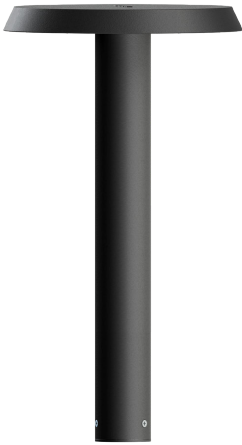


USIN-10001

Sindhu 1 Bollard



Construction

Aluminum

Less than 0.1% copper content - Marine Grade 6060 extruded & LM6 Aluminum High Pressure die casting provides excellent mechanical strength, clean detailed product lines and excellent heat dissipation.

Pre paint

8 step degrease and phosphate process that includes deoxidizing and etching as well as a zinc and nickel phosphate process before product painting.

Memory Retentive -Silicon Gasket

Provided with special injection molded "fit for purpose" long life high temperature memory retentive silicon gaskets. Maintains the gaskets exact profile and seal over years of use and compression.

Thermal management

LM6 Aluminum is used for its excellent mechanical strength and thermal dissipation properties in low and high ambient temperatures. The superior thermal heat sink design by Ligman used in conjunction with the driver, controls thermals below critical temperature range to ensure maximum luminous flux output, as well as providing long LED service life and ensuring less than 10% lumen depreciation at 50,000 hours.

Surge Suppression

Standard 10kv surge suppressor provided with all fixtures.

BUG Rating

90° & 90° x 90° | B0 - U1 - G0
270° & 360° | B1 - U2 - G1

Finishing

All Ligman products go through an extensive finishing process that includes fettling to improve paint adherence.

Paint

UV Stabilized 4.9Mil thick powder coat paint and baked at 200° C. This process ensures that Ligman products can withstand harsh environments. Rated for use in natatoriums.

MicroPRIM Finishes

MicroPRIM is Ligman's trade marked decorative powder coating technology that permanently infuses colors, patterns, or imagery directly into the surface of luminaires and poles while providing protections that standard powder coating does not offer.

MicroPRIM finishes include nature-inspired wood grains and stone aesthetics, material-inspired finishes such as brushed metal, concrete, and carbon fiber, Solid colors in Ligman standard colors, as well as any RAL or Pantone color, Decorative patterns, custom imagery and more.

Coating and Infusion Process

Metal components are pre-treated and powder coated with a proprietary polyurethane-based coating engineered for outdoor architectural use. Decorative patterns or imagery are then permanently infused into the cured powder coat through a heat-based process, creating a durable, integrated finish.

Performance and Validation

MicroPRIM finishes are suitable for indoor and outdoor applications and meet AAMA2605 architectural coating requirements. Performance is validated through laboratory and real-world testing to ASTM standards for UV exposure, adhesion, abrasion, impact, salt spray, chemical resistance, and graffiti resistance.

All MicroPRIM finishes are backed by Ligman's 10-year warranty.

Key Performance Attributes

- Anti-graffiti resistance
- UV and weather resistance
- Scratch and abrasion resistance
- Natatorium Rated for installation in corrosive environments

Hardware

Provided Hardware is Marine grade 316 Stainless steel.

Anti Seize Screw Holes

Tapped holes are infused with a special anti seize compound designed to prevent seizure of threaded connections, due to electrolysis from heat, corrosive atmospheres and moisture.

Crystal Clear Low Iron Glass Lens

Provided with tempered, impact resistant crystal clear low iron glass ensuring no green glass tinge.

Optics & LED

Precise optic design provides exceptional light control and precise distribution of light.
LED CRI > 80

Lumen - Maintenance Life

L80 /B10 at 50,000 hours (This means that at least 90% of the LED still achieve 80% of their original flux)

Modern , discrete way finding bollard. Featuring 360°, 270°, 180°, 90° and 90° x 90° beam distribution for uninterrupted pedestrian lighting.

A range of flat topped, disc head bollards providing downward light distributions. Ideally suited to illuminate walkways, as well as providing decorative light accents in parks and public spaces using high efficiency LEDs.

The Sindhu is suitable for indoor and outdoor applications and provides a clean, visually appealing solution for small, unobtrusive bollard installations.

This product is provided with integral driver and special gasketing to ensure no water enters the luminaire. This product is provided with anchor bolts and laser cut steel bolt template to ensure accurate installation.

All Ligman fixtures can be manufactured using a special pre-treatment and coating process that ensures the fixture can be installed in natatoriums as well as environments with high concentrations of chlorine or salt and still maintain Ligman's 10-Year warranty.

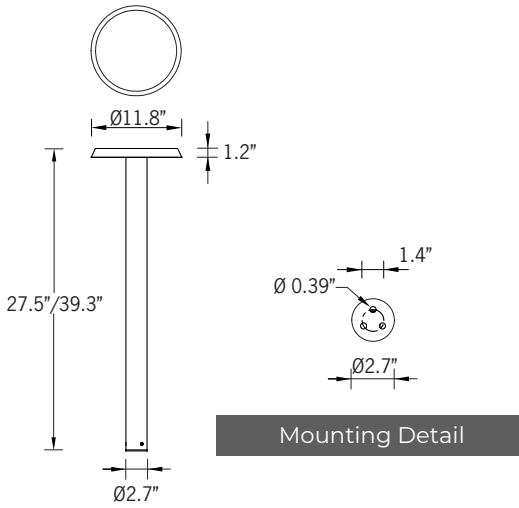
For this natatorium rated process please specify NAT in options.

This luminaire is offered in our MicroPRIM finishes. Pricing for these finishes differs from our standard solid color paint options. Consult with factory for pricing on these products.

Ligman can also offer Vandal Resistant Support. This insert can be used to provide extra rigidity in high pedestrian areas where the bollard is prone to being bumped into or potentially pushed over.

- 11w LED - 1,154 Lumens | 90° Distribution
- 19w LED - 2,274 Lumens | 180° Distribution
- 19w90 LED - 2,264 Lumens | 90° x 90° Distribution
- 23w LED - 2,789 Lumens | 270° Distribution
- 34w LED - 4,159 Lumens | 360° Distribution

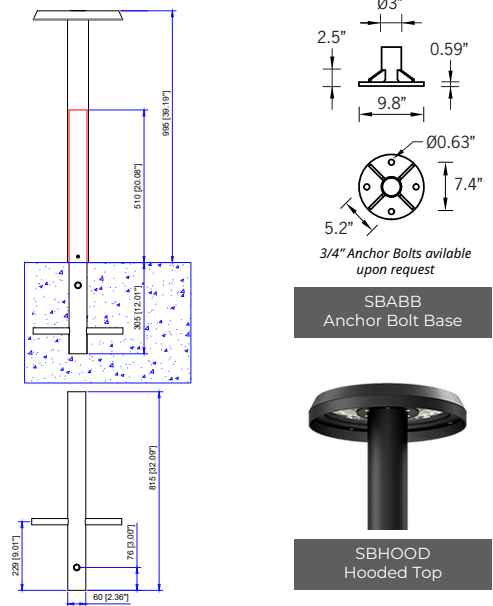
- IP65 - Suitable For Wet Locations
- IK07 - Impact Resistant (Vandal Resistant)
- Weight 14 lbs



Mounting Detail



Additional Options (Consult Factory For Pricing)



SBVRS
Vandal Resistant
Support

PROJECT		DATE	
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QUANTITY		TYPE		NOTE	
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ORDERING EXAMPLE || USIN - 10001 - 19w90 - W30 - 02 - 27.5 - 120/277v - Options

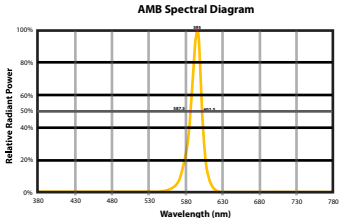
USIN-10001					
LAMP + BEAM	LED COLOR	FINISH COLOR	HEIGHT	VOLTAGE	
<ul style="list-style-type: none"> 11w - 11w LED 1,154 Lumens 90° Beam 19w - 19w LED 2,274 Lumens 180° Beam 19w90 - 19w LED 2,264 Lumens 90° x 90° Beam 23w - 23w LED 2,789 Lumens 270° Beam 34w - 34w LED 4,159 Lumens 360° Beam 	<ul style="list-style-type: none"> W27 - 2700K W30 - 3000K W35 - 3500K W40 - 4000K AMB - TURTLE FRIENDLY Amber LED 	<ul style="list-style-type: none"> 01 - BLACK RAL 9011 02 - DARK GREY RAL 7043 03 - WHITE RAL 9003 04 - METALLIC SILVER RAL 9006 05 - MATTE SILVER RAL 9006 06 - LIGMAN BRONZE 07 - CUSTOM RAL 	<ul style="list-style-type: none"> 27.5" 39.3" SPECIFY OTHER 	120/277v	

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ADDITIONAL OPTIONS

- NAT - Natatorium Rated
- HGT - Custom Bollard Height
- SBVRS - Vandal Resistant Support
- SBABB - Anchor Bolt Base 3/4" Anchor Bolt holes available upon request
- SBHOOD - Hooded Top

CITY OF FLAGSTAFF & TURTLE FRIENDLY COMPLIANT



Narrow-Spectrum Amber LEDs
Peak wavelength between 585 & 595 nanometers and a full width of 50% power no greater than 15 nanometers.

More Custom Finishes Available Upon Request

Consult factory for pricing and lead times

MicroPRIM FINISHES

- SW01 - OAK FINISH
- SW02 - WALNUT FINISH
- SW03- PINE FINISH
- DF - DOUGLAS FIR FINISH
- CW - CHERRY WOOD FINISH
- NW - NATIONAL WALNUT FINISH
- SU01 - CONCRETE FINISH
- SU02 - SOFTSCAPE FINISH
- SU03 - STONE FINISH
- SU04 - CORTEN FINISH
- CSM - Custom Image/Pattern

MicroPRIM FINISHES

- MP - MAPLE FINISH
- MHG - MAHOGANY FINISH
- BH - BEECH FINISH
- CN - CHESTNUT FINISH
- WMBL - WHITE MARBLE FINISH
- MBL - MARBLE FINISH
- GRNT - GRANITE FINISH
- BGD - BRUSHED GOLD FINISH
- BBRZ - BRUSHED BRONZE FINISH
- CAMO - CAMOUFLAGE FINISH

- MP01 - MicroPRIM RAL 9011 Black (Glossy)
- MP02 - MicroPRIM RAL 7043 Dark Grey (Glossy)
- MP03 - MicroPRIM RAL 9003 White (Glossy)
- MP04 - MicroPRIM RAL 9006 Metallic Silver (Glossy)
- MP05 - MicroPRIM RAL 9006 Matte Silver (Matte/Textured)
- MP06 - MicroPRIM Ligman Bronze (Glossy)
- MP07 - MicroPRIM Custom Color (Glossy)



MicroPRIM Finish