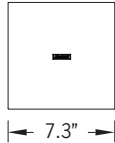
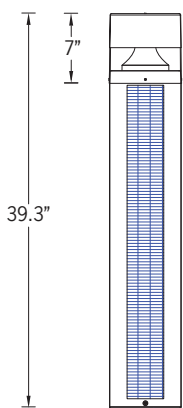
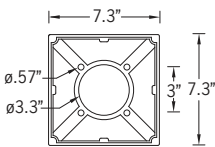




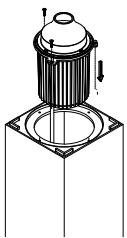
**4w LED 352 Lumens**  
**IP65 • Suitable For Wet Locations**  
**IK07 • Impact Resistant (Vandal Resistant)**  
**Weight 13.4 lbs**



**Top View**



**Mounting Detail**



**IP65 - Internal top access driver housing, prewired with SO cord and waterproof cable gland for easy installation.**

### 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 thermal 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

Contact Factory

#### 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 Deg C. This process ensures that Ligman products can withstand harsh environments. Rated for use in natoriums.

#### Inspired by Nature Finishes

The Inspired by nature Finishing is a unique system of decorative powder coating. Our metal decoration process can easily transform the appearance of metal or aluminum product into a wood grain finish.

This patented technology enables the simulation of wood grain, and even marble or granite finish through the use of decorative powder coating.

The wood grain finish is so realistic that it's almost undistinguishable from real wood, even from a close visual inspection. The system of coating permeates the entire thickness of the coat and as a result, the coating cannot be removed by normal rubbing, chipping, or scratching.

#### The Coating Process

After pre-treatment the prepared parts are powder coated with a specially formulated polyurethane powder. This powder provides protection against wear, abrasion, impact and corrosion and acts as the relief base color for the finalized metal decoration.

The component is then wrapped with a sheet of non-porous film with the selected decoration pattern printed on it using special high temperature inks.

This printed film transfer is vacuum-sealed to the surface for a complete thermo print and then transferred into a customized oven. The oven transforms the ink into different forms within the paint layer before it becomes solid. Finally, the film is removed, and a vivid timber look on aluminum remains.

Wood grain coating can create beautiful wood-looking products of any sort. There are over 300 combinations of designs currently in use. Wood grains can be made with different colors, designs, etc.

Our powder coatings are certified for indoor and outdoor applications and are backed by a comprehensive warranty. These coatings rise to the highest conceivable standard of performance excellence and design innovation.

#### Added Benefits

- Resistance to salt-acid room, accelerated aging
- Boiling water, lime and condensed water resistant
- Anti-Graffiti, Anti-Slip, Anti-Microbial, Anti-Scratch
- Super durable (UV resistant)
- TGIC free (non-toxic)

#### 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)

**Indirect light-emitting bollard range.**  
**Smooth and sharp devised bollard family with wonderful soft controlled lighting options.**

**17.5 hours of operation time (2 step dimming with motion sensor) - 5 days of autonomy**

[operation time & days of autonomy may vary depending on application, geographical location & available sunlight, contact factory for more information]

The innovative reflector technology of the Lightsoft bollard guarantees a high degree of efficiency and optimal visual comfort. Lightsoft has been developed to have excellent controlled downward light providing wide spacing ratios. It has three light shield accessories with different light distributions. The Lightsoft is available in a cylindrical or square shape design with two different heights. The Lightsoft Bollard comes standard with a unique waterproof internal driver housing compartment that is situated at the top of the pole to stop water and dust from entering the electrical components. This fixture is supplied completely wired with powercord and waterproof gland from the driver enclosure to the base of the bollard ensuring quick trouble-free installation. Custom bollard heights are available, please specify. Color temperature 2700K, 3000K, 3500K and 4000K. Custom wattages can be provided to suit customer and Title 24 requirements. (Specify total watts per fixture)

All Ligman fixtures can be manufactured using a special pre-treatment and coating process that ensures the fixture can be installed in natoriums as well as environments with high concentrations of chlorine or salt and still maintain the 5 year warranty. For this natorium rated process please specify NAT in options.

### Additional Options (Consult Factory For Pricing)



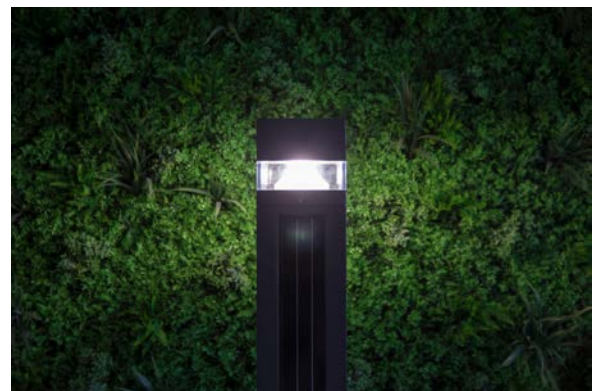
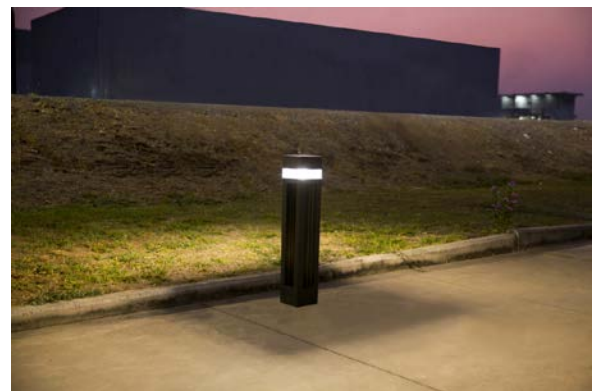
A10731  
180° Light Shield



A10831  
90° Light Shield



A92691  
Remote Solar  
Charger Programmer



The performance of Solar PV Systems is impossible to predict with certainty due to the variability in the amount of solar radiation (sunlight) from location to location and year to year.

Ligman Lighting makes every effort to calculate the hours of luminaire operation based on the information provided – considering average recorded usable sunlight and weather patterns at the installation site's geographical location. It must be noted that the performance and functionality of each luminaire relies entirely on available sunlight at the installation location.

The installation area must be free from obstructions. For example, if the luminaire is installed in shaded areas with trees, buildings, or other objects, or in areas with extended overcast days that block sunlight, the power generation efficiency of the system will decrease and negatively impact the performance of the system.

Barriers that prevent sunlight from reaching the solar panels should be disclosed to Ligman at the time of design.

Based on the above criteria, Ligman cannot be held responsible for underperforming luminaires.

# ULH-10822

## Lightsoft 20 Solar Bollard

<b>PROJECT</b>	<input type="text"/>	<b>DATE</b>	<input type="text"/>
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<b>QUANTITY</b>	<input type="text"/>	<b>TYPE</b>	<input type="text"/>	<b>NOTE</b>	<input type="text"/>
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### ORDERING EXAMPLE || ULH - 10822 - 4w - T2 - W30 - 02 - Options

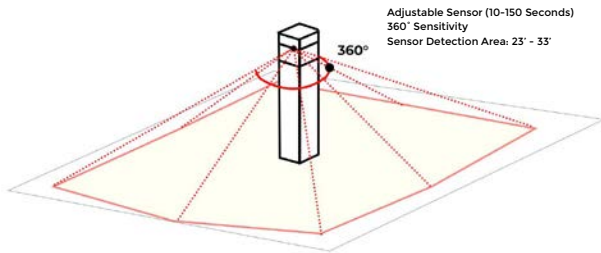
<b>ULH-10822</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>LAMP</b>	<b>BEAM</b>	<b>LED COLOR</b>	<b>FINISH COLOR</b>	

4w LED  
352 Lumens

T2 - Type II Distribution  
T3 - Type III Distribution  
T4 - Type IV Distribution  
W - Wide Beam 108°  
EW - Extra Wide Beam 120°

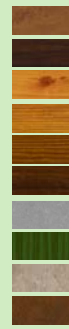
W27 - 2700K  
W30 - 3000K  
W35 - 3500K  
W40 - 4000K

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



#### INSPIRED BY NATURE 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



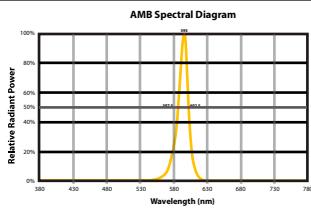
THERE IS AN ADDITIONAL COST FOR THESE FINISHES

<input type="text"/>	<input type="text"/>	<input type="text"/>
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### ADDITIONAL OPTIONS

A10731 - 180° Light Shield      HGT - Custom Bollard Height [Specify HGT=XX"]  
A10831 - 90° Light Shield      A92691 - Remote Solar Charge Controller  
NAT - Natatorium Rated

#### 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



# Lightsoft Product Family



Lightsoft 1

- ULH-10655-27w-1188lm [23.6°]
- ULH-10665-27w-1188lm [39.3°]



Lightsoft 2

- ULH-10675-27w-1050lm [23.6°]
- ULH-10685-27w-1050lm [39.3°]



Lightsoft 3

- ULH-10573-14w-447lm [23.6°]
- ULH-10583-14w-447lm [39.3°]



Lightsoft 4

- ULH-10593-14w-346lm [23.6°]
- ULH-10603-14w-346lm [39.3°]



Lightsoft 5

- ULH-31146-14w-447lm



Lightsoft 6

- ULH-31156-14w-346lm



Lightsoft 19

- ULH-10821-2w-176lm
- ULH-10822-4w-352lm
- ULH-10823-6w-528lm