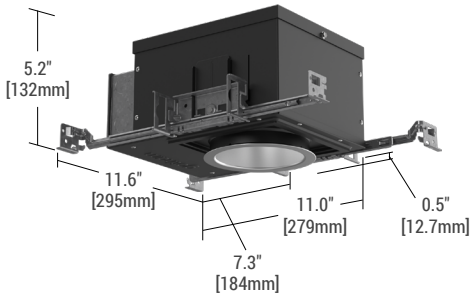
**Chicago Plenum, New Construction Housing (CP)
For 30LM to 35LM**



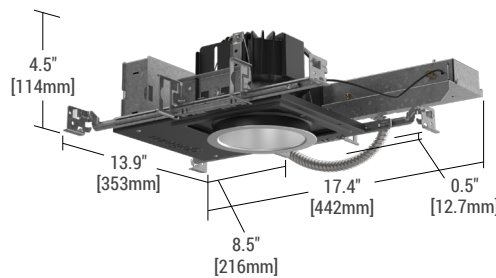
**Chicago Plenum Housing (CP)
For 40LM – MARKED SPACING
24" x 12" x 2"**



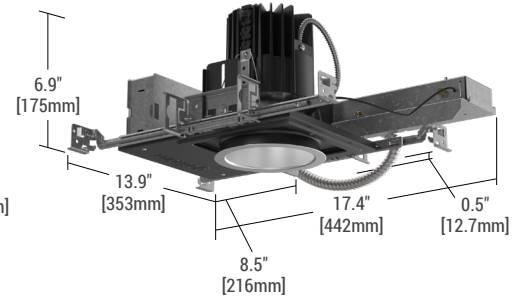
**IC rated Housing (ICAT)
For 05LM to 15LM**



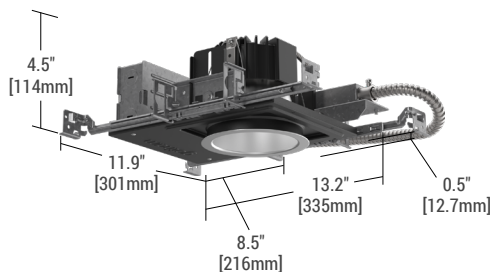
**Non-IC Housing (NCH)
with E7Wx, E10Wx Emergency Battery
For 07LM to 30LM**



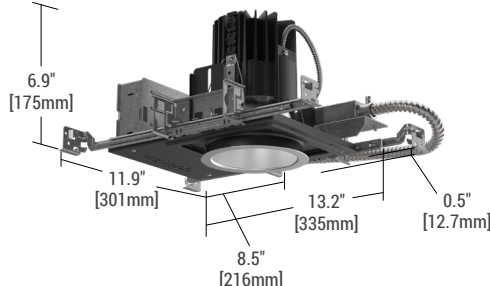
**Non-IC Housing (NCH)
with E7Wx, E10Wx Emergency Battery
For 35LM to 45LM**



**Generator Transfer Device Housing (GTD)
For 07LM to 30LM**



**Generator Transfer Device Housing (GTD)
For 35LM to 45LM**



Trim Style and Flange Option

• Dimensions in inches [millimeters]



Parabolic Flanged
(P) (F)



Parabolic Flangeless
(P) (FL)

Parabolic Flange Outer Diameter:	ø5.5"	[140]
Parabolic Flangeless Outer Diameter:	ø4.8"	[121]
Parabolic Inner Diameter:	ø4.3"	[109]
Parabolic Aperture Diameter:	ø3.0"	[77]

Trim Color



Clear Anodized
(AR)



Soft White
Matte Painted
(WMR)



Black Anodized
(BR)



Gold Anodized
(GR)



Pewter Anodized
(PR)



Wheat Anodized
(WTR)



Dark Bronze
Gloss Painted
(BZR)



White
Gloss Painted
(WR)



White Anti-Microbial
Gloss Painted
(WRAMP)

Parabolic Flanged shown.

Optical Finish



Semi-Specular
(LSS)



Specular
(LS)



Matte Diffuse
(LD)

Clear Anodized shown.

Note: These colors were carefully reproduced to give as true a depiction as possible of the finished product color. Some colors, however, may vary slightly from actual appearance due to display/printing variations and limitations. Please contact a Gotham representative for an Architectural Color Chip Kit (GCOLORS KIT), consisting of Powder-Coated and Plated Finishes.



Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect.

*See ordering tree for details



Optical System

- Bounding Ray™ optical design delivers low brightness apertures for a comfortable lighting experience and ensures no source image up to cut-off angle, minimizing glare.
- 45° visual cut-off angle to source
- Top-Down Flash characteristics avoids flash on trim until source becomes visible.
- Batwing distributions with feathered edges to provide even illumination fixture-to-fixture. Available with 0.8, 1.0, and 1.2 spacing-to-mounting-height ratio (s/mh).
- Clean beams with soft transitions from narrow spot up to wide flood distributions with optics available every 5°
- Optics are field changeable (tool-free).

LED Light Engine

- Perfect Color™ consistency within 1/2-step MacAdam Ellipse using proprietary pick and place algorithm
- 90% lumen maintenance at 55,000 hours.
- Available in 80, 90, or 95 CRI. 90CRI has R9 greater than 50, 95 CRI has R9 greater than 80.

Trims

- Trims are field changeable via twist-lock (tool-free).
- Trims are available in 9 colors and 3 surface finishes (standard)
- Custom RAL and Paint colors available upon request.
- Wall Wash and Downlight Trims are designed to be interchangeable.

Electrical

- 120, 347, or Multi-Volt (MVOLT) 120-277 VAC input at 50/60 Hz
- Power Factor > 85%
- Input wires 18 AWG, 600V minimum, copper
- Fixtures are ROHS compliant

EMI/RFI

- EMI/RFI per FCC Title 47 CFR, Part 15, Class A rated standard.

Controls (Optional)

- Luminaire can be equipped with interface for nLight wired, allowing it to communicate over an nLight network. Couple with nLight-enabled sensors, power packs, or WallPods using CAT-5 cabling to create an nLight Control Zone. Link Control Zone to a Gateway directly or via a Bridge for remote status monitoring and control using SensorView software.
- Luminaire can be equipped with interface for nLight Air, allowing it to communicate over the wireless nLight control platform. Can be paired to other luminaires and wall switches through CLAIRITY+, a mobile app, which allows individual fixture control.

Dimming

- Luminaire is capable of continuous dimming without perceivable flicker (stroboscopic) as measured by flicker index (ASNI/IES RP-16-10).
- Available dimming ranges include: 100%-10% (MIN10), 100%-1% (MIN1), and 100%-0.1% (DARK) of rated lumen output.
- Available with smooth shut off function from minimum dimming level to 0%.
- EldoLED drivers (EZT, DALI) conform to IEEE P1789 standards.
- Drivers are inaudible in 24dB environment and stable even when input voltage conditions experience typical commercial environment fluctuations.

Emergency Battery (Optional)

- Luminaires equipped with battery pack (E7W, E10W, E15W) comply with NFPA 101 (Life Safety Code) and deliver constant light output for a duration of 90 minutes minimum with AC power loss.
- Emergency battery is CEC T20 compliant.

Installation

- Patent-pending Wire-Form Mounting Springs with custom profile facilitates effortless installation, maintains tension across various ceiling thicknesses, and ensures a snug-fit of the trim to the ceiling with no sag.
- Plug-in Driver design allows for quick and easy installation and servicing.
- Light Engine, Driver, Housing, and Trim can be installed tool-free.
- Ceiling Thickness Adapters available for 1.25" to 3" thick ceilings.

Construction

- Access to Light Engine, Driver, and branch circuit conductors is available from below the ceiling without the use of tools.
- Universal Mounting Butterfly Brackets can adjust vertically 2.5" and accept various mounting bars including ¾" and 1-1/2" C Channel, ½" or ¾" Flat Strap, ½" Conduit, and ½" Angle Bars, as well as standard Hanger Bars (included).
- Hanger Bars are extendable from 8.5" to 24".
- Luminaire is constructed with 20 gauge min cold-rolled steel, galvanized steel, and aluminum.

Listings

- Fixtures are CSA certified to meet US and Canadian standards.
- All fixtures are manufactured in strict accordance with the appropriate and current requirements of the "Standards for Safety" per UL.
- Damp Location standard.
- Wet Location available, covered ceiling.

Photometrics

- All photometry is conducted by IESNA standard LM-79-08 in an accredited lab.
- LEDs are tested to LM-80 standards. Lumen maintenance is calculated via TM-21.

Warranty

- 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note:

- Actual performance may differ as a result of end-user environment and application.
- All values are design or typical values, measured under laboratory conditions at 25 °C.
- The product images shown are for illustration purposes only and may not be an exact representation of the product.

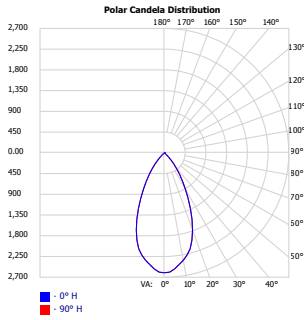
A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control capability with simple commissioning when used with Acuity Brands controls products.

All configurations of this luminaire are calibrated and tested to meet the Acuity Brands' specification for chromatic consistency - including color rendering, color fidelity and color temperature tolerance around standard CIE chromaticity coordinates.

To learn more about A+, visit www.acuitybrands.com/aplus.

MD Medium Beam
IVO4 D 20LM 35K 80CRI MD P AR LSS



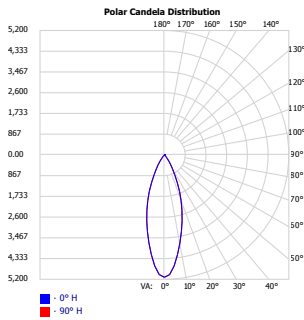
Wattage: 20.5, Lumens: 1920, LPW: 94, S/MH: .8, Test No: 24-850-22P801

Candela Summary	
0°	2603
10°	2366
20°	1784
30°	909
40°	319
50°	26
60°	6
70°	3
80°	1
90°	0

Zonal Lumen Summary		
Zone	Lumens	%
0-30	1435	74.7%
0-40	1798.4	93.7%
0-60	1914	99.7%
0-90	1920.1	100%

Cone of Light			
Mounting Height	Initial FC Center Beam	Beam Diameter (ft)	
		Horizontal	Vertical
8'	40.67	7.6	7.6
10'	26.03	9.5	9.5
12'	18.07	11.4	11.4
14'	13.28	13.3	13.3
16'	10.17	15.2	15.2

35 Degree Beam
IVO4 D 20LM 35K 80CRI 35D P AR LSS



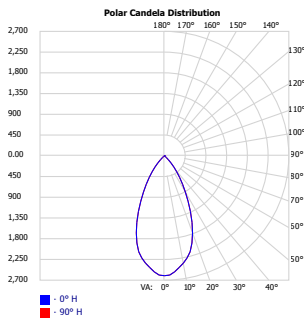
Wattage: 20.5, Lumens: 2044.6, LPW: 100, S/MH: .54, Test No: 24-850-34P401

Candela Summary	
0°	5116
10°	3734
20°	2039
30°	675
40°	120
50°	14
60°	4
70°	2
80°	1
90°	0

Zonal Lumen Summary		
Zone	Lumens	%
0-30	1778.1	87.0%
0-40	1992.7	97.5%
0-60	2040.2	99.8%
0-90	2044.6	100%

Cone of Light			
Mounting Height	Initial FC Center Beam	Beam Diameter (ft)	
		Horizontal	Vertical
8'	79.94	4.8	4.8
10'	51.16	6	6
12'	35.53	7.2	7.2
14'	26.1	8.4	8.4
16'	19.99	9.6	9.6

50 Degree Beam
IVO4 D 20LM 35K 80CRI 45D P AR LSS



Wattage: 20.5, Lumens: 1920.1, LPW: 94, S/MH: .8, Test No: 24-850-11P809

Candela Summary	
0°	2603
10°	2366
20°	1784
30°	909
40°	319
50°	26
60°	6
70°	3
80°	1
90°	0

Zonal Lumen Summary		
Zone	Lumens	%
0-30	1435	74.7%
0-40	1798.4	93.7%
0-60	1914	99.7%
0-90	1920.1	100.0%

Cone of Light			
Mounting Height	Initial FC Center Beam	Beam Diameter (ft)	
		Horizontal	Vertical
8'	40.67	7.6	7.6
10'	26.03	9.5	9.5
12'	18.07	11.4	11.4
14'	13.28	13.3	13.3
16'	10.17	15.2	15.2

CRI/CCT Multiplier Table		
CRI	CCT	Multiplier
80	2700K	0.92
	3000K	0.96
	3500K	1.00
	4000K	1.01
	5000K	1.04
90	2700K	0.80
	3000K	0.85
	3500K	0.85
	4000K	0.89
95	2700K	0.68
	3000K	0.75

Reflector Finish Multiplier		
Trim Color	Optical Finish	Multiplier
AR	LSS	1.00
AR	LS	1.06
AR	LD	0.97
GR	LSS	0.97
GR	LS	0.98
GR	LD	0.92
PR	LSS	0.97
PR	LS	0.97
PR	LD	0.90
BR	LSS	0.68
BR	LS	0.68
BR	LD	0.68
WTR	LSS	0.87
WTR	LS	0.89
WTR	LD	0.87
WR		1.03
WMR		1.03
WRAMF		1.04
BZR		0.68

UGR (70% 50% 20% reflectance using a 4H x 8H room size)						
Lumen Package	Crosswise			Endwise		
	MD	MWD	WD	MD	MWD	WD
05LM	7.9	4.9	4.9	7.9	4.9	4.9
07LM	9.2	6.2	6.2	9.2	6.2	6.2
10LM	10.3	7.3	7.3	10.3	7.3	7.3
15LM	11.4	8.4	8.4	11.4	8.4	8.4
20LM	12.3	9.4	9.3	12.3	9.4	9.3
25LM	13	10.1	10.1	13	10.1	10.1
30LM	13.6	10.6	10.6	13.6	10.6	10.6

*UGR varies based on luminaire options and is affected by application dependent parameters. Numbers depicted here are considered "Luminaire-UGR" and/or "Point-UGR" values. To determine a more precise maximum UGR value ("Application-UGR"), a full lighting design layout should be completed with the selected luminaire configuration for each application.

**Calculated using an AR (Clear reflector) with LSS (Semi-Specular) finish

UGR of zero for fixtures aimed at nadir with a cut-off equal to or less than 60deg per CIE 117-1995 Discomfort Glare in Interior Lighting. [UGR FAQ](#)



Dimming Configurations	Dimming Level	Control Input	Dimming Level	Driver Dim Curve	Recommended Control Dim Curve	
	MIN10	+	ZT	100% to 10%	Linear	Linear/Logarithmic
		+	EZT	100% to 10%	Linear	Linear/Logarithmic
	MIN1	+	ZT	100% to 1%	Linear	Linear/Logarithmic
		+	EZT	100% to 1%	Linear	Linear/Logarithmic
		+	ELV	100% to 1%*	n/a	n/a
	DARK	+	EZT	100% to 0.1%	Logarithmic	Linear
		+	DMX	100% to 0.1%	Square	Linear
		+	DALI	100% to 0.1%	Logarithmic	Linear

* ELV Minimum Dimming level depends on dimmer and dimmer load

Embedded Night Configurations	Dimming Level	Control Input	Dimming Level	Control Provided	Driver Provided	
	MIN10	+	NLIGHT	100% to 10%	NIO EZDXA	eldoLED 0-10V ECOdrive
		+	NLIGHTER	100% to 10%	NIO EZDCL ER	eldoLED 0-10V ECOdrive
		+	NLTAIR2	100% to 10%	RIO EZDL G2	eldoLED 0-10V ECOdrive
		+	NLTAIREM2	100% to 10%	RIO EZDL EM G2	eldoLED 0-10V ECOdrive
	MIN1	+	NLIGHT	100% to 1%	NIO EZDXA	eldoLED 0-10V ECOdrive
		+	NLIGHTER	100% to 1%	NIO EZDCL ER	eldoLED 0-10V ECOdrive
		+	NLTAIR2	100% to 1%	RIO EZDL G2	eldoLED 0-10V ECOdrive
		+	NLTAIREM2	100% to 1%	RIO EZDL EM G2	eldoLED 0-10V ECOdrive
	DARK	+	NLIGHT	100% to 0.1%	NIO EZDXA	eldoLED 0-10V SOLOdrive
		+	NLIGHTER	100% to 0.1%	NIO EZDCL ER	eldoLED 0-10V SOLOdrive
		+	NLTAIR2	100% to 0.1%	RIO EZDL G2	eldoLED 0-10V SOLOdrive
		+	NLTAIREM2	100% to 0.1%	RIO EZDL EM G2	eldoLED 0-10V SOLOdrive

How to Estimate Delivered Lumens in Emergency Mode

Delivered Lumens = 1.25 x P x LPW

P = Output Power/Wattage of Emergency Battery Driver (E7WR* = 7W, E10WR* = 10W, E15WR* = 15W)

LPW = Lumen per Watt rating of luminaire based on Ordering Code selections

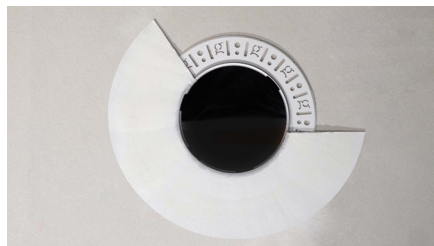
Flangeless Installation

Gotham's flangeless option utilizes a micro-thin polymer mud ring that minimizes the amount of drywall compound required to finish the ceiling. The end result is a virtually undetectable flangeless downlight installation.

The polymer mud ring is installed independent of the of the recessed frame, therefore floating with the ceiling. This innovation minimizes any surface cracks during reflector installation, ceiling movement and any future service to the recessed frame, wiring, electronics, etc.



Partially finished mud ring, showing cross-section detail.



An IVO downlight requires only approximately 3" of plaster to finish.



IVO with flangeless trim



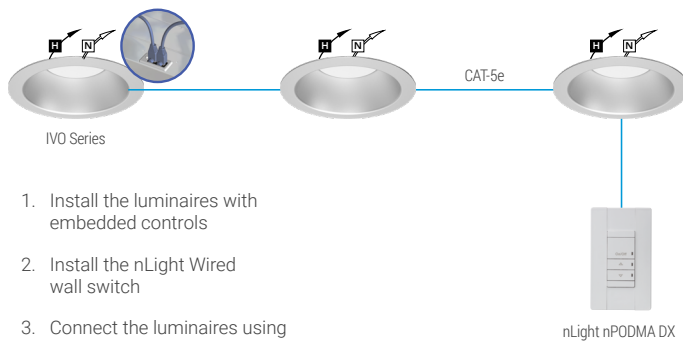
Single Lighting Controls Platform for Indoor & Outdoor Spaces

nLight® is your networked lighting controls platform, for indoor and outdoor applications, providing wired or wireless options. Scaling from room to campus-wide applications, it is the one platform that grows with your business today and tomorrow; to seamlessly address energy cost optimization, building code compliance, improved occupant comfort, and much more. nLight also interfaces with DALI®, BACnet®, DMX and additional third-party devices.

nlightcontrols.com

Wired Embedded Controls

Wireless Embedded Controls



1. Install the luminaires with embedded controls
2. Install the nLight Wired wall switch
3. Connect the luminaires using standard CAT-5e cables and the controls devices will automatically discover each other and work (plug and play)

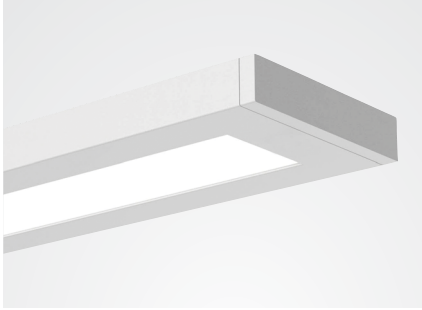


1. Install the luminaires with embedded controls
2. Install the nLight AIR battery-powered wall switch
3. Use CLAIRITY+ mobile app to pair the fixtures with the wall switch and if desired, customize the sensor settings

UL924 Sequence of Operation

- The below information applies to all nLight AIR devices with an EM option.
- EM devices will remain at their high-end trim and ignore wireless lighting control commands, unless a normal-power-sensed (NPS) broadcast is received at least every 8 seconds.
 - Using the CLAIRITY+ mobile app, EM devices must be associated with a group that includes a normal power sensing device to receive NPS broadcasts.
 - Only non-emergency rPP20, rLSXR, rSBOR, rSDGR, and nLight AIR luminaires with version 3.4 or later firmware can provide normal power sensing for EM devices. See specification sheets for control devices and luminaires for more information on options that support normal power sensing.





PLANAR

I/D PENDANT



HIGHLIGHTS

- Total System Integration features 5-year limited warranty by Acuity Brands covering all components and construction
- 4' and 8' sections
- Up to 140lm/w
- Nine distributions available (see page 2)
- Enhanced batwing distribution through optical film
- Flicker-free dimming to dark (0.1%) powered by eLdoLED® driver
- Integrated nLight® for system networking wired and wireless (optional)
- Integrated sensor for daylight dimming and/or occupancy detection (optional)
- Sculptured and flat end caps
- White, black or silver in a semi-gloss, fine textured finish. RAL color options also available.
- QuickShip option available

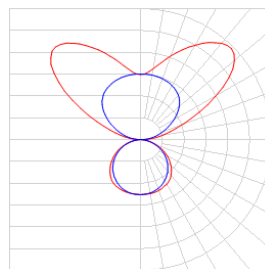
FIXTURE PERFORMANCE

Nominal Lumens/Foot	ID800LMF	ID1000LMF	ID1300LMF	ID1500LMF
Delivered Lumens/Foot	809	1014	1320	1511
Input Watts/Foot	5	6	8	8
Lumens/Watt	165	169	169	168

Based on a 4', 80CRI, 35K, 70/30 standard distribution.



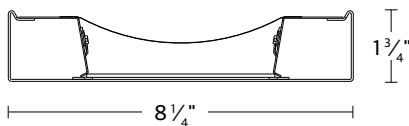
DISTRIBUTION



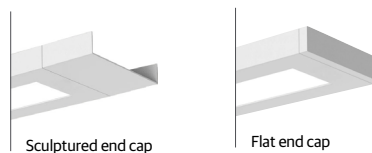
70/30 (Standard)

DIMENSIONS

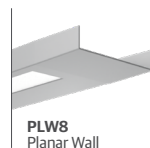
Section View




DETAILS



COMPANION LUMINAIRE(S)



 Design Select options indicated by this color background.

ORDERING

Example: PLN8 LLP 32FT MSL8 80CRI 35K ID1000LMF 70/30 MINI MVOLT WHSG NLIGHT FLEP F1/36A WHTCY WCRD

Series	Plan	Total Run Length	Max Section Length	Direct Light Source Color Rendering	Direct LED Color Temp
PLN8 Planar Indirect/Direct	LLP Longest Length Possible LSL Linear Same Length LCB Linear Center Balanced	_FT Specify continuous run length, in 4' increments. Unit length may affect available options.	MSL4 4' MSL8 8'	80CRI 80 CRI 90CRI 90 CRI	27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K

Indirect/Direct LED Light Output	Indirect/Direct Intensity Ratio	Switching	Minimum Dimming Level	Voltage
ID1000LMF 1000 Nominal Lumens Per Foot ID1300LMF 1300 Nominal Lumens Per Foot ID1500LMF 1500 Nominal Lumens Per Foot ID800LMF 800 Nominal Lumens Per Foot	70/30 70% Up, 30% Down (Standard) 100/0 100% Up, 0% Down 75/25 75% Up, 25% Down 60/40 60% Up, 40% Down 50/50 50% Up, 50% Down 40/60 40% Up, 60% Down 30/70 30% Up, 70% Down 20/80 20% Up, 80% Down 10/90 10% Up, 90% Down Nominal distribution. Refer to photometric tests for exact distribution.	SCT Single Circuit	MINI Constant current, dimming to 1% DARK Constant current, dimming to 0.1%	MVOLT Multi-volt, 120-277 120 120V 277 277V 347* 347V <small>*J-box mount, step down transformer, 1 per section. Not available with NLIGHT or F2 mount.</small>

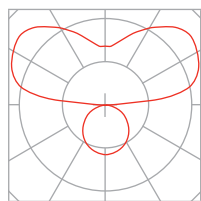
Finish	Emergency Options	Control Input	Primary Sensor	Secondary Sensor	End Option
WHSG White, Satin BKSG Black, Satin SLVT Silver, Satin RALTB RAL Paint Finish <small>RALTB is for pricing only. Replace with applicable RAL number & finish when placing order.</small>	_E10WLCP* 4' Section with 10 Watt Battery Pack, Constant Power with Self Diagnostics, T20 Compliant _EC** 4' Section with Emergency Circuit <small>Emergency type is installed in last 4' of luminaire run. Separate feed required. *E10WLCP not available with 100/0 distribution or CSA. **If 4FT MSL4 EC is needed, consult factory. If EC with CSA, entire section must have EC, i.e., if MSL8, must select 2EC.</small>	ZT 0-10V control NLIGHT nLight enabled NLTAIR2 nLight AIR (wireless) enable DALI* DALI compatible <small>*Not available with sensors. Only available with DARK.</small>	(blank) Single zone, no sensor PDT_* Standalone occupancy daylight sensor ADC_* Standalone daylight dimming sensor APDT_** Dual technology occupancy sensor and daylight dimming sensor APIR_*** Passive infrared occupancy sensor and daylight dimming sensor <small>*Not available with NLTAIR2 **Available with ZT, NLIGHT & NLTAIR2 ***Only available with NLTAIR2</small>	(blank) Single zone, no sensor SPDT_* Standalone occupancy daylight sensor SADC* Standalone daylight dimming sensor SAPDT_** Dual technology occupancy sensor and daylight dimming sensor SAPIR*** Passive infrared occupancy sensor and daylight dimming sensor <small>*Not available with NLTAIR2 **Available with ZT, NLIGHT & NLTAIR2 ***Only available with NLTAIR2</small>	SCEP Sculptured End Cap FLEP Flat End Cap

Mounting Type	Overall Suspension	Canopy Color	Cord Color	Dust Cover	Options
F1/ T-bar ceiling (universal mounting bracket) F1A/ T-bar ceiling (UMB with integrated J-box) F2/ Hard ceiling (horizontal J-box)	36A 36" adjustable 72A 72" adjustable 144A 144" adjustable <small>*Measured from ceiling to bottom of luminaire</small>	WHTCY White canopy (Default) BLKCY* Black Canopy <small>*Not available with NLIGHT</small>	WCRD White cord (Default) BCRD* Black cord w/Black Cord Manager <small>*Not available with NLIGHT</small>	DC Dust Cover	(blank) No option MCS¹ Support canopy to match feed canopy MCS² Matching Canopy for j-box mounting at non-power feed support locations. OJB³ Offset J-Box at Feed Location SLP Sloped Ceiling ELH⁴ Emergency through wiring w/separate neutrals - single EM Feed at opposite end of normal ELS^{2,4} Emergency through wiring w/separate neutrals - single EM feed at same end of normal. CP⁵ Chicago Plenum CSA Manufactured to Canadian Standards IND⁶ Individual Unit <small>1. MCS is not available with OJB. 2. MCSJ is only available with F2 mounting. 3. OJB is not available with MCS. 4. ELH & ELS2 are not available with CSA. 5. CP is only available with F1A mounting type. 6. IND is not available with F1A, SCEP, OJB or SLP.</small>

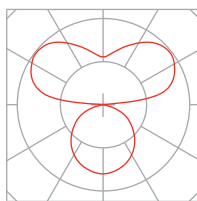

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect.
*See ordering tree for details

Maximum order quantity for Design Select lead times is 500 linear feet.

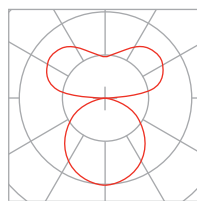
PHOTOMETRICS



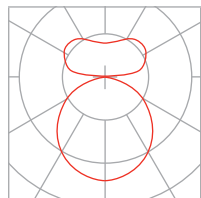
ID1000LMF 70/30 80CRI 35K
70% up/30% down
1014 Lumens per Foot
169 lm/W



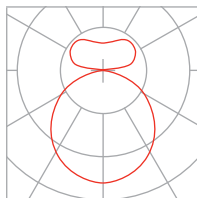
ID1000LMF 60/40 80CRI 35K
60% up/40% down
968 Lumens per Foot
162 lm/W



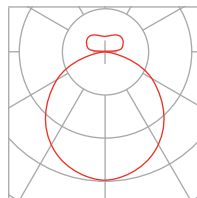
ID1000LMF 50/50 80CRI 35K
50% up/50% down
929 Lumens per Foot
155 lm/W



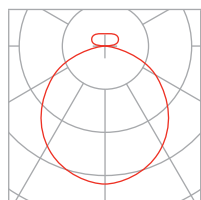
ID1000LMF 40/60 80CRI 35K
40% up/ 60% down
878 Lumens per Foot
147 lm/W



ID1000LMF 30/70 80CRI 35K
30% up/ 70% down
868 Lumens per Foot
145 lm/W



ID1000LMF 20/80 80CRI 35K
20% up/ 80% down
810 Lumens per Foot
135 lm/W



ID1000LMF 10/90 80CRI 35K
10% up/ 90% down
802 Lumens per Foot
134 lm/W

How to Calculate Delivered Lumens in Emergency Mode
Use the formula below to determine the delivered lumens in emergency mode

Delivered Lumens = 1.25 x P x LPW

P = Output power of emergency driver. P = 10W for E10WLCP option.

LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet. LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.

CCT SCALING CHART

CCT	CRI	MULTIPLIER
30K	80CRI	0.98
35K	80CRI	1
40K	80CRI	1.02
	90CRI	0.83

*Base fixture 4FT, 80CRI, 35K, ID1000LMF

OPTICAL SCALING CHARTS

Distribution	MULTIPLIER
60/40	0.96
50/50	0.93
40/60	0.82
30/70	0.88
20/80	0.85
10/90	0.82

EXPECTED LIFE: L80 @ 60,000 HOURS

MOST COMMON MOUNTING TYPES AND OPTIONS Options available for this specific luminaire are checked in the boxes below.

Mounting Type

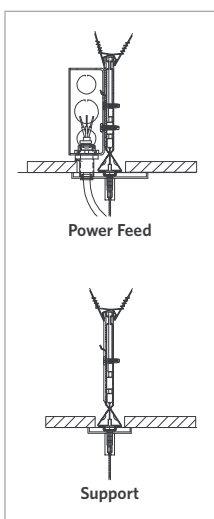
- F1/** For use with most T-Bar and screw slot grid ceilings. Designed for on-grid and off-grid applications.
- F2/** For use with recessed or surface mount horizontal J-box applications.
- F1A/** For use with most T-Bar grid ceilings. Designed for on-grid applications. *Comes complete with J-box with built-in cutout to go over grid*

Mounting Options

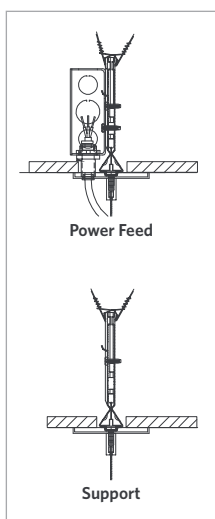
- MCS** Matching canopy at support for aesthetics.
- MCSJ** Matching canopy at for j-box mounting at non-power feed support locations
- OJB** Offset J-box at feed
- SLP OJB** Sloped ceiling couplers and offset j-box option at feed.

☑ Indicates mounting options available with this luminaire.

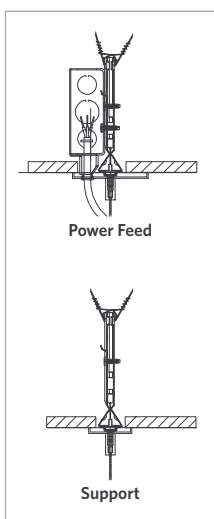
☑ F1/



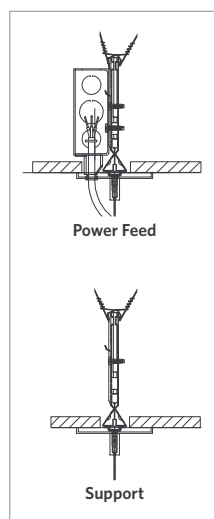
☑ F1/MCS



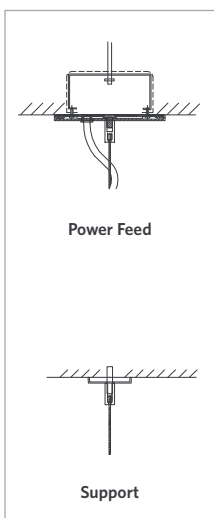
☑ F1A/



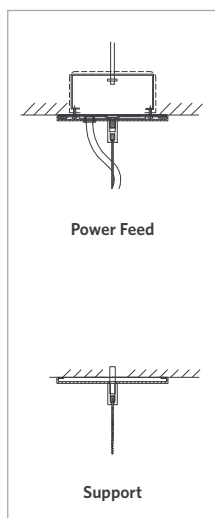
☑ F1A/MCS



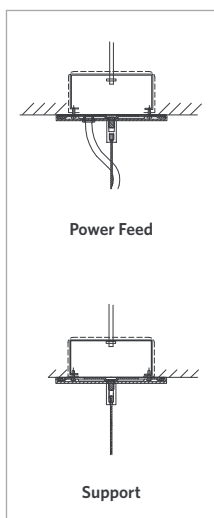
☑ F2/



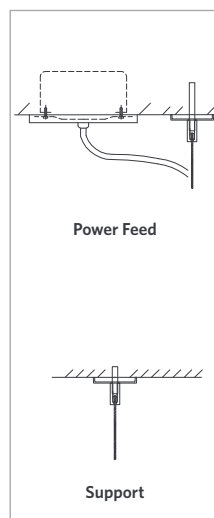
☑ F2/MCS



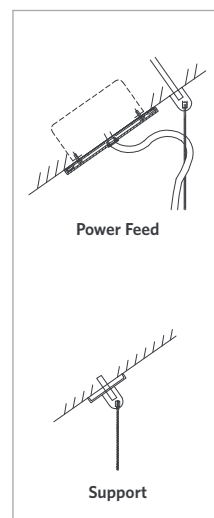
☑ F2/MCSJ



☑ F2/OJB



☑ F2/SLP OJB



LINEAR PLAN

Mark Lighting offers the ability to provide a continuous run plan to suit your requirements by optionally offering three different methods of configuration.

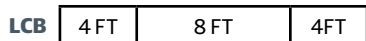
LLP- Linear Longest Possible

In this configuration, the longest length available is optimized, resulting in the fewest segments and mounting locations. Caution should be used where balanced appearance is a concern. Example: 20 FT run would have 2, 8 FT segments and 1, 4 FT segment at the end of the run.



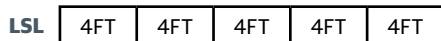
LCB- Linear Center Balanced:

This configuration incorporates the longest center segment(s) along with any additional lengths required to fill the run length, added to the run ends. Example: 16 FT run would have 2, 4 FT segments (one at each end) and 1, 8 FT segment in the center.



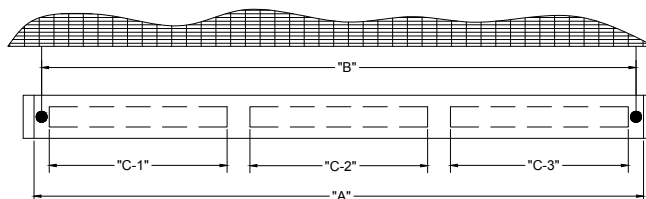
LSL- Linear Same Length:

In this configuration, each segment is the same length and is standardized based on the longest length available and is the only option provided. Because it is dependent on one segment length there are mathematical limitations on what overall row lengths can be achieved. Example: 20 FT row would be achieved with 5, 4 FT long segments equaling 20 FT (nominal).



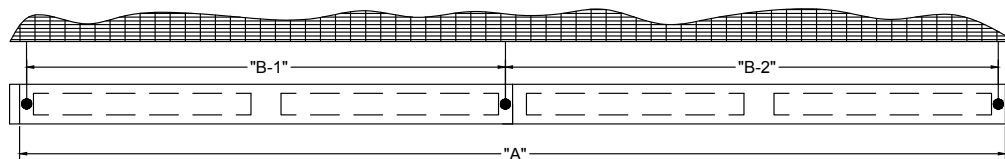
WEIGHTS & SUPPORT SPACING

Suspension spacing equals section length. Default location shown.



"Beginning of run fixture's center to centersupport spacing will be 13/16" less than the nominal fixture section length. Refer to Individual Fixture table for specific dimensions"

INDIVIDUAL FIXTURES (MOUNTING)					
ORDER LENGTH	"A" O.A.L.	"B"	FLAT END CAP	SCULPTED END CAP	APPROX. WEIGHT
4FT	4'-0" [1220 mm]	3'-11 3/16" [1121 mm]	1 1/4" [31.8 mm]	8" [203.2 mm]	22 lbs [10 kg]
8FT	8'-0" [2438 mm]	7'-11 3/16" [2418 mm]	1 1/4" [31.8 mm]	8" [203.2 mm]	38 lbs [17 kg]



1FT INCREMENTS WITH A MINIMUM OF 4FT (EXCEPT 7 FT)

LEGEND: **A** - Fixture Overall Length (excluding standard end caps on both ends). **B** - Fixture Suspension Points center-to-center distance

INDIVIDUAL FIXTURES (MOUNTING)						
ORDER LENGTH	"A" O.A.L.	"B-1"	"B-2"	FLAT END CAP	SCULPTED END CAP	APPROX. WEIGHT
4' SECTION	8'-0" [2438 mm]	3'-11 3/16" [1200 mm]	4'-0" [1220 mm]	1 1/4" [31.8 mm]	8" [203.2 mm]	44 lbs [20 kg]
4' SECTION	8'-0" [2438 mm]	7'-11 3/16" [2418 mm]	4'-0" [1220 mm]	1 1/4" [31.8 mm]	8" [203.2 mm]	60 lbs [17 kg]
8' SECTION	16'-0" [4877 mm]	7'-11 3/16" [2418 mm]	8'-0" [2438 mm]	1 1/4" [31.8 mm]	8" [203.2 mm]	76 lbs [35 kg]

INTELLIGENT LUMINAIRE CHARTS

Choose nomenclature from these columns

Driver Configurations	Minimum Dimming Level	Control Input	Driver	Dimming Range	Notes		
	MIN1	+	ZT	=	0-10V eidoLED ECOdrive	100 to 1%	Linear dimming
	MIN1	+	NLIGHT	=	0-10V eidoLED ECOdrive	100 to 1%	Logarithmic dimming
	MIN1	+	NLTAIR2	=	DALI compatible eidoLED SOLOdrive	100 to 1%	Linear dimming
	DARK	+	ZT	=	0-10V eidoLED SOLOdrive	100 to 0.1%	Linear dimming
	DARK	+	NLIGHT	=	0-10V eidoLED SOLOdrive	100 to 0.1%	Logarithmic dimming
	DARK	+	NLTAIR2	=	DALI compatible eidoLED SOLOdrive	100 to 0.1%	Linear dimming
	DARK	+	DALI	=	DALI compatible eidoLED SOLOdrive	100 to 0.1%	Linear dimming

Control + Sensor Configurations	Control Input	Sensor	Sensor	Notes		
	ZT	+	ADC	=	SensorSwitch MSD EZ ADC	0-10V control Daylight Sensor
	ZT	+	PDT	=	SensorSwitch MSD PDT 7 EZ	0-10V control Occupancy Sensor
	ZT	+	APDT	=	SensorSwitch MSD PDT 7 EZ ADC	0-10V control Daylight with Occupancy Sensor
	NLIGHT	+	ADC	=	SensorSwitch NES ADCX	nLight control Daylight Sensor
	NLIGHT	+	PDT	=	SensorSwitch NES PDT 7	nLight control Occupancy Sensor
	NLIGHT	+	APDT	=	SensorSwitch NES 7 PDT ADCX	nLight control Daylight with Occupancy Sensor
	NLTAIR2	+	RIO	=	SensorSwitch RIO EZDL 90D G2	nLight Air fixture embedded network interface
	NLTAIR2	+	APIR	=	SensorSwitch RES7 G2	nLight Air PIR Daylight Sensor
NLTAIR2	+	APDT	=	SensorSwitch RES7 PDT G2	nLight Air Dul Tech PIR/Microphone Daylight Sensor	

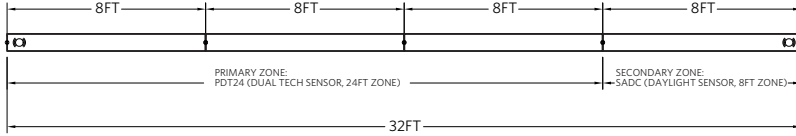
Daylight harvesting deactivated by default and field programmed per sequence of operations.

Luminaires specified with nLight system networking ship with one RJ-45 connector integrated into the luminaire, 10' of Cat-5e cable and a splitter to control the entire luminaire row (depending on wattage/voltage limitations).

INTEGRATED SENSOR LAYOUT

CORRECT:

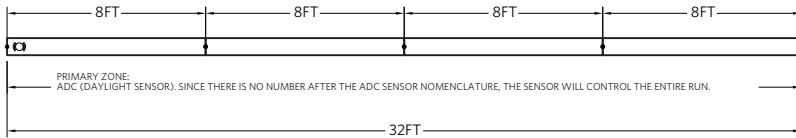
32FT MSL8 RUN WITH 2 SENSORS WITH PRIMARY ZONE 24FT AND SECONDARY ZONE 8FT -- PDT24 SADC8



Notes:

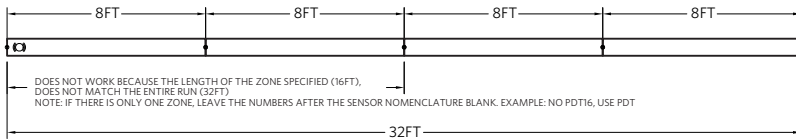
- Only one sensor per zone
- At the most, the entire run can only have 2 sensors (thus 2 sensors zones at the most)
- Sensor zone can not split fixture sections
- No overlapping zones
- NLIGHT - Nio goes where the nlight power packs are - power packs are one per zone
- One nLight or NLTAIR2 device per zone or per sensor, for multiple zones without sensors contact factory

32FT MSL8 RUN WITH 1 SENSOR ALL ONE ZONE -- ADC

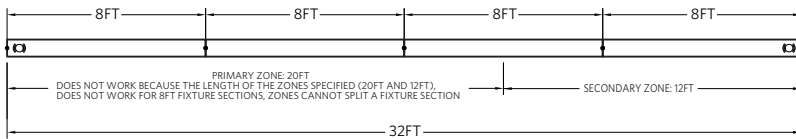


INCORRECT:

32FT MSL8 RUN WITH 1 SENSOR ALL ONE ZONE -- PDT16



32FT MSL8 RUN WITH 2 SENSORS WITH PRIMARY ZONE 20FT AND SECONDARY ZONE 12FT -- PDT20 SADC12



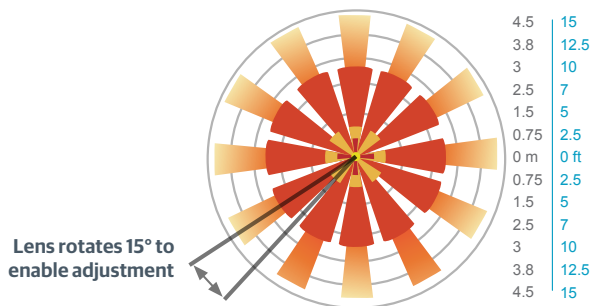
OCCUPANCY DETECTION COVERAGE

At the 7.5 ft (2.9 m) hanging height of a typical pendant mount fixture the sensor provides 10 ft (3.05 m) radial detection of small motion. At a 9 ft (2.74 m) hanging height the radius is 12 ft (3.66 m) for small motion.

Adequate for walking motion detection from mounting heights between 7.5 ft (2.29 m) and 20 ft (6.10 m).

Initial detection will occur earlier when walking across sensor's field of view than when walking directly at sensor.

Initial detection of walking motion into long coverage segment will occur at distances of 2x the mounting height up to 15 ft (4.57 m) and 1.75x up to 20 ft (6.10 m). Lens assembly rotates 15° to enable adjustment in order to line up long segments.



COMPATIBLE nLIGHT COMPONENTS WITH INTEGRATED CONTROLS



[nPODMA DX WH](#)



[nPODMA 2P DX WH](#)



[nPODMA 4P DX WH](#)



[nPODMA 2L WH](#)



[nPOD Unitouch WH](#)



[rPODBA](#)

SPECIFICATIONS

Housing

Nominal 8 ¼" x 1 ¾" rectangular housing is formed from cold-rolled steel.

End Caps

Die-cast end caps are mechanically attached with no exposed fasteners. Sculptured end cap standard. For flat end caps, choose option FLEP.

Finish

White, black or silver in a semi-gloss, fine textured finish. RAL color options also available.

Luminaire Length

4', 8' lengths in a single section. Using internal joiners, 4' and 8' sections can be joined to form longer rows. For total luminaire length, add 5/8" for each flat end cap and 4" for each sculptured end cap. Using internal joiners, 4' and 8' sections can be joined to form longer rows.

Source

Two LED lumen packages and three available color temperature options (3000K, 3500K, 4000K) – all within 2.5 MacAdam ellipses.

Optics

Optical system consists of high performance lens, diffusers and metal reflectors.

Dimming Driver

eldoLED® driver provides "natural dimming" with smooth, continuous and flicker-free dimming to dark (0.1%). Syncing for controls: 2mA max. THD: < 20%. Insignificant inrush current at 120 and 277VAC. FCC Class A and B tested for EMI and RFI When Control Input of 0-10V is specified driver will be set for linear dimming curve, if NLIGHT is specified driver will be set for logarithmic dimming curve.

nLight Air Wireless

The integrated API smart sensor is part of each luminaire in the nLight AIR network, which can be grouped to control multiple luminaires. The granularity of control with the digital PIR occupancy detection and daylight sensing makes a great solution for any application.

Optionally you can order nLight AIR less sensors for compatibility with an nLight Air wireless system.

Controls and System Networking Options

For wired networking via Cat-5e, choose an integrated nLight® module. For daylight dimming and/or dual technology occupancy detection. See Integrated Sensor Layout Page for more details.

Electrical

LED light engine – consisting of modular LED boards and eldoLED® dimming driver – is rated for 60,000 hours (L80) at 25° C ambient temperature. Specify 120V or 277V. Pre-wired with 16AWG fixture wire. For special circuiting or wire gauge, consult factory. Plug-in electrical connectors included.

Environment

Suitable for damp location.

Validation

CSA/CUS listed. CSA tested to UL 1598 standards. LM-79 tested. Individual sections meet FCC Part 15 requirements.

Warranty

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:

www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

JUNO



Luminaire Type

AF

Location: _____

Contact/Phone: _____

UNDERCABINET LIGHTING

LED SWITCHABLE WHITE, DIMMABLE

UPLD



PRODUCT DESCRIPTION

Available in four lengths, the UPLD Swivel LED undercabinet includes an easily accessible switch to select 3000K, 3500K or 4000K color temperature with 50,000 hours of life. Provides task or accent lighting in commercial, retail, hospitality and residential applications. Ideal for use over and under cabinets, display cases, task lighting, office lighting, coves and utility/work areas.

Warranty 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

PRODUCT SPECIFICATIONS

LEDs Utilizes long-life, high-efficiency LEDs binned to within a 3-step MacAdam ellipse for excellent color consistency • Rated for 50,000 hours at 70% lumen maintenance • 90 CRI minimum • The UPLD uses an improved, recessed linking mechanism that allows two fixtures to connect together with virtually no gap between with included row connector.

Driver Integrated, high efficiency 120v, 60Hz driver • Dimmable • Works with most standard incandescent, magnetic low voltage or electronic low voltage dimmers • Compatible with most residential phase-cut dimmers.

Housing Slim 1" profile • Light bar has 20 degree swivel in each direction • Housing end caps can be pivoted for easy access to linking port • Linkable, plug-together design to connect fixture-to-fixture • Available in white or bronze finishes • Each fixture has an integrated ON/OFF switch for independent power control • Juno Pro-Series accessories are not compatible • For a complete list of compatible accessories, see below

Diffuser Lightly frosted, acrylic diffuser for maximum light transmission and uniform light distribution • Swivel head allows light to be directed to desired area.

Labels cULus listed to US and Canadian safety standards • Listed for Damp Locations • Can be used to comply with 2019 Title 24, Part 6, JA8 high efficacy LED light source requirements.

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

INSTALLATION

UPLD Series fixtures offer several convenient methods for installation and can be installed as direct wire or portable luminaires. Fixtures may be mounted flush to the backsplash or up against the front lip of the cabinetry using captive mounting screws.

Direct Wire The UPLD 9", 14", 22" and 30" lengths have a rear wiring access compartment and push-in electrical connectors for direct-wire application • Each length includes a die cast fitting for 3/8" flexible metal conduit • Optional UCD JB Junction/Splice box (sold separately) is available to facilitate bringing power to front end of cabinetry and then using jumper cords to connect to fixtures (see installation diagram below) • All standard mounting hardware included • 17" jumper wire and straight joiner (row) connector are included accessories.

Electrically Connecting Multiple Fixtures Fixtures can be electrically joined together using either the straight joiner (row) connector supplied with each fixture or with the included 17" connector jumper cord or optional 24" UC ERC24 connecting cord. No more than 29 units of any size should be linked together.

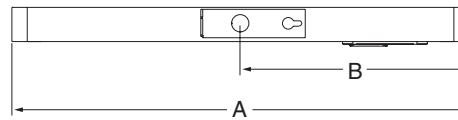
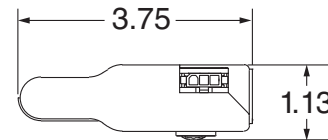
ORDERING INFORMATION

Example: UPLD 09IN SWW4 90CRI WH

Series	Length	CCT	Minimum CRI	Finish
UPLD Swivel LED Undercabinet	09IN 9 inch	SWW4 3000K, 3500K, 4000K	90CRI 90 CRI	BZ Bronze
	14IN 14 inch			WH White
	22IN 22 inch			
	30IN 30 inch			



DIMENSIONS



	Dim A	Dim B
UPLD 09	9	3.56
UPLD 14	14	7
UPLD 22	22	11
UPLD 30	30	15

ENGINEERING DATA

	9"			14"			22"			30"		
	3000K	3500K	4000K	3000K	3500K	4000K	3000K	3500K	4000K	3000K	3500K	4000K
Lumens	291	307	301.59	471	506	498.63	826	886	867	1105	1187	1166
CCT	3044	3544	4036	3040	3525	4027	3047	3543	4032	3006	3526	4017
CRI	94	95	95.37	94	96	95	94	96	95	95	96	95
Wattage	4.5	4.39	4.47	6.79	6.54	6.65	11.41	11.07	11.33	15.3	14.9	15.2
Lumens/Watt	64.61	69.83	67.48	69.41	77.3	75.03	72.35	79.99	76.54	72.23	79.67	76.73
Amperage	0.04A	0.04A	0.04A	0.06A	0.06A	0.06A	0.10A	0.10A	0.10A	0.13A	0.13A	0.13A

UNDERCABINET LIGHTING

LED SWITCHABLE WHITE, DIMMABLE

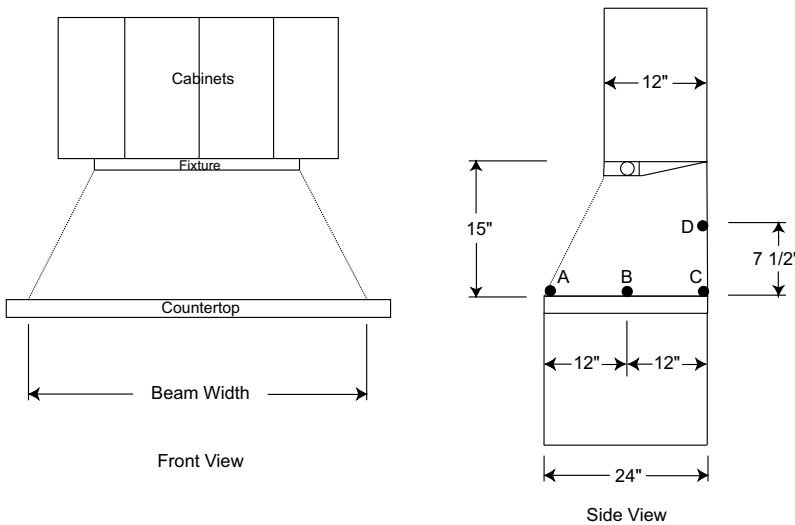
UPLD

Accessories: Order as separate catalog number.	
UC 5FT POWERCORD WH M6	White 5' cord and plug
UC 5FT POWERCORD BL M6	Black 5' cord and plug
UCD JB M12	White Junction/Splice box - allows for quick and easy direct wiring
UCD JB BL M12	Black Junction/Splice box - allows for quick and easy direct wiring
UC ERC24 R4 ¹	White 24" connector cord for longer length connections between fixtures or splice box (required for splice box to first fixture)
UC ERC24 BL M12	Black 24" connector cord for longer length connections between fixtures or splice box (required for splice box to first fixture)

1. Ships as quantity 4 retail pack.

LIGHTING APPLICATION DATA

FOOTCANDLES ON HORIZONTAL WORK SURFACE



Catalog Numbers	Beam Width*	Footcandles*			
		A	B	C	D
UPLD 09IN	20	17.9	38.7	22	34.3
UPLD 14IN	23	29.2	53.3	33.4	47.6
UPLD 22IN	28	45.4	83.5	56.2	78.9
UPLD 30IN	33	54.1	110.5	64.3	90.5

* Beam width defined as 50% of maximum footcandles
 Fixture mounted at front lip of cabinet
 Rear wall reflectance 50%
 Counter Surface Reflectance 20%

*Footcandles calculated with swivel bar facing straight down

DIMMER COMPATIBILITY

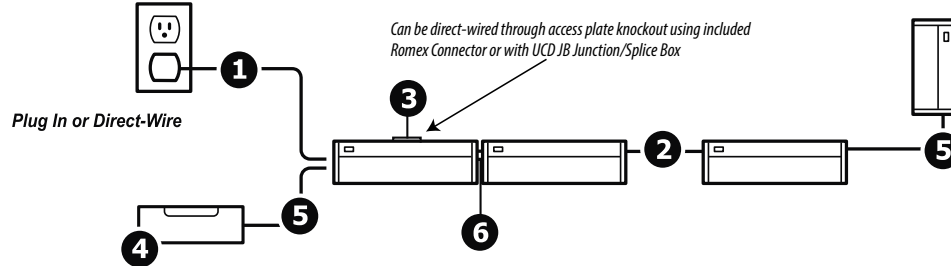
Lutron	Eaton
SkyLark SCL-153P	HALO SALO6P
Taggler TGCL-153P	
Lumea LECL-153P	
Maestro MACL-153M	
Caseta PD-6WCL	
DVCL-153P	
D-603P	
CT-603P	
DVELV-300P	
DV-603P	
S-600P	

UNDERCABINET LIGHTING

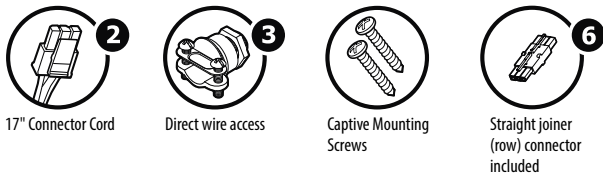
LED SWITCHABLE WHITE, DIMMABLE

UPLD

Installation

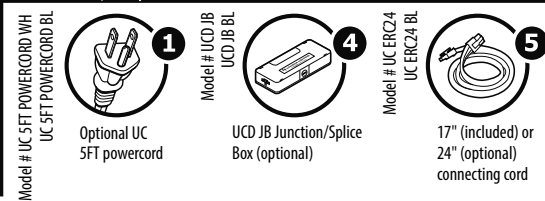


Included



Accessories

sold separately



Switchable White and On/Off Switch

- Simply switch between 3000, 3500, or 4000K CCT
- Choose CCT to enhance space based on décor
- Simplifies Distributor's inventory and choice for customer



Simple to Install

- Captive screws eliminates frustration during installation
- Can be installed as direct wired or portable luminaires
- Fixtures can be electrically joined together using either the included straight joiner (row) connector or 17" connector jumper cord, or optional 24" UC ERC24 connecting cord.





WEDGE1 LED

Architectural Wall Sconce



Catalog Number



Luminaire Type

Notes

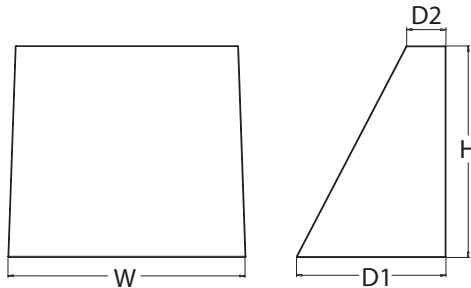
BA

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth (D1):	5.5"
Depth (D2):	1.5"
Height:	8"
Width:	9"
Weight: (without options)	9 lbs



Introduction

The WEDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing true site-wide solution.

WEDGE1 delivers up to 2,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. The compact size of WEDGE1, with its integrated emergency battery backup option, makes it an ideal over-the-door wall-mounted lighting solution.



Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect. *See ordering tree for details

WEDGE LED Family Overview

Luminaire	Optics	Standard EM, 0°C	Cold EM, -20°C	Sensor	Approximate Lumens (4000K, 80CRI)						
					P0	P1	P2	P3	P4	P5	P6
WEDGE1 LED	Visual Comfort	4W		--	750	1,200	2,000	--	--	--	--
WEDGE2 LED	Visual Comfort	10W	18W	Standalone / nLight	--	1,200	2,000	3,000	4,500	6,000	--
WEDGE2 LED	Precision Refractive	10W	18W	Standalone / nLight	700	1,200	2,000	3,200	4,200	--	--
WEDGE3 LED	Precision Refractive	15W	18W	Standalone / nLight	6,000	7,500	8,500	10,000	12,000	--	--
WEDGE4 LED	Precision Refractive			Standalone / nLight	--	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WEDGE1 LED P2 40K 80CRI VF MVOLT SRM PE DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WEDGE1 LED	P0 P1 P2	27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K ¹ 5000K	80CRI 90CRI	VF Visual comfort forward throw VW Visual comfort wide	MVOLT 347 ²	Shipped included SRM Surface mounting bracket ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only) ³ Shipped separately AWS 3/8inch Architectural wall spacer ⁴ PBBW Surface-mounted back box (top, left, right conduit entry) Use when there is no junction box available. ⁴

Options	Finish
E4WH Emergency battery backup, Certified in CA Title 20 MAEDBS (4W, 0°C min) ⁵	DDBXD Dark bronze
PE Photocell, Button Type ⁶	DBLXD Black
DS Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details) ⁷	DNAXD Natural aluminum
DMG 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)	DWHXD White
BCE Bottom conduit entry for back box (PBBW). Total of 4 entry points.	DSSXD Sandstone
DSLE Dual Switching (1 Driver, 2 Light Engines)	DDBTXD Textured dark bronze
CCE Coastal Construction ⁴	DBLTXD Textured black
	DNATXD Textured natural aluminum
	DWHGXD Textured white
	DSSTXD Textured sandstone



COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com
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WEDGE1 LED
Rev. 08/07/24

Accessories

Ordered and shipped separately.

WDGEAWS DDBXD	WDGE 3/8inch Architectural Wall Spacer (specify finish)
WDGE1PBBW DDBXD U	WDGE1 surface-mounted back box (specify finish)

NOTES

- 50K not available in 90CRI.
- 347V not available with E4WH, DS, DSLE or PE.
- Not qualified for DLC. Not available with E4WH.
- For PBBW and AWS with CCE option, require an RFA.
- E4WH not available with PE or DS.
- PE not available with DS.
- DS is not available with P0.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Dist. Type	27K (2700K, 80 CRI)					30K (3000K, 80 CRI)					35K (3500K, 80 CRI)					40K (4000K, 80 CRI)					50K (5000K, 80 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P0	7W	VF	693	99	0	0	0	718	103	0	0	0	739	106	0	0	0	759	108	0	0	0	764	109	0	0	0
		VW	694	99	0	0	0	720	103	0	0	0	740	106	0	0	0	760	109	0	0	0	766	109	0	0	0
P1	10W	VF	1,120	112	0	0	0	1,161	116	0	0	0	1,194	119	0	0	0	1,227	123	0	0	0	1,235	123	0	0	0
		VW	1,122	112	0	0	0	1,163	116	0	0	0	1,196	120	0	0	0	1,229	123	0	0	0	1,237	124	0	0	0
P2	15W	VF	1,806	120	1	0	0	1,872	125	1	0	0	1,925	128	1	0	0	1,978	132	1	0	0	1,992	133	1	0	0
		VW	1,809	120	1	0	0	1,876	125	1	0	0	1,929	128	1	0	0	1,982	132	1	0	0	1,996	133	1	0	0

Electrical Load

Performance Package	System Watts	Current (A)				
		120V	208V	240V	277V	347V
P0	7W	0.060	0.035	0.030	0.026	--
	9W	--	--	--	--	0.026
P1	10W	0.082	0.049	0.043	0.038	--
	13W	--	--	--	--	0.046
P2	15W	0.132	0.081	0.072	0.064	--
	18W	--	--	--	--	0.056

Lumen Multiplier for 90CRI

CCT	Multiplier
27K	0.845
30K	0.867
35K	0.845
40K	0.885
50K	0.898

Lumen Output in Emergency Mode (4000K, 80 CRI)

Option	Dist. Type	Lumens
E4WH	VF	646
	VW	647

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient	Lumen Multiplier
0°C / 32°F	1.03
10°C / 50°F	1.02
20°C / 68°F	1.01
25°C / 77°F	1.00
30°C / 86°F	0.99
40°C / 104°F	0.98

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

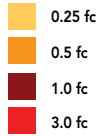
Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.96	>0.95	>0.91



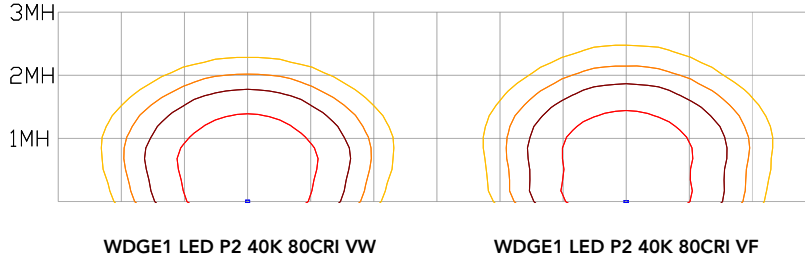
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting WDGE LED homepage. Tested in accordance with IESNA LM-79 and LM-80 standards.

LEGEND



MH = 8ft
Grid = 8ft x 8ft



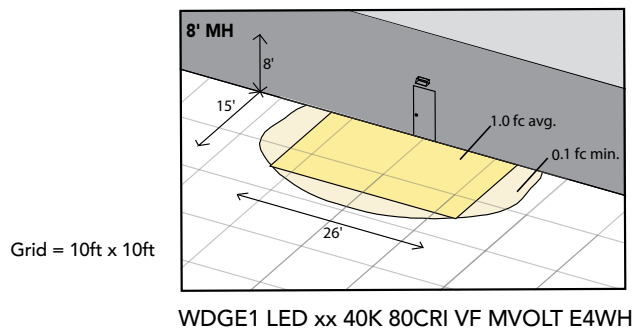
Emergency Egress Options

Emergency Battery Backup

The emergency battery backup is integral to the luminaire — no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product. All emergency battery backup configurations include an independent secondary driver with an integral relay to immediately detect loss of normal power and automatically energize the luminaire. The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time normal power is lost and maintain a minimum of 60% of the light output at the end of 90minutes.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9

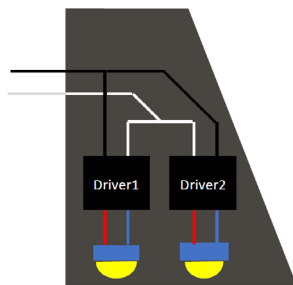
The example below shows illuminance of 1 fc average and 0.1 fc minimum in emergency mode with E4WH and VF distribution.



Dual Switching (DS) Option

The dual switching option offers operational redundancy that certain codes require. With this option the luminaire comes integrated with two drivers and two light engines. These work completely independent to each other so that a failure of any individual component does not cause the whole luminaire to go dark.

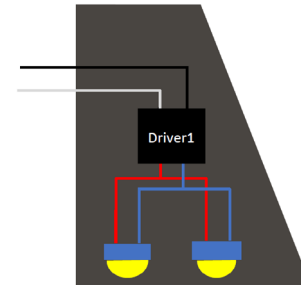
Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9



Dual Switching Light Engine (DSLE) Option

The dual switching option offers operational redundancy that certain codes require. With this option the luminaire comes integrated with one driver and two light engines. These work completely independent to each other so that a failure of either light engine does not cause the whole luminaire to go dark.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9





E4WH – 4W Emergency Battery Backup

D = 5.5"

H = 8"

W = 9"



PBBW – Surface-Mounted Back Box

Use when there is no junction box available.

D = 1.75"

H = 8"

W = 9"



AWS – 3/8inch Architectural Wall Spacer

D = 0.38"

H = 4.4"

W = 7.5"

FEATURES & SPECIFICATIONS

INTENDED USE

Common architectural look, with clean rectilinear shape, of the WDGE LED was designed to blend with any type of construction, whether it be tilt-up, frame or brick. Applications include commercial offices, warehouses, hospitals, schools, malls, restaurants, and other commercial buildings.

CONSTRUCTION

The single-piece die-cast aluminum housing integrates secondary heat sinks to optimize thermal transfer from the internal light engine heat sinks and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP66 rating for the luminaire.

FINISH

Exterior painted parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

OPTICS

Well crafted reflector optics allow the light engine to be recessed within the luminaire, providing visual comfort, superior distribution, uniformity, and spacing in wall-mount applications. The WDGE LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine consists of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L91/100,000 hours at 25°C). The electronic driver has a power factor of >90%, THD <20%. Luminaire comes with built in 6kV surge protection, which meets a minimum Category C low exposure (per ANSI/IEEE C62.41.2). Fixture ships standard with 0-10v dimmable driver.

INSTALLATION

A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections. The 3/8" Architectural Wall Spacer (AWS) can be used to create a floating appearance or to accommodate small imperfections in the wall surface. The ICW option can be used to mount the luminaire inverted for indirect lighting in dry and damp locations. Design can withstand up to a 1.5 G vibration load rating per ANSI C136.31.

LISTINGS

CSA certified to U.S. and Canadian standards. Luminaire is IP66 rated. PIR options are rated for wet location. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified. International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 2700K and 3000K color temperature only and SRM mounting only.

GOVERNMENT PROCUREMENT

BABA – Build America Buy America: Product qualifies as produced in the United States under the definitions of the Build America, Buy America Act. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions
Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Project		Catalog #		 Luminaire Type BB
Prepared by		Notes		



McGraw-Edison

GALN Galleon II

Area / Site Luminaire

Product Features



Product Certifications



Interactive Menu

- Ordering Information [page 2](#)
- Mounting Details [page 3](#)
- Optical Distributions [page 5](#)
- Product Specifications [page 5](#)
- Energy and Performance Data [page 6](#)
- Control Options [page 11](#)

Quick Facts

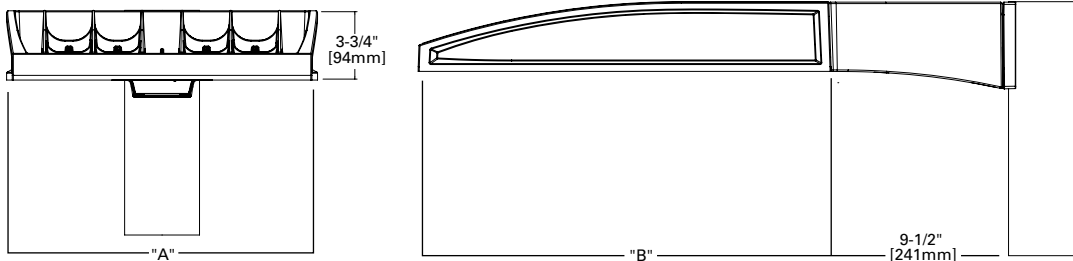
- Lumen packages range from 3,300 - 73,500 (33W - 552W)
- 17 optical distributions
- Efficacy up to 159 lumens per watt

Connected Systems

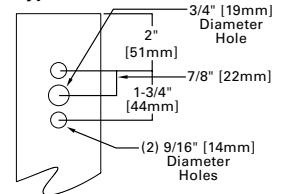
- Wavelinx LITE Wireless
- Wavelinx PRO Wireless

Dimensional Details

Standard Pole Mount Arm



Pole Drilling Pattern Type "N"



Number of Light Squares	Width "A"	Housing Length "B"	Weight with Standard or QM Arm	EPA with Standard or QM Arm
1-4	16"	22"	29 lb	0.95
5-6	22"	22"	39 lb	0.95
7-9	22"	28-1/8"	48 lb	1.1

NOTES:
For arm selection requirements and additional line art, see Mounting Details section.

NOTES:
1. Visit <https://www.designlights.org/search/> to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified (3000K CCT and warmer only, fixed mounting options)

Ordering Information

SAMPLE NUMBER: GALN-SA4C-740-U-T4FT-GM

Product Family ^{1,2}	Light Engine		Color Temperature	Voltage	Distribution	Mounting	Finish
	Configuration	Drive Current					
GALN =Galleon II BAA-GALN =Galleon II Buy American Act Compliant ²⁶ TAA-GALN =Galleon II Trade Agreements Act Compliant ²⁶	SA1 =1 Square SA2 =2 Squares SA3 =3 Squares SA4 =4 Squares SA5 =5 Squares SA6 =6 Squares SA7 =7 Squares SA8 =8 Squares SA9 =9 Squares	A =600mA B =800mA C =1000mA D =1200mA ^{4,16} Z =Configured ²²	722 =70CRI, 2200K 727 =70CRI, 2700K 730 =70CRI, 3000K 735 =70CRI, 3500K 740 =70CRI, 4000K 750 =70CRI, 5000K 760 =70CRI, 6000K 827 =80CRI, 2700K 830 =80CRI, 3000K 835 =80CRI, 3500K 840 =80CRI, 4000K 930 =90CRI, 3000K 935 =90CRI, 3500K 940 =90CRI, 4000K 950 =90CRI, 5000K AMB =Amber, 590nm ^{14,16}	U =120-277V H =347V-480V ^{7,29} 1=120V 2=208V 3=240V 4=277V 8=480V ^{7,29} 9=347V ⁷ DV =277V-480V DuraVolt Drivers ^{28,29,30}	T1 =Type I T2 =Type II T2R =Type II Roadway T3 =Type III T3R =Type III Roadway T4FT =Type IV Forward Throw T4W =Type IV Wide 5NQ =Type V Narrow 5MQ =Type V Square Medium 5WQ =Type V Square Wide SL2 =Type II w/Spill Control SL3 =Type III w/Spill Control SL4 =Type IV w/Spill Control SLL =90° Spill Light Eliminator Left SLR =90° Spill Light Eliminator Right RW =Rectangular Wide Type I AFL =Automotive Frontline	[Blank] =Standard Pole Mount Arm QU =Quick Mount Universal Arm QM =Pole Mount Arm with Quick Mount Adaptor PA =Pole Mount, Adjustable SP =3" Slipfitter, Adjustable ⁸ SP2 =2-3/8" Slipfitter, Adjustable ⁸ QMA =Quick Mount Mast Arm, Fixed MA =Mast Arm, Fixed WM =Wall Mount, Fixed WA =Wall Mount, Adjustable UP =Upswept Arm	AP =Grey BZ =Bronze BK =Black DP =Dark Platinum GM =Graphite Metallic WH =White RALXX =Custom Color

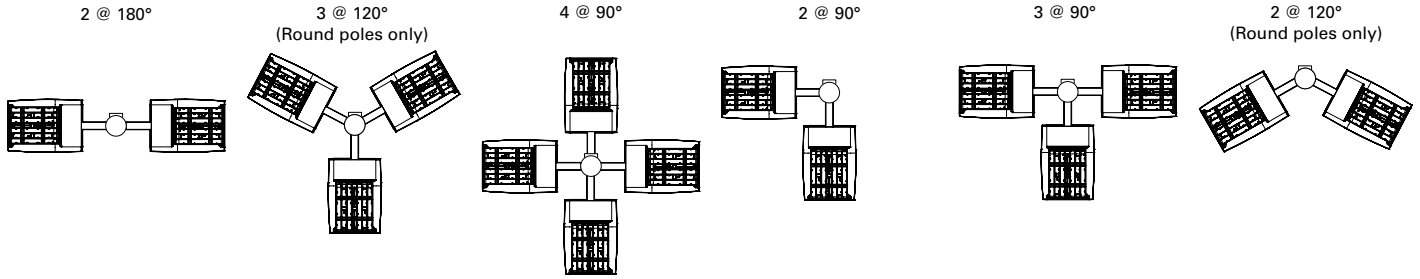
Options (Add as Suffix)	Controls and Systems Options (Add as Suffix)	Accessories (Order Separately) ²⁷
DIM =External 0-10V Dimming Leads ¹⁹ F =Single Fuse (120, 277 or 347V Specify Voltage) FF =Double Fuse (208, 240 or 480V Specify Voltage) 20K =20kV UL 1449 fused surge protective device ¹⁰ 2L =Two Circuits ¹⁰ HA =50°C High Ambient HSS =Installed House Side Shield ¹⁷ GRSBK =Glare Reducing Shield, Black ²² GRSWH =Glare Reducing Shield, White ²² LCF =Light Square Trim Painted to Match Housing ²⁵ TH =Tool-less Door Hardware ⁵ CC =Coastal Construction finish ³ L90 =Optics Rotated 90° Left R90 =Optics Rotated 90° Right AHD145 =After Hours Dim, 5 Hours ²¹ AHD245 =After Hours Dim, 6 Hours ²¹ AHD255 =After Hours Dim, 7 Hours ²¹ AHD355 =After Hours Dim, 8 Hours ²¹ DALI =DALI Drivers	BPC =Button Type Photocontrol. Must specify voltage 120V, 208V, 240V or 277V. ⁶ PR =NEMA 3-PIN Photocontrol Receptacle PR7 =NEMA 7-PIN Photocontrol Receptacle ²⁰ FADC =Field Adjustable Dimming Controller ³¹ PSC =Photocontrol Shorting Cap SPB2 =Dimming Motion Sensor, 9'-20' mounting ²³ SPB4 =Dimming Motion Sensor, 21'-40' mounting ²³ SPB2/X =Dimming Motion Sensor, limited square count, 9'-20' mounting ²³ SPB4/X =Dimming Motion Sensor, limited square count, 21'-40' mounting ²³ MS/DIM-L20 =Motion Sensor for Dimming Operation, 9'-20' Mounting ³³ MS/DIM-L40 =Motion Sensor for Dimming Operation, 21'-40' Mounting ³³ WLS2XX =WaveLinX LITE, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 7' - 15' Mounting ^{18,12,34} WLS4XX =WaveLinX LITE, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 15' - 40' Mounting ^{18,12,34} WPS2XX =WaveLinX PRO, SR Driver, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting ^{18,12,13,34} WPS4XX =WaveLinX PRO, SR Driver, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting ^{18,12,13,34} DIM10-L20 =AirMesh Occupancy Sensor (9'-20' Mounting) ¹⁸ DIM10-L40 =AirMesh Occupancy Sensor (21'-40' Mounting) ¹⁸	OA/RA1016 =NEMA Photocontrol Multi-Tap - 105-285V OA/RA1027 =NEMA Photocontrol - 480V OA/RA1201 =NEMA Photocontrol - 347V OA/RA1013 =Photocontrol Shorting Cap OA/RA1014 =120V Photocontrol MA1252 =10kV Surge Module Replacement MA1036-XX =Single Tenon Adapter for 2-3/8" O.D. Tenon MA1037-XX =2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1197-XX =3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1188-XX =4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1189-XX =2@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1190-XX =3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1191-XX =2@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1038-XX =Single Tenon Adapter for 3-1/2" O.D. Tenon MA1039-XX =2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1192-XX =3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1193-XX =4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1194-XX =2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1195-XX =3@90° Tenon Adapter for 3-1/2" O.D. Tenon SRA238 =Adapter kit for mounting 3" SP arm to 2-3/8" O.D. vertical tenon FSIR-100 =Wireless Configuration Tool for MS/DIM ³³ LS/HSS =Field Installed House Side Shield ^{9,17} LS/GRSBK-2PK =Glare Reducing Shield, Black ^{9,22} LS/GRSWH-2PK =Glare Reducing Shield, White ^{9,22} LS/PFS =Perimeter Shield, Black ¹⁵ WOLC-7P-10A =WaveLinX Outdoor Control Module ^{11,18} TL7-HVG = AirMesh 7-PIN node, 110-480V ^{11,18}

NOTES:

- Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
- DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
- Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654. Not available with TH option.
- Drive current 1200mA not available with color temperatures 722, 727, 827, 830 or 930 when the HSS option is selected
- TH option not 9G rated. Not available with Coastal Construction (CC) option.
- Not available with voltage options H, 8 or 9.
- Requires the use of an internal step down transformer when combined with sensor options. Not available in combination with the HA high ambient and sensor options at 1A.
- SP arm limited to 3" O.D. vertical tenon. SP2 limited to 2-3/8" O.D. vertical tenon.
- One required for each Light Square.
- 2L is not available with SPB at 347V or 480V. Not available with WaveLinX or Enlighted sensors, or 20kV surge option
- Requires PR7.
- Replace XX with sensor color (WH, BZ or BK.)
- WAC Gateway required to enable field-configurability: Order WAC-PoE and WPOE-120 (10V to PoE injector) power supply if needed. WAC not required for LC Bluetooth sensors.
- Narrow-band 590nm +/- 5nm for wildlife and observatory use. Choose drive current A; supplied at 500mA drive current only. Exact luminaire wattage available in IES files. Available with 5WQ, 5MQ, SL2, SL3 and SL4 distributions. Can be used with HSS option.
- Set of 4 pcs. One set required per Light Square.
- Not available with HA option.
- Not for use with T1, 5NQ, 5MQ, 5WQ or RW optics.
- Cannot be used with other control options.
- Low voltage control lead brought out 18" outside fixture. Not available with DALI or integrated controls options
- Not available if any SPB, LWR, or WaveLinX sensor is selected. Motion sensor has an integral photocell.
- Requires the use of BPC photocontrol or the PR7 or PR photocontrol receptacle with photocontrol accessory.
- Not for use with T1, T4FT, T4W or SL4 optics.
- Sensor configuration mobile application required for configuration. See controls page for details.
- Replace X with number of Light Squares controlled by the SPB, referencing the "SPB/X Availability Table" on the controls page.
- Not available with HSS, GRSWH or GRSBK.
- Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to [DOMESTIC PREFERENCES](#) website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
- For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
- DuraVolt drivers feature added protection from power quality issues such as loss of neutral, transients and voltage fluctuations. Visit www.signify.com/duravolt for more information.
- 480V not to be used with ungrounded or impedance grounded systems.
- Not available in 1 square configuration at 800mA or below. Not available with any control option except SPB.
- Cannot be used with PR7 or other motion response control options.
- Use GALN Product Configurator to specify lumen output, drive current and wattage. Not available with AMB.
- Uses the FSP-211 motion sensor. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Cooper Lighting Solutions for more information.
- Controls system is not available with photocontrol receptacles (PR, PR7) or other controls systems (FADC, SPBx).

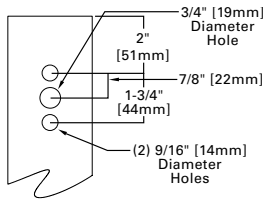
Mounting Details

Pole Configuration Options

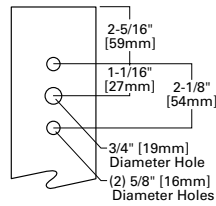


Pole Drilling Patterns

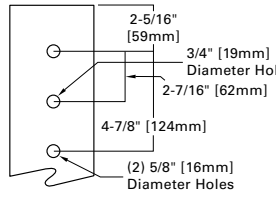
Type "N"



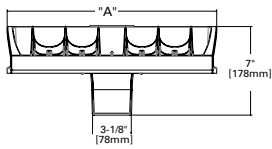
Type "R"



Type "M"

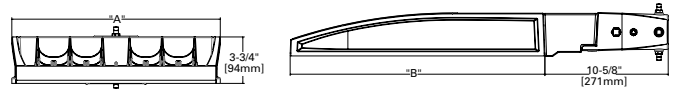


Quick Mount Universal Arm (QU)



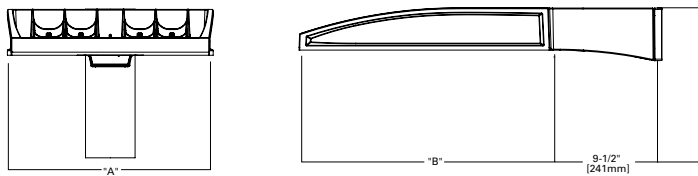
*NOTE: Universal bolt pattern compatible with Type N through Type M drilling patterns

Quick Mount Mast Arm (QMA)



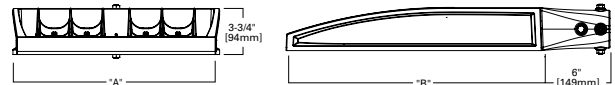
*NOTE: Fits 2-3/8" O.D. tenon

Pole Mount Arm with Quick Mount Adaptor (QM)



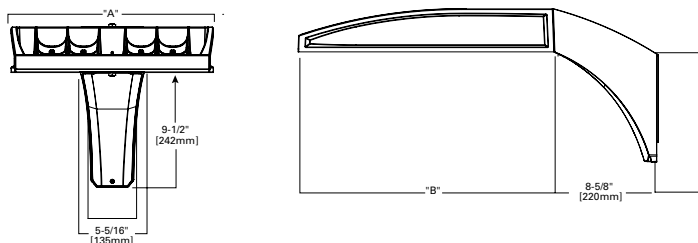
*NOTE: Use Type N drilling pattern

Mast Arm, Fixed (MA)



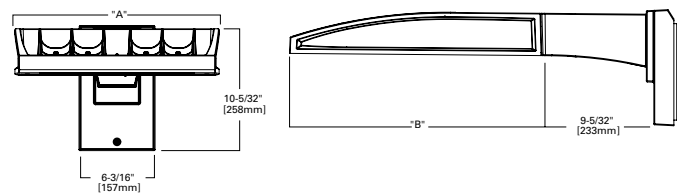
*NOTE: Fits 2-3/8" O.D. tenon

Upswept Arm (UP)



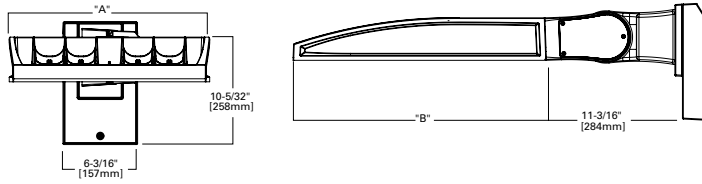
*NOTE: Universal bolt pattern compatible with Type N through Type M drilling patterns

Wall Mount, Fixed (WM)



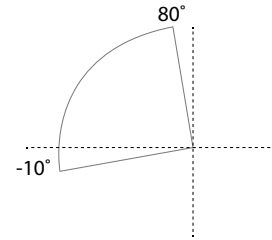
Mounting Details

Wall Mount, Adjustable (WA)

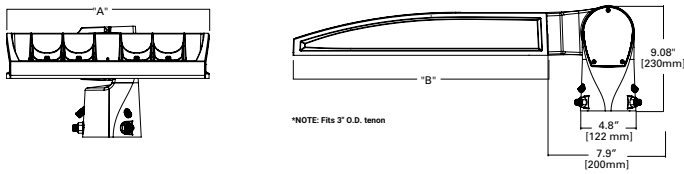


Adjustable Arm Range of Motion

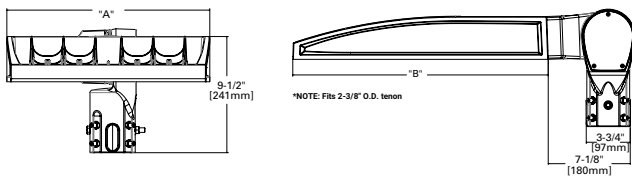
- Includes WA, SP, SP2 and PA mounting options
- Adjustable in increments of 5°
- Must maintain downward facing orientation



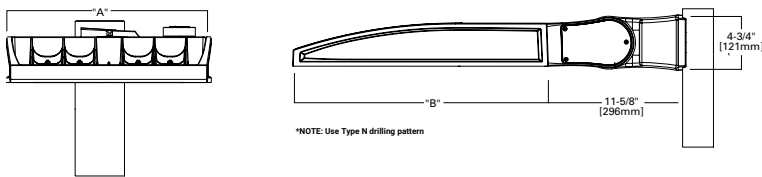
3" Slipfitter, Adjustable (SP)



2-3/8" Slipfitter, Adjustable (SP2)



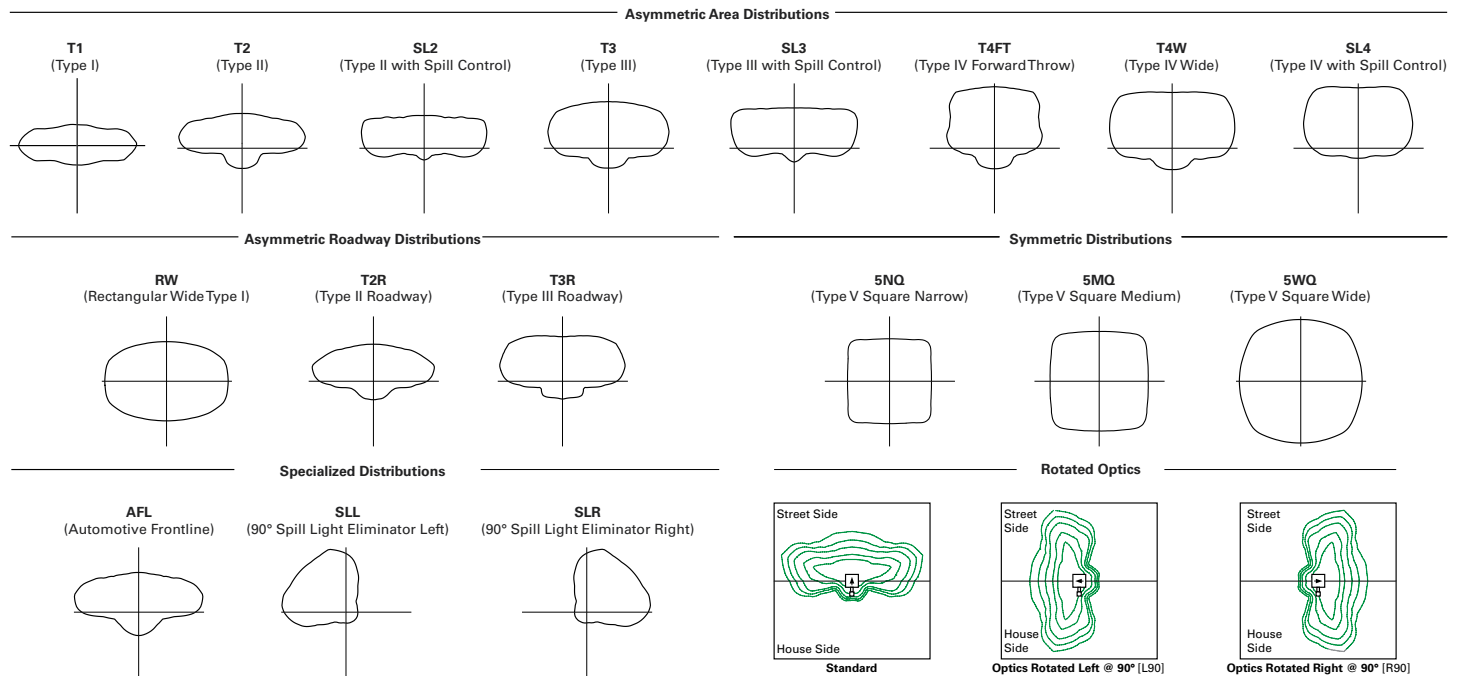
Pole Mount, Adjustable Arm (PA)



Fixture Weights and EPAs

Tilt Angle (Degrees)	Number of Light Squares	Weight	1 @ 90°	2 @ 180°	2 @ 90°	2 @ 120°	3 @ 90°	3 @ 120°	4 @ 90°
0°	1-4	33.5 lb (15.2 kg)	0.85	1.70	1.46	1.66	2.31	2.25	2.35
	5-6	43.5 lb (19.7 kg)	0.86	1.71	1.62	1.80	2.49	2.35	2.50
	7-9	52.5 lb (23.8 kg)	0.98	1.95	1.75	1.98	2.73	2.55	2.76
15°	1-4	33.5 lb (15.2 kg)	1.10	1.71	1.95	2.26	2.81	3.30	2.87
	5-6	43.5 lb (19.7 kg)	1.42	1.71	2.27	2.72	3.13	3.63	3.15
	7-9	52.5 lb (23.8 kg)	1.69	1.96	2.67	3.22	3.65	4.38	3.72
30°	1-4	33.5 lb (15.2 kg)	1.72	1.81	2.58	3.21	3.44	4.59	3.53
	5-6	43.5 lb (19.7 kg)	2.26	2.29	3.11	4.00	3.97	5.27	4.00
	7-9	52.5 lb (23.8 kg)	2.75	2.85	3.73	4.83	4.71	6.45	4.81
45°	1-4	33.5 lb (15.2 kg)	2.25	2.36	3.10	4.00	3.96	5.63	4.08
	5-6	43.5 lb (19.7 kg)	2.96	2.99	3.81	5.06	4.67	6.49	4.71
	7-9	52.5 lb (23.8 kg)	3.63	3.76	3.73	6.17	5.59	8.03	5.73
60°	1-4	33.5 lb (15.2 kg)	2.63	2.77	3.49	4.58	4.34	6.21	4.48
	5-6	43.5 lb (19.7 kg)	3.46	3.51	4.32	5.84	5.19	7.01	5.22
	7-9	52.5 lb (23.8 kg)	4.27	4.44	5.25	7.15	6.23	8.80	6.40

Optical Distributions



Product Specifications

Construction

- Die-cast aluminum housing and heat sink
- Three housing sizes, using 1 to 9 light squares

Optics

- High-efficiency injection-molded AccuLED Optics technology
- 17 optical distributions for area site and roadway applications
- 3 shielding options include HSS, GRS and PFS
- IDA Certified (3000K CCT and warmer only, fixed mounting options)

Electrical

- Removable power tray assembly includes drivers, surge modules and control modules for ease of maintenance and serviceability
- Standard with 0-10V dimming
- Standard with 10kV surge module, optional 20kV surge module
- Suitable for operation in -40°C to 40°C ambient environments. Optional 50°C high ambient (HA) configuration
- Luminaire available with the field adjustable dimming controller (FADC) to manually adjust wattage and reduce the total lumen output and light levels. Comes pre-set to the highest position at the lumen output selected

Mounting

- Arms are factory installed, enabling closed-housing installation
- All arms suitable for round or square pole installation
- All arms provide clearance for multiple fixture installations at 90°

Finish

- 6 standard finishes use super durable TGIC polyester powder coat paint, providing 2.5 mil nominal thickness and salt-spray tested to 3,000 hours per ASTM B117
- RAL and custom color matches available
- Coastal Construction (CC) option salt-spray tested to 5,000 hours per ASTM B117, achieving a scribe rating of 9 per ASTM D1654

Typical Applications

- Outdoor, Parking Lots, Walkways, Roadways, Building Areas

Warranty

- Five-year limited warranty. Consult website for details. www.cooperlighting.com/legal

Energy and Performance Data

Lumen Maintenance (TM-21)

Drive Current	Ambient Temperature	25,000 hours*	50,000 hours*	60,000 hours*	100,000 hours**	Theoretical L70 hours**
Up to 1A	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.7%	98.3%	98.1%	97.4%	> 1.9M
	50°C	98.2%	97.2%	96.8%	95.2%	> 851,000
1.2A	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.5%	97.9%	97.7%	96.7%	> 1.3M

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

* Supported by IES TM-21 standards
 ** Theoretical values represent estimations commonly used; however, refer to the IES position on LED Product Lifetime Prediction, IES PS-10-18, explaining proper use of IES TM-21 and LM-80.

FADC Settings
 SA1-SA3 (A, B, C, D Drive Current)

FADC Position	Percent of Typical Lumen Output
1	25%
2	48%
3	56%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

Note: +/-5% typical value

FADC Settings
 SA4-SA6 (A, B, C, D Drive Current)

FADC Position	Percent of Typical Lumen Output
1	14%
2	25%
3	32%
4	43%
5	49%
6	57%
7	65%
8	72%
9	80%
10	100%

Note: +/-5% typical value

FADC Settings
 SA7-SA9 (A, B, C, D Drive Current)

FADC Position	Percent of Typical Lumen Output
1	19%
2	38%
3	47%
4	63%
5	74%
6	85%
7	95%
8	97%
9	100%
10	100%

Note: +/-5% typical value

Performance Table, Drive Current "A" (615mA)

[Galleon II IES Files](#)

[Supplemental Lumen Tables](#)

Number of Light Squares		1	2	3	4	5	6	7	8	9
Nominal Power (Watts)		33	63	93	121	154	182	215	244	274
Input Current @ 120V		0.283	0.529	0.778	1.058	1.310	1.556	1.839	2.089	2.335
Input Current @ 208V		0.165	0.309	0.460	0.618	0.771	0.919	1.082	1.240	1.379
Input Current @ 240V		0.143	0.270	0.398	0.540	0.671	0.796	0.944	1.078	1.194
Input Current @ 277V		0.125	0.237	0.352	0.473	0.581	0.705	0.818	0.962	1.057
Input Current @ 347V		0.098	0.181	0.272	0.362	0.454	0.544	0.636	0.738	0.816
Input Current @ 480V		0.073	0.133	0.200	0.267	0.335	0.400	0.470	0.554	0.600
Optics										
T1	4000K Lumens	4,619	9,180	13,628	18,059	22,861	27,070	31,796	36,863	41,385
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
	Lumens per Watt	140	146	147	149	148	149	148	151	151
T2	4000K Lumens	4,654	9,249	13,730	18,194	23,032	27,273	32,034	37,138	41,694
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
	Lumens per Watt	141	147	148	150	150	150	149	152	152
T2R	4000K Lumens	4,716	9,372	13,913	18,437	23,340	27,637	32,462	37,634	42,251
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
	Lumens per Watt	143	149	150	152	152	152	151	154	154
T3	4000K Lumens	4,589	9,120	13,538	17,940	22,711	26,892	31,587	36,620	41,112
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G4
	Lumens per Watt	139	145	146	148	147	148	147	150	150
T3R	4000K Lumens	4,735	9,411	13,970	18,513	23,436	27,751	32,596	37,790	42,425
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
	Lumens per Watt	143	149	150	153	152	152	152	155	155
T4FT	4000K Lumens	4,617	9,176	13,622	18,051	22,851	27,058	31,782	36,847	41,366
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	140	146	146	149	148	149	148	151	151
T4W	4000K Lumens	4,631	9,203	13,662	18,104	22,918	27,138	31,876	36,955	41,488
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	140	146	147	150	149	149	148	151	151
SL2	4000K Lumens	4,619	9,180	13,627	18,058	22,860	27,069	31,795	36,861	41,383
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5
	Lumens per Watt	140	146	147	149	148	149	148	151	151
SL3	4000K Lumens	4,586	9,115	13,531	17,931	22,699	26,879	31,571	36,602	41,091
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
	Lumens per Watt	139	145	145	148	147	148	147	150	150
SL4	4000K Lumens	4,529	9,002	13,363	17,708	22,417	26,544	31,178	36,146	40,580
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	137	143	144	146	146	146	145	148	148
5NQ	4000K Lumens	4,829	9,598	14,247	18,880	23,901	28,301	33,242	38,539	43,266
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3
	Lumens per Watt	146	152	153	156	155	155	155	158	158
5MQ	4000K Lumens	4,853	9,645	14,318	18,974	24,020	28,442	33,407	38,731	43,482
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	147	153	154	157	156	156	155	159	159
5WQ	4000K Lumens	4,843	9,625	14,288	18,934	23,969	28,382	33,337	38,649	43,390
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
	Lumens per Watt	147	153	154	156	156	156	155	158	158
SLL/ SLR	4000K Lumens	3,989	7,927	11,768	15,594	19,741	23,375	27,456	31,831	35,736
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
	Lumens per Watt	121	126	127	129	128	128	128	130	130
RW	4000K Lumens	4,774	9,488	14,085	18,665	23,628	27,979	32,863	38,100	42,774
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
	Lumens per Watt	145	151	151	154	153	154	153	156	156
AFL	4000K Lumens	4,673	9,286	13,785	18,268	23,126	27,384	32,164	37,290	41,864
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
	Lumens per Watt	142	147	148	151	150	150	150	153	153

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Performance Table, Drive Current "B" (800mA)

[Galleon II IES Files](#)

[Supplemental Lumen Tables](#)

Number of Light Squares		1	2	3	4	5	6	7	8	9
Nominal Power (Watts)		44	82	121	164	204	243	286	325	364
Input Current @ 120V		0.367	0.689	1.014	1.378	1.704	2.027	2.393	2.716	3.041
Input Current @ 208V		0.213	0.401	0.594	0.802	0.997	1.188	1.400	1.605	1.782
Input Current @ 240V		0.184	0.347	0.510	0.694	0.860	1.021	1.210	1.386	1.531
Input Current @ 277V		0.160	0.303	0.449	0.605	0.757	0.898	1.065	1.242	1.347
Input Current @ 347V		0.125	0.235	0.355	0.471	0.592	0.710	0.828	0.958	1.065
Input Current @ 480V		0.092	0.172	0.258	0.344	0.432	0.517	0.605	0.706	0.775
Optics										
T1	4000K Lumens	5,748	11,423	16,957	22,470	28,446	33,683	39,563	45,867	51,494
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	131	139	140	137	139	139	138	141	141
T2	4000K Lumens	5,790	11,508	17,083	22,638	28,658	33,935	39,859	46,210	51,879
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	132	140	141	138	140	140	139	142	143
T2R	4000K Lumens	5,868	11,662	17,311	22,941	29,041	34,388	40,391	46,827	52,572
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
	Lumens per Watt	133	142	143	140	142	142	141	144	144
T3	4000K Lumens	5,710	11,347	16,845	22,322	28,258	33,461	39,303	45,565	51,155
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G4	B4-U0-G5	B4-U0-G5
	Lumens per Watt	130	138	139	136	139	138	137	140	141
T3R	4000K Lumens	5,892	11,710	17,383	23,035	29,161	34,530	40,558	47,020	52,788
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	134	143	144	140	143	142	142	145	145
T4FT	4000K Lumens	5,745	11,418	16,949	22,460	28,433	33,668	39,546	45,847	51,471
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	131	139	140	137	139	139	138	141	141
T4W	4000K Lumens	5,762	11,451	16,999	22,526	28,517	33,767	39,662	45,982	51,622
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	131	140	140	137	140	139	139	141	142
SL2	4000K Lumens	5,747	11,422	16,956	22,469	28,444	33,681	39,561	45,865	51,491
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	131	139	140	137	139	139	138	141	141
SL3	4000K Lumens	5,707	11,342	16,836	22,311	28,244	33,444	39,283	45,542	51,129
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	130	138	139	136	138	138	137	140	140
SL4	4000K Lumens	5,636	11,201	16,627	22,034	27,893	33,028	38,794	44,976	50,493
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	128	137	137	134	137	136	136	138	139
5NQ	4000K Lumens	6,009	11,942	17,727	23,492	29,739	35,214	41,362	47,953	53,835
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
	Lumens per Watt	137	146	147	143	146	145	145	148	148
5MQ	4000K Lumens	6,039	12,001	17,816	23,609	29,887	35,389	41,568	48,191	54,103
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
	Lumens per Watt	137	146	147	144	147	146	145	148	149
5WQ	4000K Lumens	6,026	11,976	17,778	23,559	29,824	35,315	41,480	48,090	53,989
	BUG Rating	B3-U0-G1	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	137	146	147	144	146	145	145	148	148
SLL/ SLR	4000K Lumens	4,963	9,863	14,642	19,403	24,563	29,085	34,163	39,607	44,465
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	113	120	121	118	120	120	119	122	122
RW	4000K Lumens	5,940	11,806	17,526	23,224	29,400	34,813	40,891	47,407	53,222
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	135	144	145	142	144	143	143	146	146
AFL	4000K Lumens	5,814	11,555	17,153	22,730	28,775	34,073	40,021	46,398	52,090
	BUG Rating	B1-U0-G1	B2-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4
	Lumens per Watt	132	141	142	139	141	140	140	143	143

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Performance Table, Drive Current "C" (1050mA)

[Galleon II IES Files](#)

[Supplemental Lumen Tables](#)

Number of Light Squares		1	2	3	4	5	6	7	8	9
Nominal Power (Watts)		57	108	160	213	269	321	377	429	481
Input Current @ 120V		0.478	0.905	1.338	1.810	2.244	2.675	3.150	3.584	4.013
Input Current @ 208V		0.279	0.532	0.780	1.064	1.313	1.559	1.845	2.093	2.339
Input Current @ 240V		0.243	0.458	0.664	0.916	1.123	1.328	1.582	1.788	1.991
Input Current @ 277V		0.213	0.404	0.582	0.808	0.997	1.164	1.401	1.589	1.745
Input Current @ 347V		0.164	0.322	0.471	0.644	0.795	0.943	1.117	1.269	1.414
Input Current @ 480V		0.121	0.235	0.341	0.469	0.579	0.681	0.814	0.923	1.022
Optics										
T1	4000K Lumens	7,101	14,113	20,950	27,763	35,146	41,616	48,882	56,671	63,623
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	125	131	131	130	131	130	130	132	132
T2	4000K Lumens	7,154	14,219	21,107	27,970	35,408	41,927	49,247	57,094	64,098
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	132	132	131	132	131	131	133	133
T2R	4000K Lumens	7,250	14,408	21,389	28,344	35,881	42,487	49,905	57,857	64,954
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	127	133	134	133	133	132	132	135	135
T3	4000K Lumens	7,054	14,020	20,812	27,580	34,914	41,342	48,560	56,297	63,203
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	124	130	130	129	130	129	129	131	131
T3R	4000K Lumens	7,280	14,468	21,477	28,461	36,029	42,663	50,111	58,096	65,222
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	128	134	134	134	134	133	133	135	136
T4FT	4000K Lumens	7,098	14,107	20,941	27,751	35,130	41,598	48,860	56,646	63,594
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	125	131	131	130	131	130	130	132	132
T4W	4000K Lumens	7,119	14,148	21,003	27,832	35,233	41,720	49,004	56,812	63,781
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	125	131	131	131	131	130	130	132	133
SL2	4000K Lumens	7,101	14,112	20,949	27,761	35,144	41,614	48,879	56,668	63,619
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	125	131	131	130	131	130	130	132	132
SL3	4000K Lumens	7,051	14,013	20,802	27,566	34,897	41,321	48,535	56,269	63,172
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	124	130	130	129	130	129	129	131	131
SL4	4000K Lumens	6,963	13,839	20,543	27,223	34,463	40,808	47,932	55,569	62,386
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	122	128	128	128	128	127	127	130	130
5NQ	4000K Lumens	7,424	14,755	21,903	29,025	36,743	43,508	51,104	59,247	66,515
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	130	137	137	136	137	136	136	138	138
5MQ	4000K Lumens	7,461	14,828	22,012	29,169	36,926	43,725	51,359	59,542	66,846
	BUG Rating	B3-U0-G1	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	131	137	138	137	137	136	136	139	139
5WQ	4000K Lumens	7,445	14,797	21,966	29,108	36,849	43,633	51,250	59,417	66,705
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	131	137	137	137	137	136	136	139	139
SLL/ SLR	4000K Lumens	6,132	12,187	18,091	23,973	30,348	35,936	42,210	48,935	54,938
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	108	113	113	113	113	112	112	114	114
RW	4000K Lumens	7,340	14,587	21,653	28,694	36,325	43,013	50,522	58,573	65,757
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	129	135	135	135	135	134	134	137	137
AFL	4000K Lumens	7,183	14,276	21,193	28,084	35,552	42,098	49,448	57,327	64,359
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G4
	Lumens per Watt	126	132	132	132	132	131	131	134	134

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Performance Table, Drive Current "D" (1200mA)

[Galleon II IES Files](#)

[Supplemental Lumen Tables](#)

Number of Light Squares		1	2	3	4	5	6	7	8	9
Nominal Power (Watts)		65	125	184	245	309	368	433	493	552
Input Current @ 120V		0.546	1.041	1.535	2.082	2.578	3.070	3.619	4.114	4.605
Input Current @ 208V		0.318	0.610	0.893	1.219	1.504	1.786	2.113	2.397	2.679
Input Current @ 240V		0.276	0.523	0.758	1.046	1.282	1.516	1.806	2.041	2.274
Input Current @ 277V		0.241	0.460	0.662	0.920	1.133	1.325	1.593	1.807	1.987
Input Current @ 347V		0.187	0.370	0.543	0.740	0.915	1.085	1.285	1.459	1.628
Input Current @ 480V		0.138	0.269	0.391	0.537	0.663	0.782	0.932	1.057	1.173
Optics										
T1	4000K Lumens	7,814	15,529	23,053	30,549	38,672	45,793	53,787	62,358	70,007
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	120	124	125	125	125	124	124	126	127
T2	4000K Lumens	7,872	15,645	23,225	30,777	38,962	46,135	54,189	62,824	70,530
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	121	125	126	126	126	125	125	127	128
T2R	4000K Lumens	7,977	15,854	23,535	31,188	39,482	46,751	54,913	63,663	71,472
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	123	127	128	127	128	127	127	129	129
T3	4000K Lumens	7,762	15,427	22,901	30,348	38,418	45,491	53,433	61,947	69,546
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B4-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	119	123	124	124	124	124	123	126	126
T3R	4000K Lumens	8,010	15,920	23,632	31,317	39,645	46,944	55,139	63,925	71,767
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	123	127	128	128	128	128	127	130	130
T4FT	4000K Lumens	7,810	15,522	23,043	30,535	38,655	45,772	53,763	62,330	69,976
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	120	124	125	125	125	124	124	126	127
T4W	4000K Lumens	7,833	15,568	23,110	30,625	38,769	45,907	53,921	62,513	70,182
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	121	125	126	125	125	125	125	127	127
SL2	4000K Lumens	7,813	15,528	23,052	30,547	38,670	45,790	53,784	62,354	70,003
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	120	124	125	125	125	124	124	126	127
SL3	4000K Lumens	7,758	15,419	22,889	30,332	38,398	45,468	53,406	61,916	69,511
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	119	123	124	124	124	124	123	126	126
SL4	4000K Lumens	7,662	15,228	22,605	29,955	37,921	44,903	52,742	61,146	68,646
	BUG Rating	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	118	122	123	122	123	122	122	124	124
5NQ	4000K Lumens	8,169	16,235	24,101	31,938	40,431	47,874	56,232	65,193	73,190
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	126	130	131	130	131	130	130	132	133
5MQ	4000K Lumens	8,210	16,316	24,221	32,097	40,632	48,113	56,512	65,517	73,554
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	126	131	132	131	131	131	131	133	133
5WQ	4000K Lumens	8,192	16,282	24,170	32,029	40,546	48,011	56,393	65,379	73,399
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	126	130	131	131	131	130	130	133	133
SLL/SLR	4000K Lumens	6,747	13,410	19,906	26,379	33,394	39,542	46,445	53,846	60,451
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	104	107	108	108	108	107	107	109	110
RW	4000K Lumens	8,076	16,050	23,826	31,574	39,970	47,329	55,592	64,450	72,356
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
	Lumens per Watt	124	128	129	129	129	129	128	131	131
AFL	4000K Lumens	7,904	15,709	23,320	30,902	39,120	46,323	54,410	63,079	70,817
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B4-U0-G4	B4-U0-G4
	Lumens per Watt	122	126	127	126	127	126	126	128	128

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Control Options

0-10V (DIM)

This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (BPC, PR and PR7)

Optional button-type photocontrol (BPC) and photocontrol receptacles (PR and PR7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PR7 receptacle.

After Hours Dim (AHD)

This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

Dimming Occupancy Sensor (SPB and MS/DIM-LXX)

These passive infrared (PIR) sensors are factory installed in the luminaire housing. When the SPB (FSP-321 or FSP-311) or MS/DIM (FSP-211) sensor options are selected, the occupancy sensor is connected to a dimming driver and the luminaire dims when no motion is detected. After a set period of time, the luminaire turns off, and when motion is detected, the luminaire returns to full light output. Both sensors are factory preset to dim down to approximately 10% power with a time delay of five minutes. The MS/DIM sensor requires the FSIR-100 programming tool to adjust factory defaults. The SPB sensor default parameters are listed in the table below and can be configured utilizing the Sensor Configuration mobile application for iOS and Android devices. The SPB/X is configured to control only the specified number of light squares (See SPB/X Availability Table below.) An integral photocontrol can be activated with the app for "dusk-to-dawn" control or daylight harvesting - the factory default is off. Four sensor colors are available; Bronze, Black, Gray and White, and are automatically selected based on the luminaire finish as indicated by the table below.

SPB sensor finish matched to luminaire finish		
Luminaire Finish		SPB Sensor Finish*
WH	White	White
BK	Black	Black
GM	Graphite Metallic	Black
BZ	Bronze	Bronze
AP	Gray	Gray
DP	Dark Platinum	Gray

*SPB bezel color automatically selected based on luminaire finish

SPB/X Availability Table	
Fixture Square Count	Available SPB/X Square Count
1	Not Available
2	Not Available
3	Not Available
4	2
5	2 or 3
6	3
7	2, 3, 4 or 5
8	2, 3, 5 or 6
9	3 or 6

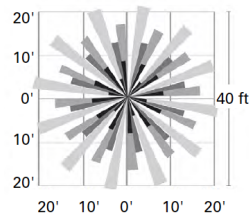
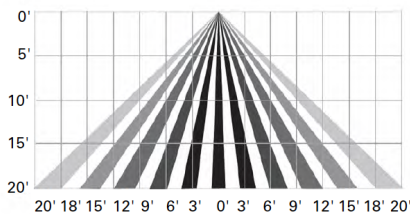
Default Program Settings (Out of the Box Functionality)

Occupancy Sensor				
Setting	MS/DIM	SPB	WaveLinX Lite (WLS4 / WLS2)	WaveLinX (WPS)
High Mode %	100%	100%	100%	100%
Low Mode %	10%	10%	50%	50%
Time Delay	5 min	5 min	15 min	15 min
Cut Off Delay	1 hr	1 hr	Disabled	Disabled
Photocell Enabled	No	No	Yes	Yes

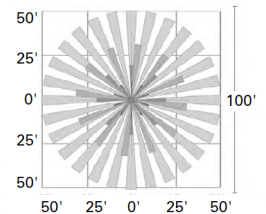
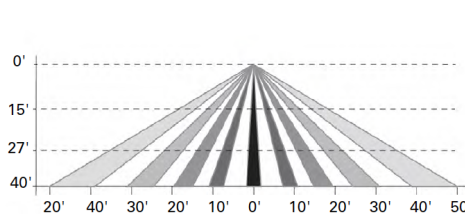
WaveLinX Wireless Control and Monitoring System

Operates on a wireless mesh network based on IEEE 802.15.4 standards enabling wireless control of outdoor lighting. WaveLinX (WPS2 to WPS4) outdoor wireless sensors offer passive infrared (PIR) occupancy and photocell for closed loop daylight harvesting, and can be factory or field-installed. Sensors are factory preset to dim down to 50% after 15 minutes of no motion detected. Two lens options are available for mounting heights of 7' to 40'. Use the WaveLinX mobile application for set-up and configuration. At least one Wireless Area Controller (WAC) is required for full functionality and remote communication (including adjustment of any factory pre-sets). WaveLinX Lite (WLS4 and WLS2) outdoor wireless sensors provide PIR occupancy and photocell for closed loop daylight harvesting, and can be factory or field-installed. Sensors are factory preset to dim down to 50% after 15 minutes of no motion detected. Two lens options are available for mounting heights of 7' to 40'. Use the WaveLinX Lite mobile application for set-up and configuration. WAC not required. WaveLinX Outdoor Control Module (WOLC-7P-10A) accessory provides a photocontrol enabling astronomic or time-based schedules to provide ON, OFF and dimming control of fixtures utilizing a 7-PIN receptacle. The out-of-box functionality is ON at dusk and OFF at dawn.

For mounting heights up to 15' (WPS2 and WLS2)



For mounting heights up to 40' (WPS4 and WLS4)



AirMesh (DIM10)

AirMesh integrated wireless controls system includes factory installed DIM10 Synapse control module and FSP-201 motion sensor; requires additional AirMesh components for operation. Contact Synapse at www.synapsewireless.com for product support, warranty and terms and conditions.

Steel Poles



RSS ROUND STRAIGHT STEEL

Catalog #		Type
Project		
Comments		Date
Prepared by		

FEATURES

- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" poles, 2" x 4" on 4" poles
- 10'-30' mounting heights
- Drilled or tenon (specify)

DESIGN CONSIDERATIONS - VIBRATIONS AND NON-GROUND MOUNTED INSTALLATIONS

The information contained herein is for general guidance only and is not a replacement for professional judgment. Design considerations for wind-induced vibrations and non-ground mounted installations (e.g., installations on bridges or buildings) are not included in this document. Consult with a professional, and local and federal standards, before ordering to ensure product is appropriate for the intended purpose and installation location. Refer to the Cooper Lighting Solutions Light Pole White Paper for risk factors and design considerations. [Learn more.](#)

NOTE: The Limited Warranty for this product specifically excludes fatigue failure or similar damage resulting from vibration, harmonic oscillation or resonance.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Cooper Lighting Solutions or visit www.cooperlighting.com for available options, accessories and ordering information.

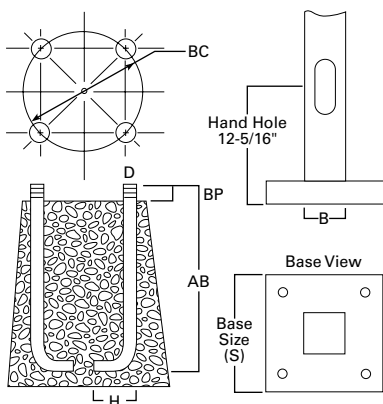
ORDERING INFORMATION

SAMPLE NUMBER: RSS4A20SF2XG

Product Family	Shaft Size (Inches) ¹	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Arm Lengths (Feet)	Options (Add as Suffix)
RSS=Round Straight Steel	4=4" 5=5" 6=6"	A=0.120" ⁶ M=0.188"	10=10' 15=15' 20=20' 25=25' 30=30'	S=Square Steel Base	F=Dark Bronze G=Galvanized Steel J=Summit White K=Carbon Bronze L=Dark Platinum R=Hartford Green S=Silver T=Graphite Metallic V=Grey W=White X=Custom Color Y=Black	2=2-3/8" O.D. Tenon (4" Long) 3=3-1/2" O.D. Tenon (5" Long) 4=4" O.D. Tenon (6" Long) 9=3" O.D. Tenon (4" Long) 6=2-3/8" O.D. Tenon (6" Long) 7=4" O.D. Tenon (10" Long) A=Type A Drilling C=Type C Drilling E=Type E Drilling F=Type F Drilling G=Type G Drilling J=Type J Drilling K=Type K Drilling M=Type M Drilling N=Type N Drilling S=Standard Upsweep Arm ⁷ Z=Type Z Drilling	1=Single 2=2 at 180° 3=Triple ² 4=4 at 90° 5=2 at 90° 6=3 at 90° 7=2 at 120° X=None	X=None 2=2' 3=2.5' 4=4' 6=6' 8=8'	A=1/2" Tapped Hub ³ B=3/4" Tapped Hub ³ C=Convenience Outlet ⁴ E=GFCI Convenience Outlet ⁴ G=Ground Lug H=Additional Hand Hole ⁵ V=Vibration Dampener

NOTES: 1. All shaft sizes nominal. 2. Square poles are 3 at 90°, round poles are 3 at 120°. 3. Tapped Hub is located 5' below the pole top and on the same side of pole as hand hole, unless specified otherwise. 4. Outlet is located 4' above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. 5. Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified. 6. Available in 4" shaft size only. 7. Arm must be ordered separately.

ANCHORAGE DATA



See technical information.

Pole	Template Number	Bolt Number	Bolt Circle (inches)	Number of Bolts	Bolt Size (inches)
RSS4	TMP4	AB1	11	4	3/4 x 25 x 3
RSS5	TMP4	AB1	11	4	3/4 x 25 x 3
RSS6	TMP5	AB3	12.5	4	1 x 36 x 4

Effective Projected Area (At Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
									80 mph	90 mph	100 mph	110 mph	
MH			S	BC	BP	B	D x AB x H						
10	RSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	73	21.0	16.0	12.7	10.5	100
15	RSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	97	11.2	8.3	6.4	5.1	100
20	RSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	122	5.8	3.9	2.7	2.0	150
20	RSS5M20S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	216	17.0	13.0	10.4	8.4	150
25	RSS5M25S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	264	11.0	8.5	6.5	5.2	200
30	RSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	394	14.0	10.7	8.4	6.7	200

Effective Projected Area (Two Feet Above Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
									80 mph	90 mph	100 mph	110 mph	
MH			S	BC	BP	B	D x AB x H						
10	RSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	73	16.7	13.0	10.4	8.5	100
15	RSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	97	9.8	7.2	5.6	4.4	100
20	RSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	122	5.3	3.5	2.4	1.8	150
20	RSS5M20S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	216	15.0	11.7	9.2	7.5	150
25	RSS5M25S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	264	10.2	7.8	6.0	4.8	200
30	RSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	394	13.1	10.0	7.8	5.9	200

- NOTES:**
1. Catalog number includes pole with hardware kit. Anchor bolts not included. Before installing, make sure proper anchor bolts and templates are obtained.
 2. Tenon size or machining for rectangular arms must be specified. Hand hole position relative to drill location.
 3. Shaft size, base square, anchor bolts and projections may vary slightly. All dimensions nominal.
 4. EPAs based on shaft properties with wind normal to flat. EPAs calculated using base wind velocity as indicated plus 30% gust factor.

VIBRATION

Vibrations may cause damage to structures, including poles. Vibrations are unpredictable, and there are many factors and variables that can cause damaging vibrations. Many wind conditions exist that can create damaging vibrations to poles and luminaires, such as constant winds between 10-30 mph. Although all pole types can experience vibration, straight square poles seem to be most prone. Vibration dampers and/or a round tapered design may be used to mitigate damage from vibrations, but there is no guarantee damaging vibrations will be prevented. Vibration dampers are not included with this pole but can be ordered separately. Consult with a professional, and local and federal standards, to ensure this pole is appropriate for the intended purpose and installation location. Refer to Cooper Lighting Solutions' Light Pole White Paper for risk factors and design considerations.

MAINTENANCE

Perform inspections periodically. A prudent inspection schedule would be: one week after installation, one month after installation, yearly after installation, and following any major wind event. During the inspection, check the poles for cracks. If cracks are detected, remedial action is required. Recheck anchor bolt torques and re-tighten according to the recommended torque values. Check for missing covers and pole caps and replace as necessary. Check the pole for corrosion and deterioration of the finish. Should there be corrosion or deterioration, take remedial action to correct.

WARNING: Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to pole white paper WP513001EN for additional support information. Before installing, make sure proper anchor bolts and templates are obtained. The use of unauthorized accessories such as banners, signs, cameras or pennants for which the pole was not designed voids the pole warranty and may result in pole failure causing serious injury or property damage. Information regarding total loading capacity can be supplied upon request. The pole warranty is void unless poles are used and installed as a complete pole and luminaire combination. This warranty specifically excludes failure as the result of a third party act or omission, misuse, unanticipated uses, fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Cooper Lighting Solutions or visit www.cooperlighting.com for available options, accessories and ordering information.



Cooper Lighting Solutions
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
www.cooperlighting.com

Specifications and dimensions subject to change without notice.



RAZOR MK3

Ultra-Thin Die-Cast LED Exit Sign

The Razor MK3 Classic's 5/8" profile provides a modern, inconspicuous LED exit sign with wall, canopy, or pendant mounting options. Sophisticated electronics provide impressive energy efficiency, consuming just 2 watts. The illumination of 18fL is 7 times the minimum code requirements with a unique refractive-pattern light guide that distributes the LED evenly for flawless legend uniformity. Field-selectable top or end canopy mounting, snap-lock assembly, and optional square pendant rod with matching slim profile adapters and canopy simplify installation and improve versatility.



CONSTRUCTION

- Razor thin 5/8" Pressure Die Cast Aluminum. Available in Fine Grain Brushed Aluminum or powder coated pure White or Black finishes. Other finishes available to order
- Light Guide, light engine, batteries and electrical connectors are neatly housed in a single injection-molded frame assembly with flexible circuit board and simple mating connector.
- Mounts to standard 4S Junction box in Wall, Canopy or Pendant mount configurations
- Unique snap fit housing design eliminates unsightly hardware
- Removable face with field selectable Chevron directional indicators
- Low profile canopy for universal end or top mount applications
- Hang Straight 1/2" Extruded Aluminum matching Tube Pendant and adapters.
- Optional polycarbonate face shield with snap-fit installation ideal for vandal resistant and low level applications (U.L. listed for floor proximity installation)
- Also available with an additional remote powered sign (see data sheet RZMR3) or open face custom graphic (see data sheet RCG3)

ELECTRICAL

- Unique High intensity LED array provides exceptional energy efficiency with just 2 watts power consumption for both single and double face AC models. Battery backup models consume just 2.4 watts.
- Solid State circuitry provides optimum condition power supply for the LED's which are powered at less than 50% of their rated operating current ensuring minimal heat dissipation and subsequent exceptional LED life predicated to maintain 80% luminosity after 20 years continuous operation.
- Self-Diagnostic Battery monitoring on all 'EM' models
- Self-compensating constant current charger circuit monitors the condition of the battery pack and indicates via a flashing LED when battery needs replacing



- 120 or 277 VAC field selectable input
- Circuitry includes - Zero current LVCO, Brownout Sensing and Line-Latch
- Optional functions available: Self-Test, Self-Diagnostics, Fire Alarm Interface, Flash in Emergency Mode or Continuous Flash in AC mode, Infrared Remote testing (up to 40 feet away), Dual AC input and 2 Watt Remote Lamp Head Capacity.
- Premium High Temperature Maintenance free, eco-friendly Nickel Metal Hydride battery with fuse protection.
- Standard Battery Backup models are U.L. listed with 240 minutes emergency run time, 2.6 times longer than the 90 minute code requirement and assures optimum battery capacity over many years of natural depreciation. Remote lamp head rated models are U.L. listed for 90 minutes emergency run time.
- UL and CSA listed as standard "Suitable for use in damp locations 10° to 40° C"

ILLUMINATION

- Unique injection molded 3mm refractive light guide produces flawless uniformity and vibrantly illuminated 18fL legend - 7 times the minimum UL 924 requirement at a 100' viewing distance
- Red or Green LED with 6" letters and 3/4" stroke
- Maintenance free LED light source with 25+ year's life expectancy

CERTIFICATION

- Tested and Listed by Underwriters Laboratories in compliance with UL924 and CSA-C22.2 No. 14115. Razor also meets or exceeds all performance standards as required by NFPA 101 Life Safety Code, NFPA 70-NEC and OSHA
- California Energy Commission (CEC) Title 20 Compliant
- Buy American Act compliant

WARRANTY

- 5 year limited warranty

ORDERING GUIDE

RZR3-EM-R-1-WH-CN-SD

MODEL	OPERATION	LETTER COLOR	NO. OF FACES	FACE & BODY COLOR	MOUNTING
RZR3	AC AC Only (120/277 VAC)	R Red	1 Single	BA All Brushed Aluminum	SURFACE MOUNT
	EM Battery Backup	G Green	2 Double	BK All Black	IB Wall Mount, No Canopy
			U Universal ¹	WH All White	CN Canopy Universal, Top, Left, Right End
				CC Custom Color ²	PENDANT MOUNT
					PA 12" Hang Straight Pendant Mount
					PB 24" Hang Straight Pendant Mount
					PC 36" Hang Straight Pendant Mount
					PD 48" Hang Straight Pendant Mount
					PE 60" Hang Straight Pendant Mount
					PF 72" Hang Straight Pendant Mount
RZR3					
OPTIONS					ORDERING NOTES
OPTIONS		COMPATIBLE REMOTE HEADS⁹			
SD Self-Test/Self-Diagnostic ³	M990010 Wire Guard ¹⁰	TCRH1 1 Watt Single Indoor LED Head			
IR Self-Diagnostics with Infrared Remote Testing ³	TCRH2 1 Watt Each Double Indoor LED Head	PRWLED1MV 1 Watt Single Outdoor LED Head			
F Flash in Emergency Mode ⁴	PRWLED2MV 1 Watt Each Double Outdoor Remote Head				
FA Flash in AC and Emergency mode ⁵					
DK Two Circuit Input ⁶					
RC Remote Lamp Head Capacity (2 Watt, 3.6 Volts)					
RS Razor Polycarbonate Security Cover ⁷					
TLRT Infrared Transmitter ⁸					
					<ol style="list-style-type: none"> 1 Universal includes two faces, backplate and canopy 2 Specify Color by RAL # or Manufacture detail 3 EM models only 4 Flash in Emergency Mode (EM Models) or Continuous Flash (AC models) 5 On 12-24V (AC or DC). Normally-off Fire Alarm signal (AC or EM models) 6 Field Selectable 120 or 277 VAC (AC models only) 7 Vandal-resistant snap lock clear polycarbonate cover. Available for Single or Double face signs in all mounting configurations. Listed for floor proximity installation 8 Order separately 9 Remote Lamp Head Options. Order Separately (Not to exceed 2 watts per master sign) 10 Wall mount only

Fill in fields from categories above and complete type and part number.

Type No:

Full Part No:

ADDITIONAL IMAGES



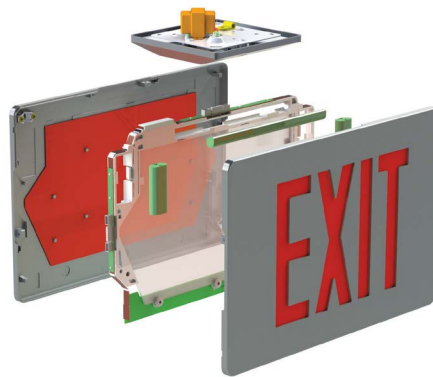
WHITE HOUSING FINISH



BLACK HOUSING FINISH



POLYCARBONATE SECURITY COVER



CONSTRUCTION VIEW



OPTIONAL PRWLED1MV
Outdoor LED Remote Lamp Head



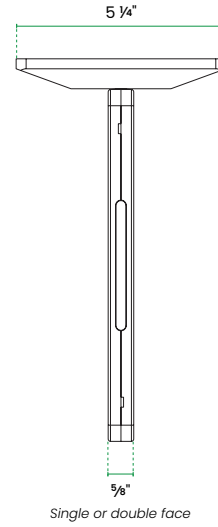
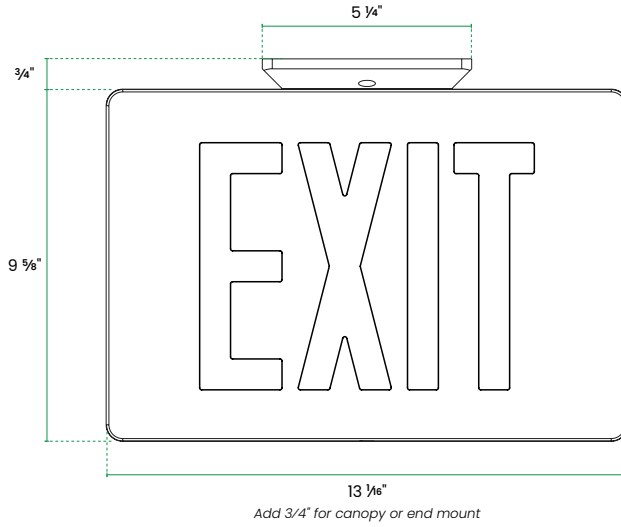
OPTIONAL TCRH1
Indoor LED Remote Lamp Head



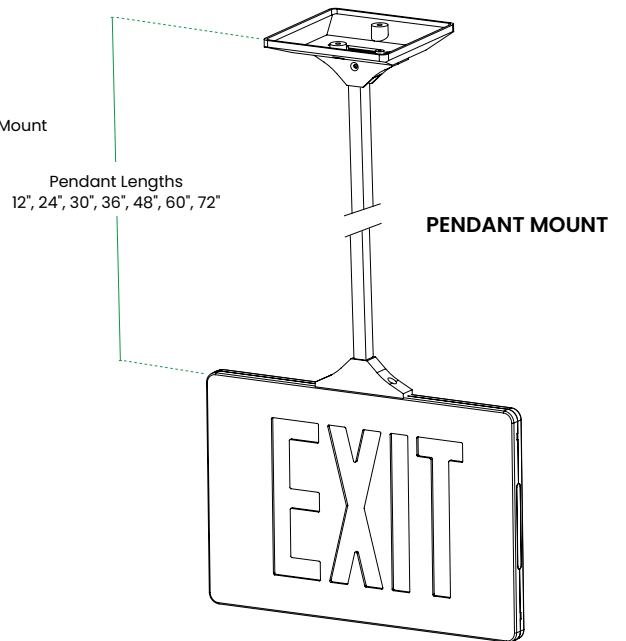
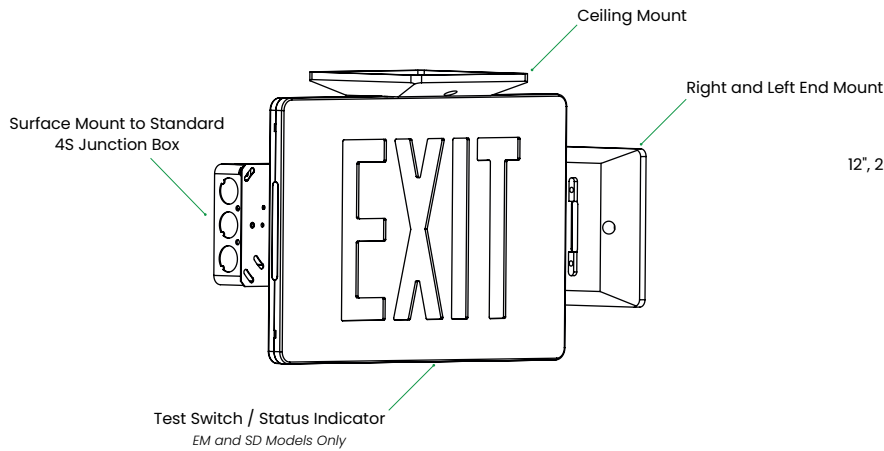
BRUSHED ALUMINUM FINISH
With Hang Straight Pendant

DIMENSIONS & MOUNTING

SURFACE MOUNT



UNIVERSAL MOUNT





Configuration:

LKS-4-A1 ListenTALK Portable ADA Kit

Product Overview:

Offer your clients, customers, and students a complete assistive listening solution wherever it is needed with the ListenTALK ADA system. The LKS-4-A1 meets all IBC and ADA requirements for rooms with a capacity up to 75. The portable system is easily transported and stored in its own carrying case and is ready to use in less than a minute.

From classrooms to conferences, boardrooms to houses of worship, the LKS-4-A1 gives you a complete package to begin offering on-demand assistive listening right away.

Highlights:

- Ear Speakers (LA-401), Battery (LA-365), and Breakaway Lanyard (LA-445-BK) included with each Transceiver (LK-1)
- The 4-Port USB Charger (LA-423) comes with four (4) USB to micro USB cables
- The Assistive Listening Notification Signage Kit comes with one (1) hard plaque and one (1) static cling window sticker.
- Takes less than a minute to set up and use.
- Simple user interface (no channel surfing)
- Easily portable in a small, compact case.

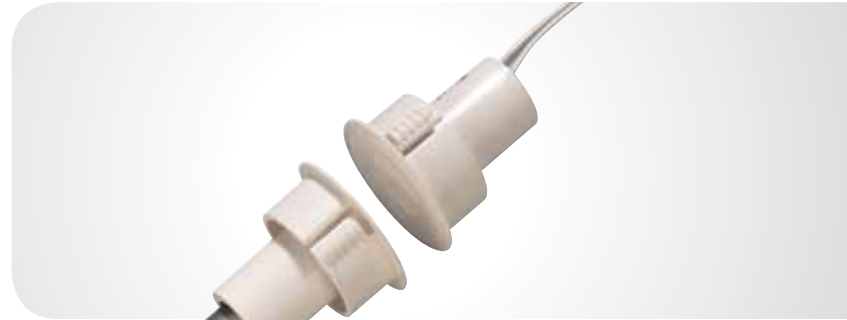
Includes:

- Four (4) LK-1 ListenTALK Transceivers
- One (1) LA-451 Headset 1 (Ear Speaker w/Boom Mic)
- Two (2) LA-438 Advanced Neck Loops (Adult)
- One (1) LA-423 4-Port USB Charger
- One (1) LA-436 Microphone Input / Headphone Output Cable
- One (1) LA-483 Soft Shell Case 4
- One (1) LA-304 Assistive Listening Notification Signage Kit

Product Specification: ListenTALK Portable ADA Kit	
Physical	
Shipping Weight	1.68 kg (3.7 lbs)

Steel Door Contacts

1078/1076 Series



OVERVIEW

The Interlogix 1078 Series Steel Door contacts are designed specifically for use in the steel doors commonly found in commercial building applications. The unique housing design features a rugged unibody construction with flexible ribbed sides for quick, secure installation without gluing. The magnet housing isolates the magnet from the surrounding steel for maximum gap distances, both make and break. Over seven models including: Wide Gap, SPDT, DPDT, and Biased for High Security applications make the 1078 Series the most widely used and comprehensive line available.

On available models a terminal connection (T) makes installation easier. Simply strip the wire, insert it into the terminal block and tighten. The terminal accepts any wire size from 14 to 22 gauge, and has a unique one piece design for added strength.

An optional Rare Earth Magnet is available. It is designed for use in metal entry/exit doors with a channel in the top of the door. The magnet eliminates the need to cut a mounting hole in the door channel. The flexible magnet housing can be compressed to accommodate a variety of channel widths for quick, easy installation. Adhesive is recommended.

The contact contains a hermetically sealed magnetic reed switch. The reed shall be potted in the contact housing with a polyurethane based compound. Contact and magnet housing shall snap-lock into a 3/4" or 1" dia. hole. Housings shall be molded of flame retardant ABS plastic. Color of housings shall be off-white, gray or mahogany brown. The magnet shall be made of Alnico V. Rare Earth Magnet shall be made of neodymium iron boron.

Snap-lock insulation bushing for tight fit and maximum gap in steel. Both contact and magnet plastic housings are constructed of one piece of thick-walled ABS plastic for maximum strength and durability.

STANDARD FEATURES

- Fly leads and terminal options available
- Designed specifically for use in steel doors
- Special ribbed sides allow for easy installation
- Rugged unibody construction for maximum durability and reliability
- Terminal models available for easier installation
- Regular, Wide Gap, SPDT, DPDT, and High Security models available
- Rare Earth Magnet designed for steel door with top channel available

Steel Door Contacts

1078/1076 Series

North America
T 855-286-8889

Latin America
T 561-998-6114

Ordering Information

1076CH-N	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, Higher Security, Biased for Higher Security Applications, Single Pole-Double Throw, White
1076C-M	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, SPDT, 3/8" Gap Size, Single Pole-Double Throw, Brown
1076C-N	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, SPDT, 3/8" Gap Size, Single Pole-Double Throw, White
1076CW-M	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, Wide Gap, SPDT, 3/4" Gap Size, Single Pole-Double Throw, Brown
1076CW-N	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, Wide Gap, SPDT, 3/4" Gap Size, Single Pole-Double Throw, White
1076D-G	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, DPDT, 1/2" Gap Size, Double Pole-Double Throw, Gray
1076D-M	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, DPDT, 1/2" Gap Size, Double Pole-Double Throw, Brown
1076D-N	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, DPDT, 1/2" Gap Size, Double Pole-Double Throw, White
1076-G	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, SPDT, 1/2" Gap Size, Single Pole-Double Throw, Gray
1076H-N	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, High Security, SPDT, Biased for Higher Security, 1/2" Gap, Single Pole-Double Throw, White
1076-M	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, SPDT, 1/2" Gap Size, Single Pole-Double Throw, Brown
1076-N	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, SPDT, 1/2" Gap Size, Single Pole-Double Throw, White
1076W-M	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, SPDT, Wide Gap, 1" Gap Size, Single Pole-Double Throw, Brown
1076W-N	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, SPDT, Wide Gap, 1" Gap Size, Single Pole-Double Throw, White
1078C1-M	1078C w/1929 Magnet, Brown
1078C-G	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, Closed Loop, 3/8" Gap Size, Gray
1078C-M	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, Closed Loop, 3/8" Gap Size, Brown
1078C-N	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, Closed Loop, 3/8" Gap Size, White
1078CT-M	Recessed Steel Door Terminal Contact, 3/4" Diameter, 7/8" Gap Size (3/8" in Steel), Brown
1078CT-N	Recessed Steel Door Terminal Contact, 3/4" Diameter, 7/8" Gap Size (3/8" in Steel), White
1078CTW-N	Recessed Steel Door Terminal Contact, 3/4" Diameter, Wide Gap, 2" Gap Size (3/4" in Steel), White
1078CW-G	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, Closed Loop, Wide Gap, 3/4" Gap Size, Gray
1078CW-M	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, Closed Loop, Wide Gap, 3/4" Gap Size, Brown
1078CW-N	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, Closed Loop, Wide Gap, 3/4" Gap Size, White
1078-G	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, 1/2" Gap Size, Closed Loop, Gray
1078-M	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, 1/2" Gap Size, Closed Loop, Brown
1078-N	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, 1/2" Gap Size, Closed Loop, White
1078W-G	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, Wide Gap, 1" Gap Size, Closed Loop, Gray
1078W-M	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, Wide Gap, 1" Gap Size, Closed Loop, Brown
1078W-N	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, Wide Gap, 1" Gap Size, Closed Loop, White
1078WN-3.3K	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, Wide Gap, 3.3K Ohm Resistor, 1" Gap Size, Closed Loop, White
R1078-M	Mini-Max Recessed Steel Door Contact w/Wire Leads, 1" Diameter, 1/2" Gap Size, Brown
R1078-N	Mini-Max Recessed Steel Door Contact w/Wire Leads, 1" Diameter, 1/2" Gap Size, White

Specifications

Form A: (R)1078, 1078W, 1078C, 1078CT, 1078CTW

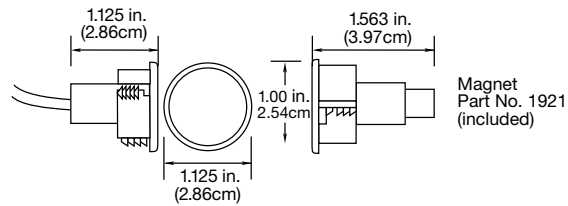
Voltage	100V AC/DC max.
Current	0.5 A max.
Power	7.5 W max.

Form C: 1076, 1076W, 1076D, 1076C(D), 1076CW, 1076CH

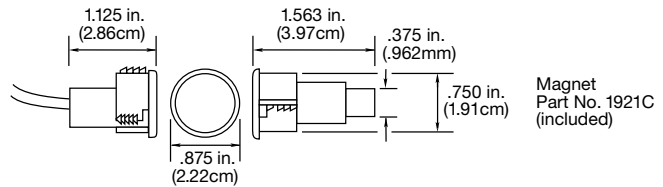
Voltage	30V AC/DC max.
Current	0.25 A max.
Power	3.0 W max.

Dimensional Diagram

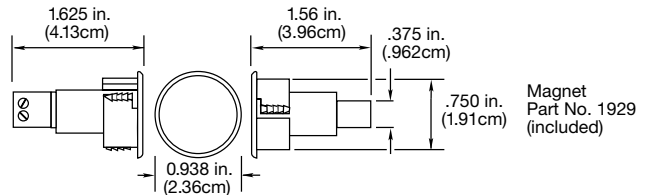
Models: (R)1078, 1078W, 1076, 1076W, 1076D



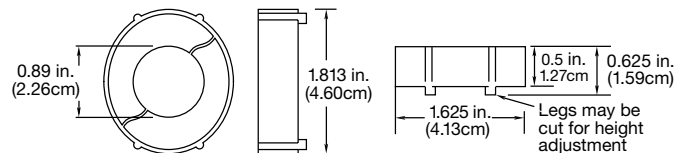
Models: 1078C, 1076C, 1076CW, 1076CH



Models: 1078CT, 1076CTW



Rare Earth Magnet



(R) prefix indicates
Rare Earth Magnet

Protected by
U.S. Patent 5,844,458.



interlogix.com

Specifications subject to change without notice.

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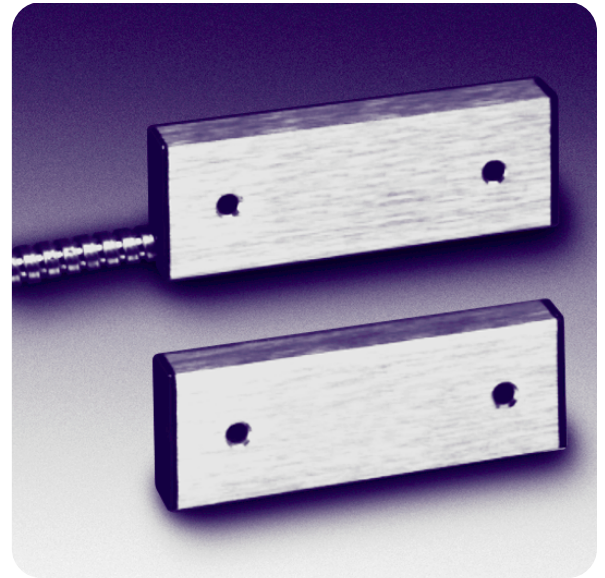


Industrial Wide Gap Surface Mount

2500 Series

Overview

The 2500 Series is designed to be installed in commercial and industrial environments where a rugged sealed unit is required. It is ideal for metal doors, overhead doors, fences and gates. Each model features a high strength extruded aluminum housing and is completely encapsulated in our exclusive polyurethane potting compound. The 2500 series feature wide gap distances and several models to meet any application need. Jacketed lead or armored cable is available.



Standard Features

- *Wide gap distance for decreased installation time*
- *Fewer false alarms*
- *Fewer service calls*
- *Six models including SPDT, DPDT and High Security*
- *Mounting brackets available*

Model Numbers

2505, 2505A, 2507, 2507A, 2507AD, 2507AH

Industrial Wide Gap Surface Mount

2500 Series

Architectural and Engineering Specifications

The contact shall be a hermetically sealed reed switch nominally 3" L x 1" H x 0.50" D with matching actuating magnet. Mounting holes shall be on 2" centers. Contact and magnets shall be in brushed anodized aluminum tube housing. Contact shall be sealed in our exclusive polyurethane potting compound. Right angle mounting bracket shall be furnished with contact, #1912. Contacts shall be specified as part numbers 2505, 2505A, 2507, 2507A, 2507AD, 2507AH.

2505, 2505A, 2507, 2507A

Each contact shall connect to three feet of vinyl-jacketed cable (2505, 2507) or three feet of flex stainless steel conduit (2505A, 2507A).

2507AD (not ULC listed)

The contact shall contain two single-poled double throw reed contacts. Three feet of flex stainless steel conduit shall be permanently attached to the contact.

2507AH (not ULC listed)

The contact shall be a Form C (SPDT) reed contact biased with an Alnico VII magnet. Contact will be difficult to defeat with an external magnet. Three feet of flex stainless steel conduit shall be permanently attached to the contacts.

Specifications

Form A (2505, 2505A)

Voltage 100V AC/DC max.

Current 0.5A max.

Power 7.5W max.

European Union Specification 48V AC/DC max.

Form C (2507, 2507A, 2507AD, 2507AH)

Voltage 30V AC/DC max.

Current 0.25A max.

Power 3.0W max.

SPDT Lead Colors

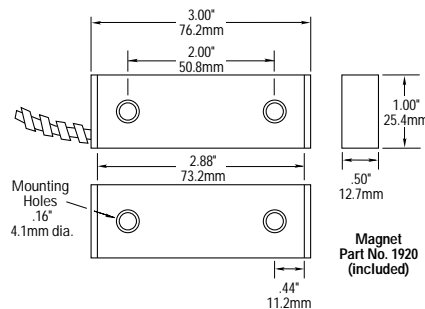
Black Common

White Closed Loop (N.O.)

Red Open Loop (N.C.)

Listing C-UL-US, UL-634

Dimensions



Ordering Information

Model	Loop Type	Electrical Configuration	Gap Distance (Make)*	Lead Type
2505	Closed	N.O.	Up to 3"	3' vinyl jacketed
2505A	Closed	N.O.	Up to 3"	3' stainless steel armored cable
2507	Open or Closed	SPDT	Up to 3"	3' vinyl jacketed
2507A	Open or Closed	SPDT	Up to 3"	3' stainless steel armored cable
2507AD no Canadian listing	Open or Closed	DPDT	Up to 1 1/2"	3' stainless steel armored cable
2507AH no Canadian listing	Open or Closed	SPDT	3/4" min., 2" max.	3' stainless steel armored cable

* Gap distances are nominal make distance \pm 20%. Gap specifications are for switch to make. Break distance is approximately 1.1 to 1.5 times make.



GE Interlogix

HID® Mercury™ LP1502 Intelligent Controller

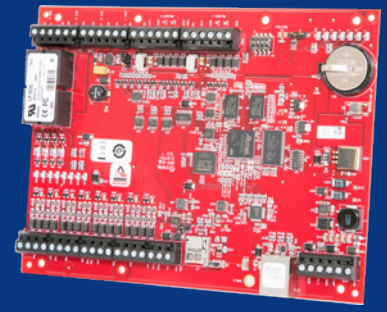
Intelligent controller (4 readers, 8 inputs, 4 outputs)

The HID Mercury LP Series Intelligent Controllers are HID Global's next generation advanced access control platform that runs on embedded Linux. The enhanced platform offers an improved processor and increased memory, plus feature an embedded crypto memory chip that provides a secured layer of encryption to onboard sensitive data. Built on the HID Mercury open platform, LP Series controllers provide the necessary flexibility for OEMs, channel partners and end customers to choose the controller configuration that best fits their needs.

The multi-port LP1502 is a 2-4 card reader panel for controlling two connected doors and managing up to 64 doors/openings. Built on the HID Mercury platform, the intelligent controller uses on-board Ethernet port to connect to cloud or server based access control hosts. The intelligent controller performs access control, alarm management and scheduled operations—all in a single package.

With native connectivity, the high-performance LP1502 functions independently of the host for performing numerous access control applications and supports OSDP, OSDP Secure Channel, keypads, biometric readers, Wiegand, clock and data, magnetic stripe, F/2F and supervised F/2F reader technologies. System configuration and setup are provided through HID Mercury OEM partner software applications.

For partners seeking a comprehensive and open access control platform, and a reliable hardware platform running in a secure environment, the LP1502 is the clear solution. It delivers a complete security and access control solution as well as innovative application extensions, interoperability and data security.



KEY BENEFITS:

- Open Architecture – High performance, reliable platform enables use of hardware with HID Mercury OEM partners' software solutions.
- Enhanced Security – Embedded crypto memory chip and data at rest encryption provides secured layer of protection of sensitive data.
- OSDP Protocol – Secure channel communications for reader connectivity.
- Versatile Interoperability – Same reliable interface and identical footprint as the EP Controllers, enabling seamless upgrades for existing deployments.

HIGHLIGHTS

Third Party Integration Supported

- Wireless Locks
- Power Supply Alerts and Events

Security and Network

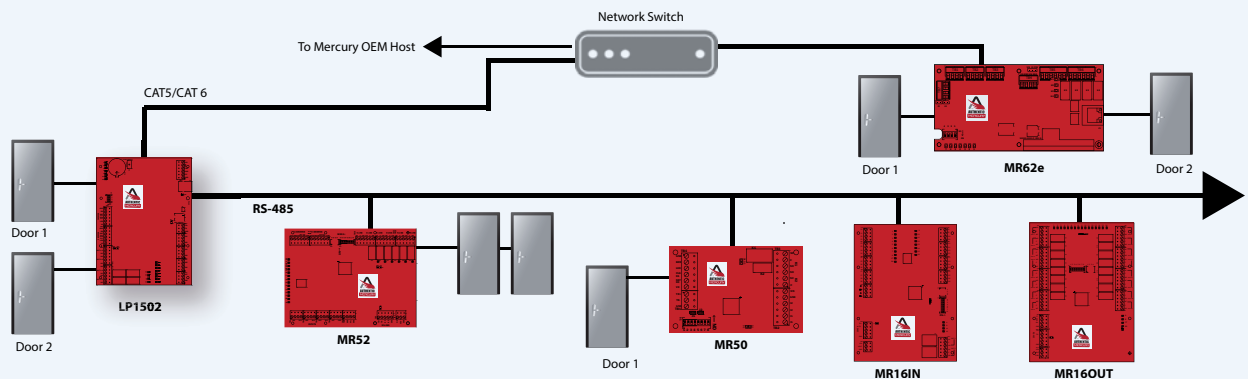
- IPv4/v6
- Host communications protected by TLS 1.2/1.1 or AES-256/128
- Controller/IO Expansion connection protected by AES
- Generate and load custom peer certificates for TLS
- Port based network access control using 802.1X
- FIPS 140-2 user of OpenSSL

Card Reader Functions

- Supports multiple card formats, paired and alternate readers, elevator, turnstile and biometric devices
- Anti-passback support (area, reader and time based)
- Programmable keypad user commands
- Threat level and operating mode

HID Mercury LP1502 Intelligent Controller

Access Control	240,000 cardholder capacity 50,000 transaction buffer Supports total of 1 RS-485 IO protocols 255 access levels per cardholder Cardholder - 19 Digit (64 Bit) User ID with 15 digit PIN MAX Activation/Deactivation If/Then macro capabilities Anti-passback support Nested, area, hard, soft and timed forgiveness Adjustable cardholder capacity Supports up to 520 inputs or 516 outputs
Door Control	Natively supports for up to 4 readers and 2 openings. Expands to support up to 64 readers and openings.
GENERAL	
Primary Power	12 to 24 VDC ± 10 %, 500 mA maximum (reader and USB ports not included)
Reader Port	600 mA maximum (add 600 mA to primary power current)
Micro USB Port	5 VDC, 500 mA maximum (add 270 mA to primary power current)
Battery	Memory/Clock Backup: 3 Volt Lithium, type BR2330 or CR2330
microSD Card	microSD or microSDHC; 2GB to 8GB
Host Communication	Ethernet: 10-BaseT/100Base-TX and USB port (2.0) with optional adapter: pluggable model USB2-OTGE100
Serial I/O Device	2-wire RS-485, 2,400 to 115,200 bps, asynchronous, half-duplex, 1 start bit, 8 data bits, and 1 stop bit
Inputs	Eight unsupervised/supervised, standard EOL: 1k/1k ohm, 1%, ¼ watt. Two unsupervised dedicated for cabinet tamper and UPS fault monitoring
Output Relays	Four relays, Form C, NO 5 A @ 30 VDC resistive, NC 3 A @ 30 VDC resistive
READER INTERFACE	
Reader Power	12-24 VDC ± 10 % regulated, 300 mA maximum each reader
Data Inputs	TTL compatible, F/2F or 2-wire RS-485
RS-485 Mode	9,600 to 115,200 bps, asynchronous, half-duplex, 1 start bit, 8 data bits, and 1 stop bit. Maximum cable length: 2000 ft. (609.6 m)
LED Output	TTL levels, high>3 V, low<0.5 V, 5 mA source/sink maximum
Buzzer Output	Open collector, 12 VDC open circuit maximum, 40 mA sink maximum
CABLE REQUIREMENTS	
Power and Relays	1 twisted pair, 18 to 16 AWG
Ethernet	CAT-5, minimum
Reader TTL	6-conductor, 18 AWG, 500 feet (150 m) maximum
Reader F/2F	4-conductor, 18 AWG, 500 feet (150 m) maximum
Reader RS-485	1 twisted pair, shielded, 120 ohm impedance, 24 AWG, 2,000 ft. (610 m) max.
I/O Devices	1 twisted pair with drain wire and shield, 120 ohm impedance, 24 AWG, 4,000 ft. (1,219 m) maximum
Alarm Input	1 twisted pair, 30 ohms maximum
ENVIRONMENTAL	
Temperature	-55 to +85 °C, storage, 0 to +70 °C, operating
Humidity	5 to 95% RHNC
MECHANICAL	
Dimensions	8 in. (203.2 mm) W x 6 in. (152.4 mm) L x 1 in. (25 mm) H
Weight	9 oz. (255 g) nominal, board only
COMPLIANCE AND WARRANTY	
Product Compliance	UL 294 Recognized, FCC Part 15 Class A, CE Compliant, RoHS (2011/65/EU & 2015/863), EU REACH (1907/2006), California Proposition 65, NIST Certified Encryption
Warranty	The product is warranted free from defects in material and workmanship under normal use and service with proper maintenance for one year from the date of factory shipment.



hidglobal.com

North America: +1 512 776 9000 | Toll Free: 1 800 237 7769

Europe, Middle East, Africa: +44 1440 714 850

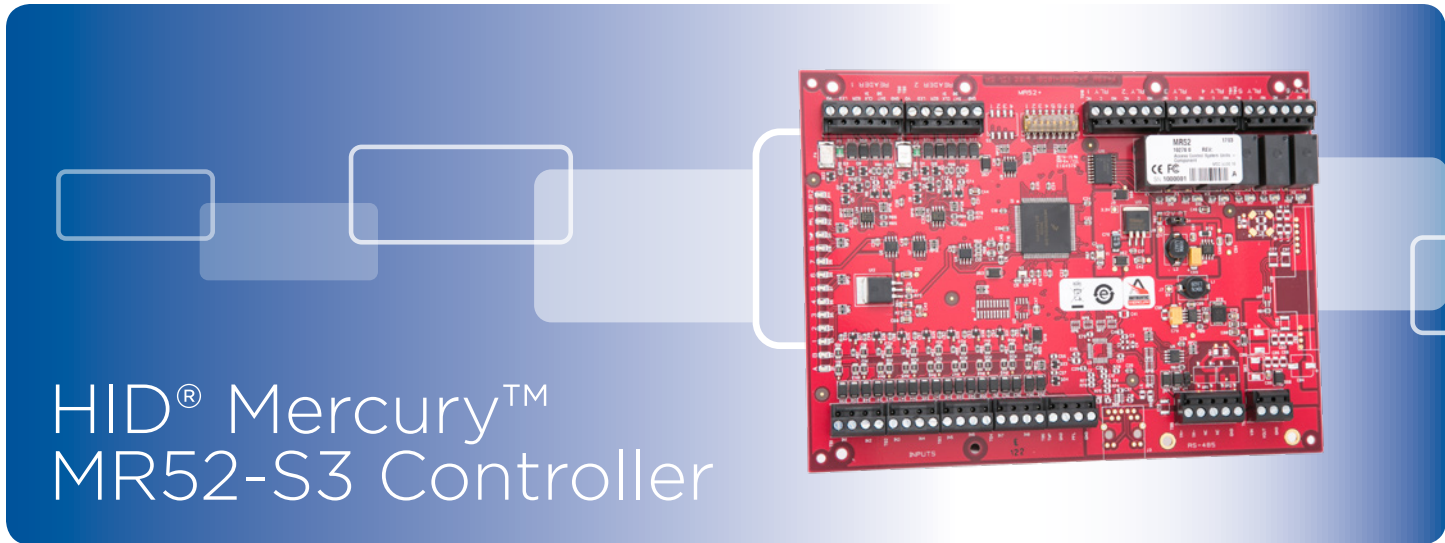
Asia Pacific: +852 3160 9800 | Latin America: +52 (55) 9171-1108

For more global phone numbers click here

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2022-05-02-pacs-hid-mercury-lp1502-ds-en PLT-04697

Part of ASSA ABLOY



HID[®] Mercury[™] MR52-S3 Controller

FEATURES

- AES 128/256 bit data encryption
- HSPD-12/FIPS201 compliant
- UL 294 recognized, CE compliant, FCC, RoHS
- Supports OSDP, OSDP Secure Channel, FICAM government profiles, keypads, biometric readers, Wiegand, clock and data, magnetic stripe, F/2F and supervised F/2F reader technologies
- RS-485 host connectivity

SERIAL I/O DUAL CARD READER INTERFACE

- **Open Architecture** - High performance, reliable platform enables use of hardware with HID Mercury OEM partners' software solutions
- **OSDP Protocol** - Supports OSDP and Secure Channel protocol for device connectivity, file transfer and extended applications such as biometrics and federal government profile support
- **Enhanced Security** - Embedded crypto memory chip provides secured layer of encryption to protect sensitive data
- **Versatile Interoperability** - Same reliable interface and identical footprint as the Series 2 HID Mercury IO modules, enabling seamless upgrades for existing deployments

The HID Mercury MR Series 3 Serial Input/Output (SIO) modules enable system expansion of HID Mercury intelligent controllers as part of HID Mercury's distributed architecture. The enhanced modules offer an improved processor and increased memory, plus feature an embedded crypto memory chip that provides a secured layer of encryption to onboard sensitive data. Built on the HID Mercury open platform, Series 3 modules provide the necessary flexibility for OEMs, channel partners and end customers to choose the controller configuration that best fits their needs.

The MR52 Series 3 is a card reader interface panel with on-board flexibility to connect a wide range of security devices. The MR52 is easy to install and provides the required I/O for interfacing two card readers, eight general-purpose input monitor points and six control relays to any HID Mercury series intelligent controller.

With two-wire RS-485 connectivity, the MR52's two reader ports support OSDP, OSDP Secure Channel, FICAM government profiles, keypads, biometric readers, Wiegand, clock and data, magnetic stripe, F/2F and supervised F/2F reader

technologies. System configuration and setup are provided through HID Mercury OEM partner software applications.

The MR52 Series 3 is the latest generation door interface module for HID Mercury intelligent controllers, the platform of choice for customers seeking open architecture access control solutions.

Application Notes

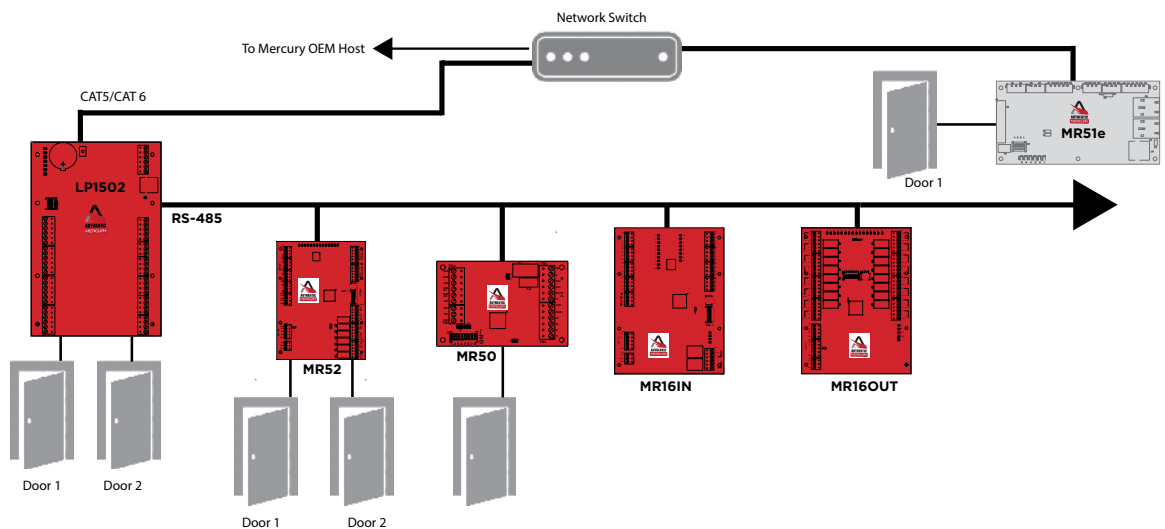
The inputs and the relays may be assigned to door-related functions or to general-purpose I/O. The inputs support normally open, normally closed, supervised, and non-supervised circuits. End-of-line (EOL) resistance values are configurable, and the relays can be configured for fail-safe or fail-secure operation.

When connected to an HID Mercury intelligent controller, the MR52 can relate the activities of selected system devices to other devices within the system, generating actions and allowing activities to occur independent of the host. The MR52 can also locally process access requests based on facility code verification, even when disconnected from an intelligent controller. Up to eight facility codes may be active in each MR52.

SPECIFICATIONS

Primary Power	12-24 VDC +/- 10%, 550mA maximum
Host Communication	RS-485, 2-WIRE, 4,000' (twisted pair with shield, Belden 9841)
Reader Ports	2 Reader Ports*
Card/Keyboard Data	OSDP, Clock/Data, Data-1/Data-0, RS-485, or F/2F
Keypad	8-bit Mercury, 8-bit Dorado/HID, 4-bit HID
Reader Power	Pass-through or 12 VDC regulated 300mA each reader
LED	One-wire bi-color LED or two-wire LED
Buzzer	Only with 'one-wire' LED
Inputs	8 General Purpose: Programmable circuit type 2 Dedicated: Tamper and Power Monitor
Output Relays	Six Form-C Relays: Normally open contact (NO): 5A @ 30 VDC resistive Normally closed contact (NC): 3A @ 30 VDC resistive
Dimensions	6.0" W x 8.0" L x 1.0" H (152mm W x 203mm L x 25mm H)
Temperature	Storage: -55° - 85° C Operational: 0° - 70° C
Humidity	5 to 95% RHNC
Product Compliance	UL 294 Recognized, FCC Part 15 Class A, CE Compliant, RoHS (2011/65/EU & 2015/863), EU REACH (1907/2006), California Proposition 65

*Note: Up to two entry exit door applications (4 readers total) can be supported when connected to OSDP readers.



hidglobal.com

North America: +1 512 776 9000

Toll Free: 1 800 237 7769

Europe, Middle East, Africa: +44 1440 714 850

Asia Pacific: +852 3160 9800

Latin America: +52 55 5081 1650

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2019-10-15-hid-pacs-mercury-mr52-series-3-reader-interface-ds-en PLT-04706

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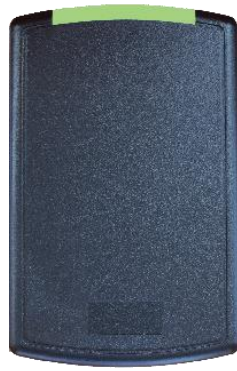
ENTERPRISE & CAMPUS READY

ETHOS™ READERS

Advanced Access Control Readers | Secure Communications



ET10



ET20



ET25

WaveLynx Technologies' Ethos line of multi-technology contactless access control readers offers a modern aesthetic and a state-of-the-art feature set. Standard technologies include Proximity (125 kHz), Smart (13.56 MHz), NFC, and Bluetooth®, so that customers can set their migration path to secure credentials and security ecosystems. All Ethos readers are fully OSDP™ compliant and are currently enabled for Secure Channel and remote firmware upgrades. Additionally, Ethos readers offer a unique patented feature called OSDP Auto-Detect. They communicate OSDP and Wiegand over the same wires to automatically detect and convert to OSDP Secure Channel protocol when the panel is upgraded, eliminating the need to rewire or reconfigure the reader.

KEY FEATURES

- o Multiple technologies in a single reader: Proximity, Smart, NFC & BLE
- o OSDP Autodetect
- o OSDP Secure Channel and remote firmware upgradability
- o MIFARE DESFire® EV1 & EV2 support
- o Ethos Wiegand/OSDP readers work with MyPass Mobile Credentials
- o LEAF credential support for secure, open, interoperability
- o FSK and ASK legacy proximity credentials support for seamless transitions
- o Accelerometer-based tamper detection
- o Tri-state LED light bar (red, green, amber) and audible beeper
- o Accommodates indoor, outdoor installation environments

TECHNICAL SPECIFICATIONS

			
FEATURES	Mullion Model ET10	Single Gang Model ET20	Keypad Model ET25
RF Technologies 13.56 MHz 125 kHz & 13.56MHz 13.56MHz & Mobile 125 kHz & 13.56MHz & Mobile	Part Number ET10-2WS ET10-3WS ET10-6WS ET10-7WS	Part Number ET20-2WS ET20-3WS ET20-6WS ET20-7WS	Part Number ET25-2WS ET25-3WS ET25-6WS ET25-7WS
Color	Black (Standard) Beige by Request		
Current	105 mA average, 145 mA peak	120 mA average, 170 mA peak	145 mA average, 195 mA peak
Voltage	5-16 V DC		
Temperature Range	UL™ tested -35° to 66°C and EN -40° to 70°C and 95% humidity		
Read Ranges	EV1: 1.2", EV2: 2.2" 125 kHz up to 4"	EV1: 1.5", EV2: 2.5" 125 kHz up to 4"	
Dimensions	5.1" x 1.7" x 0.71"	5.1" x 3.25" x 0.71"	
Shipping Dimensions	6" x 3" x 2"	6" x 4" x 2"	
Shipping Weight	7 oz	10 oz	11.3 oz
HS Code	8471.60.9030		
Security Level	EAL 6+		
Country of Origin	USA		
Warranty	Lifetime		3 Years

Certifications: FCC, IC, CE, UL 294, EN 302291, EN 301489, EN 300330, EN 50130-4, IP55, BIS IS 13252

Patents: Please visit www.wavelynxtech.com/patents

WaveLynx Technologies Corporation
North America +1 720-572-4963 | WavelynxTech.com

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WL-EN-Ethos-Readers-DS-3.7 | 12-01-2021



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For more information, visit LEAFidentity.com

AXIS P3748-PLVE Panoramic Camera

4x4K MP multidirectional with AI analytics

AXIS P3748-PLVE offers four channels with 4K per channel at 12.5/15 fps. It includes 360° IR illumination with individually controllable LEDs and a removable IR cut filter. All four sensors are fully motorized and PTRZ functionality ensures ease of installation and configuration. Plus, presets make it easy to configure multiple devices. This discreet camera can be mounted on ceilings for complete 360° coverage. Or corner mounted for 270° coverage. It supports advanced analytics on the edge. Furthermore, Axis Edge Vault, a hardware-based cybersecurity platform, safeguards the device and offers FIPS 140-2 Level 2 certified secure key storage and operations.

- > **4x8 MP at 12.5/15 fps per channel**
- > **Remote pan, tilt, roll, zoom (PTRZ)**
- > **Support for powerful analytics**
- > **360° IR illumination with individually controlled LEDs**
- > **Built-in cybersecurity with Axis Edge Vault**



AXIS P3748-PLVE Panoramic Camera

Camera

Image sensor

4x 1/2.9" progressive scan RGB CMOS
Pixel size 1.4 µm

Lens

Varifocal, 3.18–7.42 mm, F1.6–2.7
Horizontal field of view: 360° (103°–41° per sensor)
Vertical field of view: 54.5°–23°
Minimum focus distance: 1.5 m (4.9 ft)
Fixed iris, IR corrected, remote zoom and focus

Day and night

Automatic IR-cut filter

Minimum illumination

Color: 0.4 lux at 50 IRE, F1.6
B/W: 0 lux at 50 IRE, F1.6 (with IR on)

Shutter speed

1/14000 s to 1/2 s

Camera adjustment

Pan ±180°, tilt -23° to -150°, roll +5° to -95°

System on chip (SoC)

Model

ARTPEC-8

Memory

4096 MB RAM, 8192 MB Flash

Compute capabilities

Deep learning processing unit (DLPU)

Video

Video compression

H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles
H.265 (MPEG-H Part 2/HEVC) Main Profile
Motion JPEG

Resolution

4x 3840x2160 (4x 4K) to 4x 640x360

Frame rate

Up to 12.5/15 fps (50/60 Hz) in all resolutions

Video streaming

Multiple, individually configurable streams in H.264, H.265 and Motion JPG
Axis Zipstream technology in H.264 and H.265
Controllable frame rate and bandwidth
VBR/ABR/MBR H.264/H.265
Low latency mode
Video streaming indicator

Signal-to-noise ratio

>55 dB

WDR

Forensic WDR: Up to 120 dB depending on scene

Noise reduction

Spatial filter (2D noise reduction)
Temporal filter (3D noise reduction)

Image settings

Saturation, contrast, brightness, sharpness, white balance, day/night threshold, local contrast, tone mapping, exposure mode, exposure zones, barrel distortion correction, compression, rotation: 0°, 90°, 180°, 270° including corridor format, mirroring, text and image overlay, dynamic text and image overlay, privacy masks, polygon privacy mask

Image processing

Axis Zipstream, Forensic WDR, Lightfinder, OptimizedIR

Audio

Input and output through portcast technology accessories or edge-to-edge pairing. For more information, see *Optional accessories* and *Edge-to-edge*.

Audio streaming

Two-way (half duplex, full duplex) via network speaker pairing technology

Network

Network protocols

IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS¹, HTTP/2, TLS¹, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, NTS, RTSP, RTP, SRTP/RTSPS, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, ARP, SSH, LLDP, CDP, MQTT v3.1.1, Secure syslog (RFC 3164/5424, UDP/TCP/TLS), Link-Local address (ZeroConf)

System integration

Application Programming Interface

Open API for software integration, including VAPIX®, metadata and AXIS Camera Application Platform (ACAP); specifications at axis.com/developer-community. ACAP includes Native SDK.

One-click cloud connection

ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and ONVIF® Profile T, specifications at onvif.org

Video management systems

Compatible with AXIS Camera Station Edge, AXIS Camera Station Pro, AXIS Camera Station 5, and video management software from Axis' partners available at axis.com/vms.

Onscreen controls

Autofocus
Video streaming indicator
IR illumination
Privacy masks
Media clip

Edge-to-edge

Speaker pairing

Event conditions

Device status: above/below/within operating temperature, IP address removed, new IP address, network lost, system ready, live stream active, casing open, shock detected
Edge storage: recording ongoing, storage disruption, storage health issues detected
I/O: manual trigger, virtual input
MQTT: stateless
Scheduled and recurring: schedule
Video: average bitrate degradation, day-night mode, tampering

Event actions

Day-night mode
Illumination: use lights, use lights while the rule is active
LEDs: flash status LED, flash status LED while the rule is active
MQTT: publish
Notification: HTTP, HTTPS, TCP and email
Overlay text
Recordings: record, record while the rule is active
Security: erase configuration
SNMP traps: send, send while the rule is active
Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share and email
WDR mode

Built-in installation aids

Pixel counter, remote zoom and focus, level grid, barrel distortion correction, preset positions, pan-tilt-roll: designed to withstand at least 200 full movement cycles

Analytics

Applications

Included

AXIS Object Analytics, AXIS Scene Metadata, AXIS Video Motion Detection, active tampering alarm

Supported

Support for AXIS Camera Application Platform enabling installation of third-party applications, see axis.com/acap

Multisensor analytics

4 channels analytics support, AXIS Object Analytics

AXIS Object Analytics

Object classes: humans, vehicles (types: cars, buses, trucks, bikes, other)

Scenarios: line crossing, object in area, time in area, crossline counting, occupancy in area, motion in area, motion line crossing

Up to 10 scenarios

Other features: triggered objects visualized with trajectories, color-coded bounding boxes and tables

Polygon include/exclude areas

Perspective configuration

ONVIF Motion Alarm event

AXIS Scene Metadata

Object classes: humans, faces, vehicles (types: cars, buses, trucks, bikes), license plates

Object attributes: vehicle color, upper/lower clothing color, confidence, position

1. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (ey@cryptsoft.com).

Approvals

Product markings

UL/cUL, CE, FCC, ICES, KC, VCCI, RCM, BSMI

Supply chain

TAA compliant

EMC

CISPR 35, CISPR 32 Class A, EN 55035, EN 55032 Class A, EN 50121-4, EN 61000-6-1, EN 61000-6-2

Australia/New Zealand: RCM AS/NZS CISPR 32 Class A

Canada: ICES-3(A)/NMB-3(A)

Japan: VCCI Class A

Korea: KS C 9835, KS C 9832 Class A

USA: FCC Part 15 Subpart B Class A

Taiwan: CNS 15936

Railway: IEC 62236-4

Safety

CAN/CSA C22.2 No. 62368-1 ed. 3, IEC/EN/UL 62368-1 ed. 3, IEC/EN 62471 risk group exempt, RCM AS/NZS 62368.1:2022, IS 13252

Environment

IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78, IEC/EN 60529 IP66, IEC/EN 62262 IK10, MIL-STD-810H (Method 501.7, 502.7, 505.7 506.6, 507.6 509.7), NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9)

Network

NIST SP500-267

Cybersecurity

ETSI EN 303 645, BSI IT Security Label, FIPS 140

Cybersecurity

Edge security

Software: Signed OS, brute force delay protection, digest authentication and OAuth 2.0 RFC6749 Client Credential Flow/OpenID Authorization Code Flow for centralized ADFS account management, password protection, Axis Cryptographic Module (FIPS 140-2 level 1)

Hardware: Axis Edge Vault cybersecurity platform
Secure keystore: TPM 2.0 (CC EAL4+, FIPS 140-2 Level 2), system-on-chip security (TEE)
Axis device ID, signed video, secure boot, encrypted filesystem (AES-XTS-Plain64 256bit)

Network security

IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2)², IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR, HTTPS/HSTS², TLS v1.2/v1.3², Network Time Security (NTS), X.509 Certificate PKI, host-based firewall

Documentation

AXIS OS Hardening Guide

Axis Vulnerability Management Policy

Axis Security Development Model

AXIS OS Software Bill of Material (SBOM)

To download documents, go to axis.com/support/cybersecurity/resources

To read more about Axis cybersecurity support, go to axis.com/cybersecurity

General

Casing

IP66-, NEMA 4X- and IK10-rated

Polycarbonate hard-coated dome

Aluminum and plastic casing, polycarbonate (PC) dome

Color: white NCS S 1002-B

For repainting instructions, go to the product's support page. For information about the impact on warranty, go to axis.com/warranty-implication-when-repainting.

Mounting

Mounting bracket with junction box holes (double-gang, single-gang, 4" square, and 4" octagon)

1/2" (M20) conduit side entry

Power

Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 2 Class 4

Typical 10.9 W, max 23.6 W

2. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (eyay@cryptosoft.com).

Connectors

Network: Shielded RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE
Audio: Audio and I/O connectivity via portcast technology

IR illumination

Optimized IR with power-efficient, long-life 850 nm IR LEDs
Range of reach 20 m (65.6 ft) at 0 lux, 30 m (98.4 ft) at 0.2 lux

Storage

Support for microSD/microSDHC/microSDXC card
Support for SD card encryption (AES-XTS-Plain64 256bit)
Recording to network-attached storage (NAS)
For SD card and NAS recommendations see axis.com

Operating conditions

-40 °C to 50 °C (-40 °F to 122 °F)
Minimum temperature for PTR functionality: -30 °C (-22 °F)
Maximum temperature according to NEMA TS 2 (2.2.7): 74 °C (165 °F)
Start-up temperature: -30 °C
Humidity 10–100% RH (condensing)

Storage conditions

-40 °C to 65 °C (-40 °F to 149 °F)
Humidity 5–95% RH (non-condensing)

Dimensions

For the overall product dimensions, see the dimension drawing in this datasheet.
Effective Projected Area (EPA): 0.030862 m² (0.33 ft²)

Weight

3 kg (6.6 lb)

Box content

Camera, installation guide, connector guard, cable gasket, mounting plate, dome casing

Optional accessories

AXIS TP3107 Pendant Kit, AXIS TP3108-E Pendant Kit, AXIS TP3840-E Dome Casing Black, AXIS TP3841-E Dome Smoked, AXIS T90D Illuminators, AXIS T8415 Wireless Installation Tool, AXIS T6112 Mk II Audio and I/O Interface, AXIS Surveillance Cards
For more accessories, go to axis.com/products/axis-p3748-plve#accessories

System tools

AXIS Site Designer, AXIS Device Manager, product selector, accessory selector, lens calculator
Available at axis.com

Languages

English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional Chinese, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese

Warranty

5-year warranty, see axis.com/warranty

Part numbers

Available at axis.com/products/axis-p3748-plve#part-numbers

Sustainability

Substance control

PVC free, BFR/CFR free in accordance with JEDEC/ECA Standard JS709
RoHS in accordance with EU RoHS Directive 2011/65/EU/ and 2015/863, and standard EN IEC 63000:2018
REACH in accordance with (EC) No 1907/2006. For SCIP UUID, see echa.europa.eu

Materials

Renewable carbon-based plastic content: 40% (recycled: 13%, bio-based: 25%, carbon capture based: 2%)
Screened for conflict minerals in accordance with OECD guidelines
To read more about sustainability at Axis, go to axis.com/about-axis/sustainability

Environmental responsibility

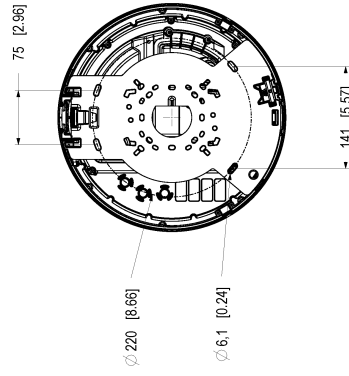
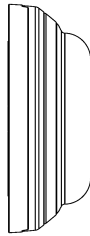
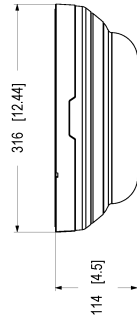
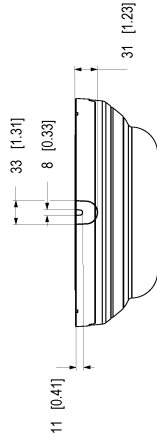
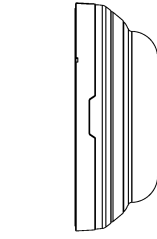
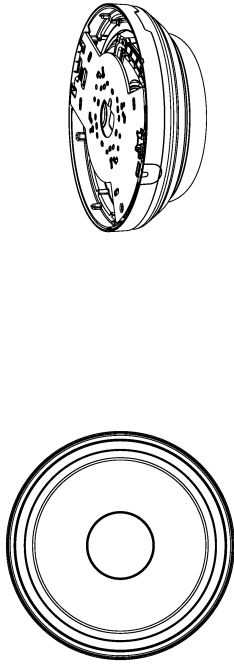
axis.com/environmental-responsibility
Axis Communications is a signatory of the UN Global Compact, read more at unglobalcompact.org

Detect, Observe, Recognize, Identify (DORI)

	DORI definition	Distance (wide)	Distance (tele)
Detect	25 px/m (8 px/ft)	86.4 m (283.4 ft)	230.5 m (756.0 ft)
Observe	63 px/m (19 px/ft)	34.3 m (112.5 ft)	91.5 m (300.1 ft)
Recognize	125 px/m (38 px/ft)	17.3 m (56.7 ft)	46.1 m (151.2 ft)
Identify	250 px/m (76 px/ft)	8.6 m (28.2 ft)	23 m (75.4 ft)

The DORI values are calculated using pixel densities for different use cases as recommended by the EN-62676-4 standard. The calculations use the center of the image as the reference point and consider lens distortion. The possibility to recognize or identify a person or object depends on factors such as object motion, video compression, lighting conditions, and camera focus. Use margins when planning. The pixel density varies across the image, and the calculated values can differ from the distances in the real world.

Dimension drawing



Highlighted capabilities

AXIS Object Analytics

AXIS Object Analytics is a preinstalled, multifeatured video analytics that detects and classifies humans, vehicles, and types of vehicles. Thanks to AI-based algorithms and behavioral conditions, it analyzes the scene and their spatial behavior within – all tailored to your specific needs. Scalable and edge-based, it requires minimum effort to set up and supports various scenarios running simultaneously.

50%. Zipstream also includes three intelligent algorithms, which ensure that relevant forensic information is identified, recorded, and sent in full resolution and frame rate.

For more information, see axis.com/glossary

Axis Edge Vault

Axis Edge Vault is the hardware-based cybersecurity platform that safeguards the Axis device. It forms the foundation that all secure operations depend on and offer features to protect the device's identity, safeguard its integrity and protect sensitive information from unauthorized access. For instance, **secure boot** ensures that a device can boot only with **signed OS**, which prevents physical supply chain tampering. With signed OS, the device is also able to validate new device software before accepting to install it. And the **secure keystore** is the critical building-block for protecting cryptographic information used for secure communication (IEEE 802.1X, HTTPS, Axis device ID, access control keys etc.) against malicious extraction in the event of a security breach. The secure keystore and secure connections are provided through a Common Criteria or FIPS 140 certified hardware-based cryptographic computing module.

Furthermore, signed video ensures that video evidence can be verified as untampered. Each camera uses its unique video signing key, which is securely stored in the secure keystore, to add a signature into the video stream allowing video to be traced back to the Axis camera from where it originated.

To read more about Axis Edge Vault, go to axis.com/solutions/edge-vault.

Pan-tilt-roll-zoom (PTRZ)

PTRZ functionality includes the ability of a camera to rotate around its vertical, lateral, and longitudinal axes. The camera's focal length is adjustable to achieve a narrower or wider field of view. Thanks to the remote functionality, you can quickly adjust and readjust the camera view remotely over the network, saving time and effort. PTRZ functionality also gives you the flexibility to make future adjustments easily, ensuring less disruption, less downtime, and that no dispatched technician is needed.

Zipstream

The Axis Zipstream technology preserves all the important forensic in the video stream while lowering bandwidth and storage requirements by an average of

AXIS P9117-PV Corner Camera

6 MP corner camera with no blind spots

AXIS P9117-PV delivers 360° panoramic view with no blind spots. This 6 MP corner-mounted camera includes Axis Lightfinder and Axis Forensic WDR for true colors and great details in challenging light or near darkness. AXIS TP9801 Cover Steel is also available as an accessory. Featuring a deep learning processing unit, it's possible to run powerful analytics on the edge. For instance, AXIS Object Analytics can detect and classify different objects of interest. With a built-in microphone, it's out-of-the-box-ready for AXIS Audio Analytics. Furthermore, Axis edge vault, a hardware-based cybersecurity platform, safeguards the device.

- > **Full coverage and no blind spots**
- > **6 MP with stereographic lens**
- > **Built-in microphone and Axis Audio Analytics**
- > **Vandal-resistant (IK10) and IP66-rated dust protection**
- > **Built-in cybersecurity with Axis edge vault**



AXIS P9117-PV Corner Camera

Camera

Image sensor

1/1.8" progressive scan RGB CMOS

Lens

1.1 mm, F2.2

Overview (1:1) :

Horizontal field of view: 176°

Vertical field of view: 176°

Corner View (4:3) :

Horizontal field of view: 115°

Vertical field of view: 100°

Fixed iris, fixed focus, IR corrected

Day and night

Automatic IR-cut filter

Minimum illumination

Color: 0.17 lux at 50 IRE, F2.2

B/W: 0.04 lux at 50 IRE, F2.2

Shutter speed

1/33500 s to 1/5 s

Camera adjustment

Digital roll: ±180°

System on chip (SoC)

Model

ARTPEC-8

Memory

2048 MB RAM, 8192 MB Flash

Compute capabilities

Deep learning processing unit (DLPU)

Video

Video compression

H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles

H.265 (MPEG-H Part 2/HEVC) Main Profile

Motion JPEG

Resolution

Overview: 2160x2160 to 160x160 (1:1)

Corner View: 2048x1536 to 320x240 (4:3)

Corner View: 2048x1152 to 256x144 (16:9)

Frame rate

without WDR: 50/60 fps @ 50/60 Hz

with WDR: up to 25/30 fps @ 50/60 Hz

Video streaming

Multiple, individually configurable streams in H.264, H.265, and Motion JPEG

Axis Zipstream technology in H.264 and H.265

Controllable frame rate and bandwidth

VBR/ABR/MBR H.264/H.265

Video streaming indicator

WDR

Forensic WDR: Up to 120 dB depending on scene

Noise reduction

Spatial filter (2D noise reduction)

Temporal filter (3D noise reduction)

Image settings

Saturation, contrast, brightness, sharpness, local contrast, tone mapping, white balance, day/night threshold, exposure mode, exposure zones, compression, mirroring, dynamic text and image overlay, and polygon privacy mask

Image processing

Axis Zipstream, Forensic WDR

Pan/Tilt/Zoom

Digital PTZ of view areas, digital PT of corner, preset positions, guard tours

Audio

Audio features

Automatic gain control

Speaker pairing

Audio privacy control

Audio streaming

Two-way (full duplex)

Audio analytics even when audio streaming is off

Audio input

Input through speaker pairing or portcast technology
10-band graphic equalizer
Built-in microphone (disabled by default): MEMS microphone

Audio output

Output through speaker pairing or portcast technology

Audio encoding

24bit LPCM, AAC-LC 8/16/32/44.1/48 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz, Opus 8/16/48 kHz
Configurable bit rate

Network

Network protocols

IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS¹, HTTP/2, TLS¹, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP[®], SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, NTS, RTSP, RTP, SRTP, TCP, UDP, IGMPv1/v2/v3, RTCP, DHCPv4/v6, SSH, LLDP, CDP, MQTT v3.1.1, Syslog, Link-Local address (ZeroConf), IEEE 802.1X (EAP-TLS), IEEE 802.1AR

System integration

Application Programming Interface

Open API for software integration, including VAPIX[®], metadata and AXIS Camera Application Platform (ACAP); specifications at axis.com/developer-community.

One-click cloud connection

ONVIF[®] Profile G, ONVIF[®] Profile M, ONVIF[®] Profile S, and ONVIF[®] Profile T, specifications at onvif.org
Support for Session Initiation Protocol (SIP) for integration with Voice over IP (VoIP) systems, peer to peer or integrated with SIP/PBX.

Video management systems

Compatible with AXIS Camera Station Edge, AXIS Camera Station Pro, AXIS Camera Station 5, and video management software from Axis' partners available at axis.com/vms.

Onscreen controls

Privacy masks
Media clip

Event conditions

Audio: audio detection
Device status: above operating temperature, above or below operating temperature, below operating temperature, within operating temperature, IP address removed, new IP address, network lost, system ready, live stream active
Edge storage: recording ongoing, storage disruption, storage health issues detected
I/O: manual trigger, virtual input
MQTT: subscribe
Scheduled and recurring: schedule
Video: average bitrate degradation, day-night mode, tampering

1. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (ey@cryptsoft.com).

Event actions

Day-night mode
MQTT: publish
Notification: HTTP, HTTPS, TCP and email
Overlay text
Recordings: SD card and network share
SNMP traps: send, send while the rule is active
Status LED
Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share and email
WDR mode

Built-in installation aids

Pixel counter, digital roll, level grid

Analytics

Applications

Included

AXIS Object Analytics, AXIS Image Health Analytics, AXIS Audio Analytics, AXIS Scene Metadata, AXIS Video Motion Detection, Active tampering alarm, Elevator door state detector

Supported

AXIS Camera Application Platform enabling installation of third-party applications, see axis.com/acap

AXIS Object Analytics

Object classes: humans, vehicles (types: cars, buses, trucks, bikes, other)

Features: line crossing, object in area

Up to 10 scenarios

Metadata visualized with trajectories, color-coded bounding boxes and tables

Polygon include/exclude areas

ONVIF Motion Alarm event

AXIS Image Health Analytics

Detection settings:

Tampering: blocked image, redirected image

Image degradation: blurred image, underexposed image

Other features: sensitivity, validation period

AXIS Audio Analytics

Features: adaptive audio detection, audio classification

Audio classes: scream, shout, glass break, speech

Event metadata: audio detections, classifications

AXIS Scene Metadata

Object classes: humans, faces, vehicles (types: cars, buses, trucks, bikes), license plates

Object attributes: vehicle color, upper/lower clothing color, confidence, position

Audio data: audio level

Approvals

Product markings

BIS, CE, ICES, KC, RCM, UKCA, UL/cUL, VCCI, WEEE

Supply chain

TAA compliant

EMC

EN 55032 Class A, EN 55035, EN 61000-6-1, EN 61000-6-2,

Australia/New Zealand: RCM AS/NZS CISPR 32 Class A,

Canada: ICES-3(A)/NMB-3(A),

Japan: VCCI Class A,

Korea: KS C 9835, KS C 9832 Class A,

USA: FCC Part 15 Subpart B Class A

Safety

IEC/EN/UL 62368-1 ed. 3,

CAN/CSA C22.2 No. 62368-1 ed. 3, IS 13252

Environment

IEC/EN 60529 IP66, IEC/EN 62262 Class IK10,

IEC 60721-3-5 Class 5M3 (Vibration, Shock)

IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC

60068-2-14, IEC 60068-2-27, IEC 60068-2-78

Network

NIST SP500-267

Cybersecurity

ETSI EN 303 645, BSI IT Security Label, FIPS-140

Cybersecurity

Edge security

Software: Signed OS, brute force delay protection, digest authentication, password protection, Axis Cryptographic Module (FIPS 140-2 level 1), AES-XTS-Plain64 256bit SD card encryption

Hardware: Axis Edge Vault cybersecurity platform Secure element (CC EAL 6+), system-on-chip security (TEE), Axis device ID, secure keystore, signed video, secure boot, encrypted filesystem (AES-XTS-Plain64 256bit)

Network security

IEEE 802.1X (EAP-TLS)²,

IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR,

HTTPS/HSTS², TLS v1.2/v1.3², Network Time Security

(NTS), X.509 Certificate PKI, host-based firewall

2. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (ey@cryptsoft.com).

Documentation

AXIS OS Hardening Guide

Axis Vulnerability Management Policy

Axis Security Development Model

To download documents, go to axis.com/support/cybersecurity/resources

To read more about Axis cybersecurity support, go to axis.com/cybersecurity

General

Casing

IP66, IK10-rated

Polycarbonate hard-coated dome

Color: White NCS S 1002-B

For repainting instructions and impact on warranty, contact your Axis partner

Mounting

Corner mounting on 3 or 2 surfaces (wall + wall or wall + ceiling)

Power

Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 3

Typical 3.7 W, max 5.3 W

Connectors

Network: Shielded RJ45 10BASE-T/100BASE-TX PoE

Audio: Audio and I/O connectivity via AXIS T61 Mk II

Audio and I/O Interfaces with portcast technology

Storage

Support for microSD/microSDHC/microSDXC card

Recording to network-attached storage (NAS)

For SD card and NAS recommendations, see axis.com

Operating conditions

-15 °C to 50 °C (5 °F to 122 °F)

Humidity 10–85% RH (non-condensing)

Maximum operating temperature (intermittent): 55 °C (131 °F)

Minimum startup temperature: -15 °C (5 °F)

Storage conditions

-40 °C to 65 °C (-40 °F to 149 °F)

Dimensions

Height: 92 mm (3.62 in)

Width: 146 mm (5.75 in)

Depth: 122 mm (4.80 in)

Weight

760 g (1.68 lb)

Box content

Camera, installation guide, RJ45 tool mounting, extra screw gaskets, extra cable gasket, owner authentication key

Optional accessories

AXIS TP9801 Cover Steel

AXIS TP9601 Conduit Top Box

AXIS T6101 Mk II Audio and I/O Interface

AXIS T6112 Mk II Audio and I/O Interface

AXIS T864 PoE+ over Coax Series

2N® 2WIRE

AXIS T8415 Wireless Installation Tool

AXIS Surveillance Cards

For more accessories, go to axis.com/products/axis-p9117-pv#accessories

System tools

AXIS Site Designer, AXIS Device Manager, product selector, accessory selector, lens calculator

Available at axis.com

Languages

English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Traditional Chinese, Portuguese, Polish

Warranty

5-year warranty, see axis.com/warranty

Part numbers

Available at axis.com/products/axis-p9117-pv#part-numbers

Sustainability

Substance control

PVC free, BFR/CFR free in accordance with JEDEC/ECA Standard JS709

RoHS in accordance with EU RoHS Directive 2011/65/EU/ and EN 63000:2018

REACH in accordance with (EC) No 1907/2006. For SCIP UUID, see axis.com/partner.

Materials

Renewable carbon-based plastic content: 73% (recycled)

Screened for conflict minerals in accordance with OECD guidelines

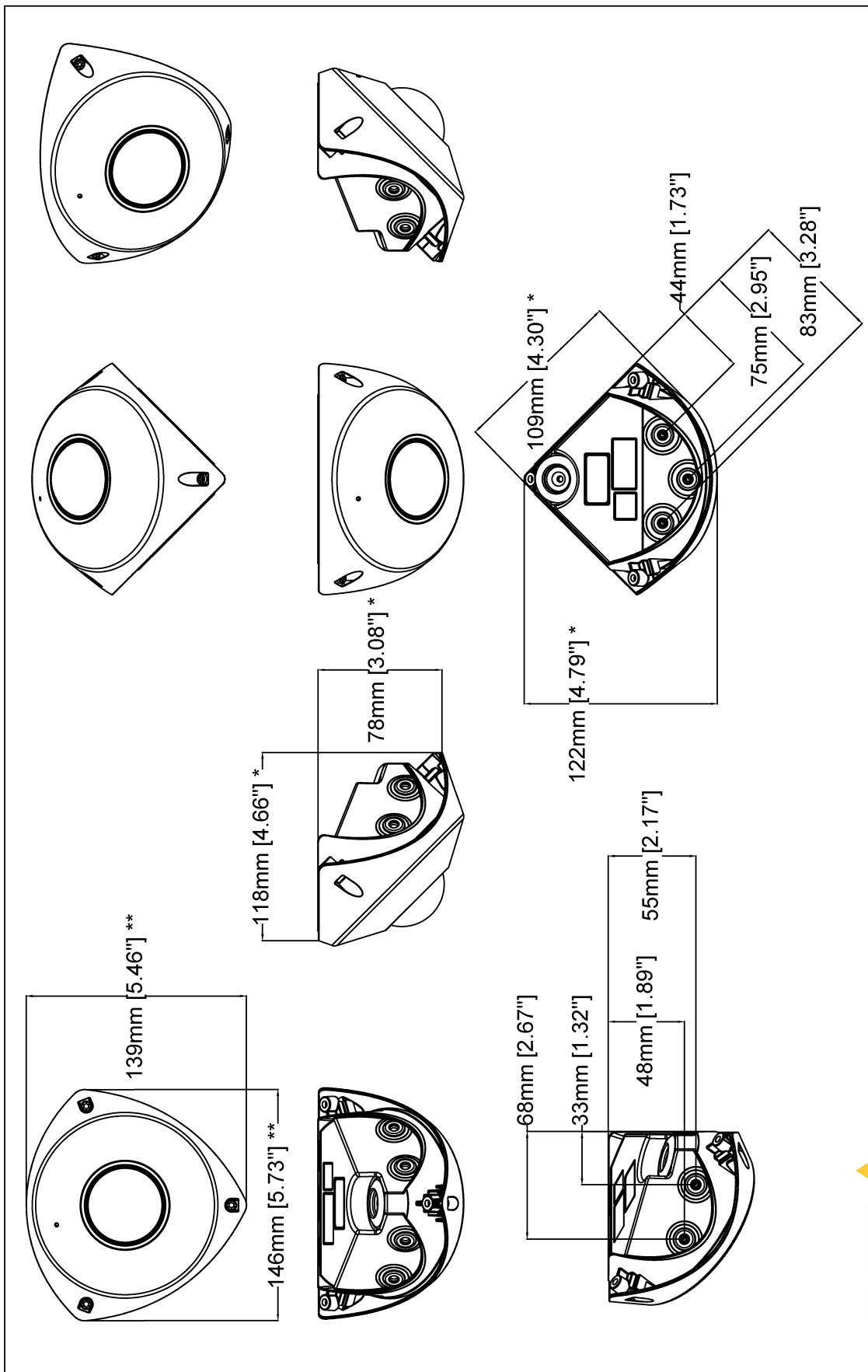
To read more about sustainability at Axis, go to axis.com/about-axis/sustainability

Environmental responsibility

axis.com/environmental-responsibility

Axis Communications is a signatory of the UN Global Compact, read more at unglobalcompact.org

Dimension drawing



Revision	v.01	Revision date	2024-01-12
Paper size	A4	Release date	2024-01-12
Created by	MS	Scale	1:3

AXIS COMMUNICATIONS **AXIS P9117-PV Corner Camera**

* 1mm[0.04"] addition when using the skin cover. ** 2mm[0.08"] addition when using the skin cover

www.axis.com

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Detect, Observe, Recognize, Identify (DORI)

Center	DORI definition	Distance
Detect	25 px/m (8 px/ft)	21.3 m (69.9 ft)
Observe	63 px/m (19 px/ft)	8.5 m (27.9 ft)
Recognize	125 px/m (38 px/ft)	3.6 m (11.8 ft)
Identify	250 px/m (76 px/ft)	2.1 m (6.9 ft)

The DORI values are calculated using pixel densities for different use cases as recommended by the EN-62676-4 standard. The calculations use the center of the image as the reference point and consider lens distortion. The possibility to recognize or identify a person or object depends on factors such as object motion, video compression, lighting conditions, and camera focus. Use margins when planning. The pixel density varies across the image, and the calculated values can differ from the distances in the real world.

Corner	DORI definition	Distance
Detect	25 px/m (8 px/ft)	30.2 m (99.1 ft)
Observe	63 px/m (19 px/ft)	12.0 m (39.4 ft)
Recognize	125 px/m (38 px/ft)	6.0 m (19.7 ft)
Identify	250 px/m (76 px/ft)	3.0 m (9.8 ft)

The DORI values are calculated using pixel densities for different use cases as recommended by the EN-62676-4 standard. The calculations use the Corner of the image as the reference point and consider lens distortion. The possibility to recognize or identify a person or object depends on factors such as object motion, video compression, lighting conditions, and camera focus. Use margins when planning. The pixel density varies across the image, and the calculated values can differ from the distances in the real world.

Highlighted capabilities

AXIS Object Analytics

AXIS Object Analytics is a preinstalled, multifeatured video analytics that detects and classifies humans, vehicles, and types of vehicles. Thanks to AI-based algorithms and behavioral conditions, it analyzes the scene and their spatial behavior within – all tailored to your specific needs. Scalable and edge-based, it requires minimum effort to set up and supports various scenarios running simultaneously.

Axis Edge Vault

Axis Edge Vault is the hardware-based cybersecurity platform that safeguards the Axis device. It forms the foundation that all secure operations depend on and offer features to protect the device's identity, safeguard its integrity and protect sensitive information from unauthorized access. For instance, **secure boot** ensures that a device can boot only with **signed OS**, which prevents physical supply chain tampering. With signed OS, the device is also able to validate new device software before accepting to install it. And the **secure keystore** is the critical building-block for protecting cryptographic information used for secure communication (IEEE 802.1X, HTTPS, Axis device ID, access control keys etc.) against malicious extraction in the event of a security breach. The secure keystore and secure connections are provided through a Common Criteria or FIPS 140 certified hardware-based cryptographic computing module.

Furthermore, signed video ensures that video evidence can be verified as untampered. Each camera uses its unique video signing key, which is securely stored in the secure keystore, to add a signature into the video stream allowing video to be traced back to the Axis camera from where it originated.

To read more about Axis Edge Vault, go to axis.com/solutions/edge-vault.

Forensic WDR

Axis cameras with wide dynamic range (WDR) technology make the difference between seeing important forensic details clearly and seeing nothing but a blur in challenging light conditions. The difference between the darkest and the brightest spots can spell trouble for image usability and clarity. Forensic WDR effectively reduces visible noise and artifacts to deliver video tuned for maximal forensic usability.

Lightfinder

The Axis Lightfinder technology delivers high-resolution, full-color video with a minimum of motion blur even in near darkness. Because it strips away noise, Lightfinder makes dark areas in a scene visible and captures details in very low light. Cameras with Lightfinder discern color

in low light better than the human eye. In surveillance, color may be the critical factor to identify a person, an object, or a vehicle.

Zipstream

The Axis Zipstream technology preserves all the important forensic in the video stream while lowering bandwidth and storage requirements by an average of 50%. Zipstream also includes three intelligent algorithms, which ensure that relevant forensic information is identified, recorded, and sent in full resolution and frame rate.

For more information, see axis.com/glossary

Specification Sheet

Husky IVO™ 700R

October 24, 2024

Feature Overview

Husky IVO™ 700R is recommended medium-sized video surveillance appliance that brings ease-of-use and full redundancy together – making it a great choice for those with a critical need for maximum uptime on their video installation.

Key Features

- Rack-mount unit 1U form factor – ideal for those with an existing IT infrastructure
- Up to 64 TB local storage
- Dual OS drives & power supplies
- Hardware RAID for redundancy
- iDRAC9 Enterprise

Redundancy for your peace of mind

- No need to worry about losing video or OS failures – the Husky IVO 700R has it all covered.
- Full hardware redundancy with dual OS drives, power supplies and RAID
- Extensive configuration options on RAID
- Single point of contact for the support of both the VMS and the appliances
- Possibility for onsite support for hardware repairs and replacement

Achieve more

- It is always crucial to get the most out of your video solution – and to be able to achieve more with the same resources. Husky IVO 700R removes the hassle of installation, compatibility and support – enabling you to save time and focus on more important aspects of your project.
- Seamless installation with Husky Assistant
- Remote management through iDRAC
- Extended camera compatibility – compatible with 14,000+ devices

Recommended Usage

- Up to 100 channels (Based on the following video stream: 1080p, 30 FPS, 5-8 Mbps/channel, with video motion detection recording)
- XProtect management and recording server – viewing recommended on a separate machine through XProtect Smart Client
- Remote viewing possible on Mobile or Web Client for up to 8 video streams, without affecting the overall performance.

Hardware Information

- **Form factor**
 - Rack mounted 1U
- **CPU**
 - Intel® Xeon® E-2436 2.9GHz 12MB Cache (6 Cores, 12 Threads) 65W
- **GPU**
 - No
- **RAM**
 - 32 GB DDR5 (2 x 16 GB) ECC
- **Operating system (OS)**
 - Windows Server IoT 2022 for Storage Workgroup²
- **VMS/OS storage**
 - 2 x 480 GB (RAID 1, SSD M.2 PCIe NVMe)
- **Number of hard drives**
 - 4 x 3.5" (hot-plug)
- **Raw storage (gross)**
 - 16/32/48/64 TB (Dell Enterprise Grade 24/7 Drives)
- **RAID controller & support**
 - HW RAID Controller PERC H755
- **VGA**
 - 1 x DB-15 VGA port on rear. (For installation use, not for live viewing purposes)
- **Network interface**
 - 6 x 1 GbE (RJ45) + 1 x 1 GbE iDRAC/Mgmt (RJ45)
- **Archiving to external NAS**
 - Yes, through LAN
- **Credential and key encryption**
 - Trusted Platform Module (TPM 2.0)
- **Redundant power supply**
 - Yes, hot-plug
- **Remote management**
 - Yes, iDRAC9 Enterprise (license incl.)

General Information

- **Hardware warranty**
 - 5 years full system warranty (incl. HDD) Onsite support next business day¹
- **Dimensions**
 - 482 mm x 42,8 mm x 564 mm
 - 19" x 1,7" x 22,2"
- **Weight**
 - 13.23 kg (min)
 - 29.17 lb (min)
- **Power input**
 - 100~240V, 50/60 Hz
- **Max. power consumption**
 - Dual, 600W hot-plug redundant
- **BTU rating**
 - 2250 BTU/h (max theoretical)
- **Protection**
 - OVP (over voltage), OCP (over current), OTP (over temp), SCP (short circuit)

Environmental

This unit is intended for stationary server room and office use, according to the conditions stated below.

- **Operating temperature**
 - 10° – 35° C / 50° – 95° F
- **Storage temperature**
 - -40° – 65° C / -40° – 149° F
- **Humidity**
 - 10 – 85% relative humidity (non-condensing)

Regulatory

- **Regulatory Model and Type**
 - Model E77S, Type E77S002

Miscellaneous

XProtect VMS software

Milestone Husky appliances are preloaded with Milestone XProtect VMS, which means that they can be used with any XProtect VMS variants. The required VMS licenses are purchased separately. The units can also be used with XProtect Essential+ with up to 8 cameras for free.

¹ Onsite intervention dispatched following Milestone's support processes – hardware Service Tag information accuracy required. Subject to regional availability, dependent on Dell Technologies support network. Dell Technologies onsite support service will be given on a best effort basis conditioned upon the location of the Husky IVO unit. Onsite support services like NBD or 4HR are being counted from the moment Dell Technologies' troubleshooting is finalized and conditioned upon the hour and the day of the week the troubleshooting finishes.

Milestone reserves the right to correct errors and typos in these data sheets. For the latest version of this document, always check our website

Previous revisions from the available stock may still be delivered during transition phases to refreshed revisions.

² Windows Server IoT for Storage Workgroup EULA and Microsoft Conditions should be respected at all times by the end user.



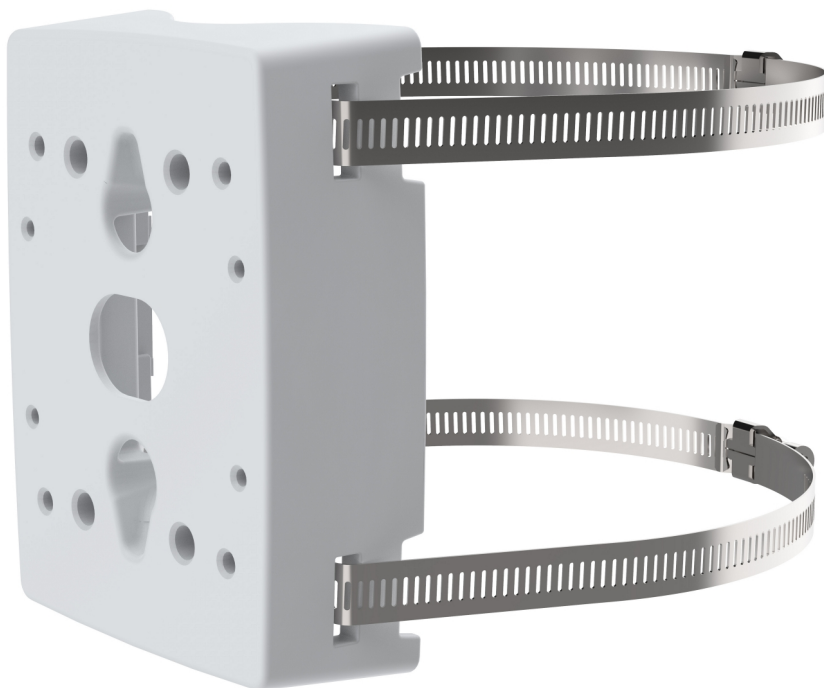
Milestone Systems is a leading provider of open platform video management software; technology that helps the world see how to ensure safety, protect assets and increase business efficiency. Milestone enables an open platform community that drives collaboration and innovation in the development and use of network video technology, with reliable and scalable solutions that are proven in more than 150,000 sites worldwide. Founded in 1998, Milestone is a stand-alone company in the Canon Group.

AXIS T91B47

Pole mount for different pole diameters

AXIS T91B47 Pole Mount is designed for both indoor and outdoor use. It is available in two versions with different lengths of marine-grade (SS316L) stainless steel straps. One version for poles with diameter between 50–150 mm (2–6 in), and one for poles with diameter between 100–410 mm (4–16 in) in diameter. Additionally, it can be used for attaching cameras to beams. When AXIS T91B47 is used for Axis fixed dome or fixed bullet cameras, no additional accessories such as pendant kits are required, ensuring a cost-efficient solution.

- > **Suitable for a wide range of pole diameters**
- > **Safe and easy to install**
- > **IK10-rated vandal resistance**
- > **NEMA 4X-rated corrosion protection**
- > **Axis stainless steel (SS316L) straps included**



AXIS T91B47

Models	AXIS T91B47 Pole Mount 50–150 mm AXIS T91B47 Pole Mount 100–410 mm	Sustainability	PVC free
General		Environment	Indoor Outdoor
Supported products	Compatible Axis network cameras: Outdoor fixed box cameras: AXIS M11/P13/Q16 Series Fixed bullet cameras: AXIS P14/Q17 Series Fixed dome cameras: AXIS M30/P32/P33/Q35/Q36 Series Thermal cameras: AXIS Q19/Q29 Series Compatible Axis accessories: AXIS T91E61 Wall Mount AXIS T94Q01A Wall Mount AXIS P33 Mounting Bracket AXIS T92E Housing Series AXIS T93F Housing Series AXIS T93G05 Protective Housing	Approvals	Safety IEC/EN/UL 60950-1, IEC/EN/UL 60950-22 Environment EN 50581, NEMA 250 Type 4X ^a Impact IEC 62262 IK10
Pole diameter	AXIS T91B47 Pole Mount 50–150 mm: 50–150 mm (2–6 in) AXIS T91B47 Pole Mount 100–410 mm: 100–410 mm (4–16 in)	Dimensions	111 x 42 x 147 mm (4 3/8 x 1 5/8 x 5 13/16 in)
Maximum load	15 kg (33 lb)	Weight	0.3 kg (0.7 lb) without steel straps
Cable routing	Back: Cable hole Side: U-shaped cable hole (26 mm/1 in)	Included accessories	Installation Guide Cable ties, Screws Stainless steel straps
Casing	NEMA 4X- and IK10-rated powder-coated aluminum mount Color: white NCS S 1002-B	Warranty	Axis 3-year warranty, see www.axis.com/warranty

a. *Corrosion protected only*

Environmental responsibility:

axis.com/environmental-responsibility

AXIS T91B67

Pole Mount for fixed dome cameras

AXIS T91B67 Pole Mount is suitable for all Axis fixed dome cameras compatible with 1.5" NPS threaded Axis pendant kits. Thanks to its impact-resistant and outdoor-proven material, the mount can be used in both indoor and outdoor environments. AXIS T91B67 is intended for poles with a diameter between 65–165 mm (2 1/2–6 1/2 in), and also for beams. It features 3/4" conduit side entries for protected cable runs, and a closed back with cable gasket for protection against insect infestation.

- > **Robust and safe pole installation**
- > **Suitable for indoor and outdoor use**
- > **Impact-resistant to prevent vandalism**
- > **Cable gasket to prevent insect infestation**
- > **Support for 1.5" NPS threaded Axis pendant kits**



AXIS T91B67

General	
Supported products	Axis fixed dome cameras compatible with 1.5" NPS threaded Axis pendant kits
Pole diameter	65–165 mm (2 1/2–6 1/2 in)
Maximum load	15 kg (33 lb)
Cable routing	Back: cable hole Sides: 3/4" Conduit entrance
Casing	NEMA 4X- and IK10-rated powder-coated aluminum mount Color: white NCS S 1002-B Interface: 1.5" NPS
Sustainability	PVC free
Environment	Indoor Outdoor
Approvals	Safety IEC/EN/UL 60950-1, IEC/EN/UL 60950-22 Environment
	IEC 60721, IEC 60721-4 Class 4M3, MIL-STD 810G 509.5, NEMA 250 Type 4X, RoHS, WEEE Impact IEC 62262 IK10
Dimensions	252 x 134 x 194 mm (9.9 x 5.3 x 7.6 in)
Weight	1.2 kg (2.6 lb)
Included accessories	Installation Guide Stainless steel straps Insect-proof cable gasket
Required accessories	1.5" NPS threaded Axis pendant kit
Warranty	Axis 3-year warranty, see www.axis.com/warranty

Environmental responsibility:

axis.com/environmental-responsibility

AXIS T91D61 Wall Mount 1.5" NPS

For selected fixed dome cameras

AXIS T91D61 is an aluminum wall mount with a 1.5" NPS thread. It is compatible with Axis fixed dome pendant kits and Axis ACI 3/4" conduit adapters. The cables can be routed through the back hole, or from the side by using a conduit connection. The wall mount includes AXIS T91A6 Pipe Seal.

- > [Indoor and outdoor](#)
- > [Robust and safe installation](#)
- > [Ease of installation](#)
- > [Vandal resistance with IK10](#)



AXIS T91D61 Wall Mount 1.5" NPS

General

Supported products	AXIS P32 Series (requires camera-specific pendant kit) AXIS P33 Series (requires camera-specific pendant kit) AXIS P3707-PE (requires AXIS T94M02D Pendant Kit) AXIS Q35 Series (requires camera-specific pendant kit) AXIS Q36 Series (requires camera-specific pendant kit)	IEC/EN/UL 60950-22 EN 50581 IEC 62262 IK10
Dimensions	140 x 268 x 196 mm (5 1/2 x 10 1/2 x 7 3/4 in)	
Weight	1.4 kg (3.1 lb)	
Maximum load	15 kg (33 lb)	
Cable routing	Back: Cable hole Side: Cable conduit holes M20 (3/4")	
Environment	Indoor Outdoor	
Approvals	IEC/EN/UL 60950-1	
		Included accessories Installation Guide AXIS T91A6 Pipe Seal
		Optional accessories Axis network cable couplers, AXIS Conduit Adapter U-shape 30 mm A For more accessories, see www.axis.com
		Warranty 3-year warranty, see axis.com/warranty

Environmental responsibility:
axis.com/environmental-responsibility

SL3000UL SLIDE GATE OPERATOR



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Key Features

REMOTE CONTROL ACCESS

Security+ 2.0° 3-channel receiver will handle up to 50 remote controls (unlimited remotes with 811LM/813LM)

INTERNET CONNECTIVITY

myQ® technology monitors and controls the operator through the myQ app

MONITORED SAFETY INPUTS

6 inputs (main and expansion board)

DIAGNOSTIC DISPLAY

LED diagnostic display

WIRELESS DUAL-GATE COMMUNICATION

Eliminates expensive conduit costs and unsightly driveway scars

LIMIT SETTING

Mechanical

PROGRAMMABLE AUXILIARY RELAYS

Easily add additional features, such as warning lights/alarms

UNAUTHORIZED ACCESS PREVENTION

Can be programmed with anti-tailgate or quick close capabilities

HOMELINK® COMPATIBLE

Version 4 and higher

Specifications

OPERATOR SPEED

12 in. per second

POWER

120VAC single phase

ACCESSORY POWER

24VDC, 500mA output

OPERATOR WEIGHT

140 lbs.

WARRANTY

5 years commercial, 7 years residential

TEMPERATURE SPECIFICATIONS

Without heater: -4°F (-20°C) to 140°F (60°C); with optional heater: -40°F (-40°C) to 140°F (60°C)

UL USAGE CLASSIFICATION

UL 325 & UL 991 listed – class I, II, III and IV

Construction

MOTOR

High-temperature (1/2 HP or 1 HP) AC motor with class H insulation for high cycle, high-temperature applications

OPERATOR DUTY RATING

Continuous duty

CHASSIS/FRAME

Constructed with 1/4 in. gold zinc plated steel for rust prevention

GEAR REDUCTION

30:1 worm gear reducer in synthetic oil bath

CHAIN

#41 black oxide (50 ft. included)

COVER

High-density UV resistant one piece polyethylene plastic for excellent heat and corrosion resistance

RECOMMENDED CAPACITIES

1/2 HP rated for gates up to 50 ft. in length or weighing up to 1,000 lbs.
1 HP rated for gates up to 50 ft. in length or weighing up to 2,000 lbs.

Accessories

Important: Use only LiftMaster monitored entrapment protection devices itemized on the accessory page of the operators installation manual.



LiftMaster

POWERED BY myQ

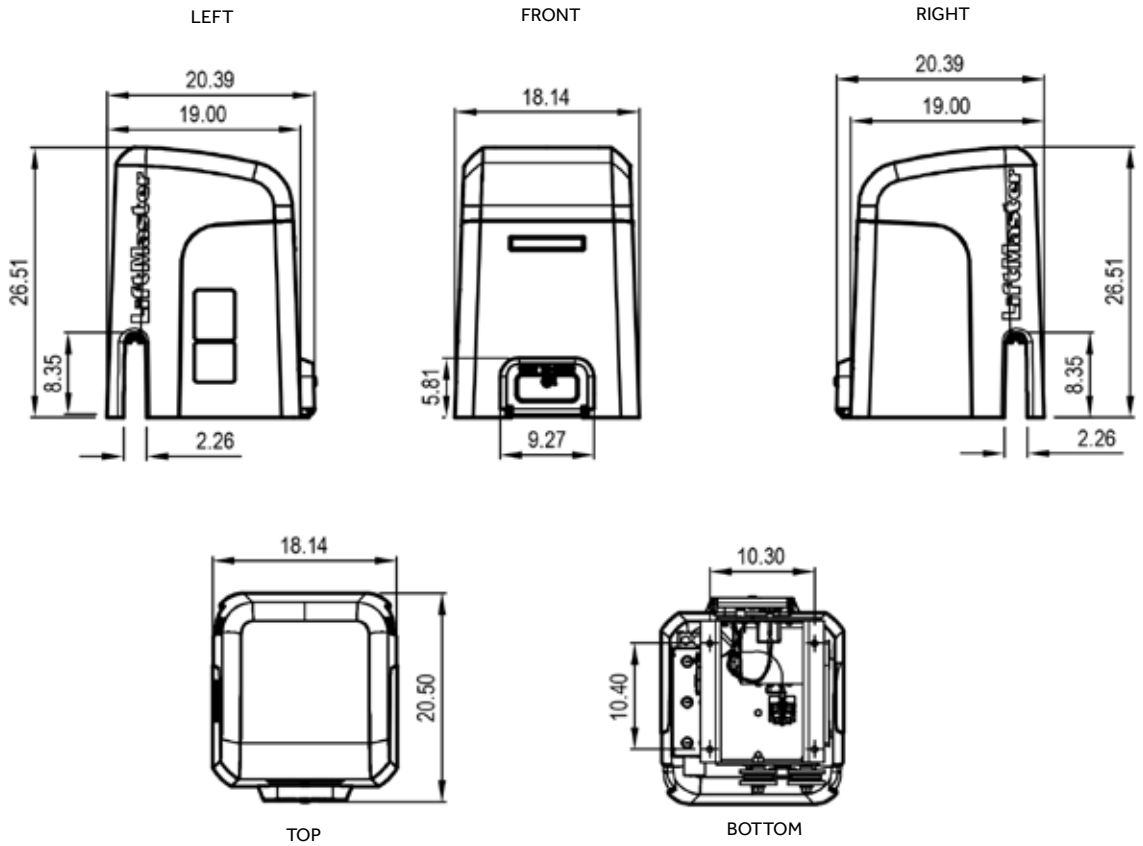
SL3000UL SLIDE GATE OPERATOR

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Dimensions



Capacity

