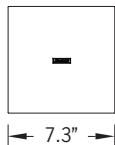**LiGMAN Solar USA**
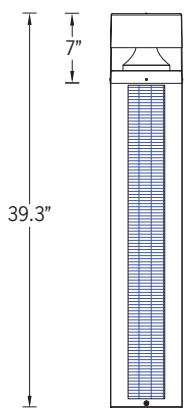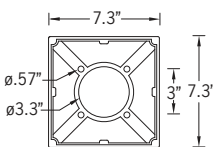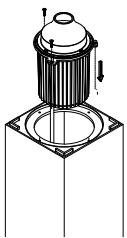
6w LED 528 Lumens
IP65 • Suitable For Wet Locations
IK07 • Impact Resistant (Vandal Resistant)
Weight 13.4 lbs

7"

39.3"

Top View

7.3"

7.3"

ø.57"
ø3.3"

3" 7.3"

Mounting Detail

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

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.

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
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 natatoriums.

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.

7.5 hours of operation time (2 step dimming with motion sensor) - 3.5 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 natatoriums as well as environments with high concentrations of chlorine or salt and still maintain the 5 year warranty. For this natatorium rated process please specify NAT in options.

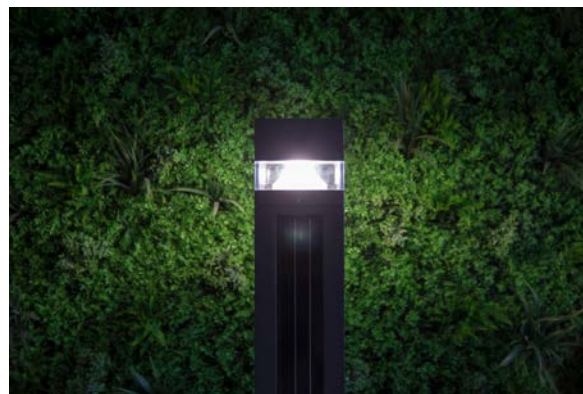## Additional Options (Consult Factory For Pricing)

A10731 180˚ Light Shield	A10831 90˚ Light Shield	A92691 Remote Solar Charger Programmer

ULH-10823
Lightsoft 20 Solar Bollard

PROJECT		DATE	

QUANTITY		TYPE		NOTE	

ORDERING EXAMPLE || ULH - 10823 - 6w - T2 - W30 - 02 - Options

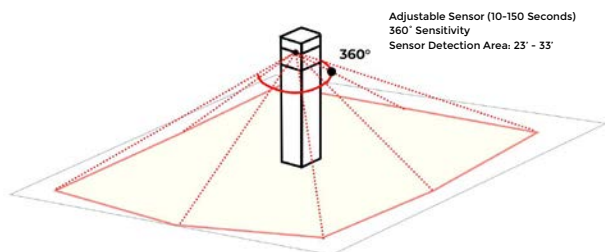| ULH-10823				
	LAMP	BEAM	LED COLOR	FINISH COLOR

LAMP
6w LED
528 Lumens

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

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

FINISH COLOR
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

Adjustable Sensor (10-150 Seconds)
360˚ Sensitivity
Sensor Detection Area: 23' - 33'

360°

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
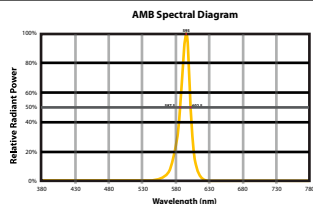SU03 - STONE FINISH
SU04 - CORTEN FINISH

THERE IS AN ADDITIONAL COST FOR THESE FINISHES

ADDITIONAL OPTIONS

A10731 - 180˚ Light Shield
A10831 - 90˚ Light Shield
NAT - Natatorium Rated

HGT - Custom Bollard Height [Specify HGT=XX"]
A92691 - Remote Solar Charge Controller

CITY OF FLAGSTAFF & TURTLE FRIENDLY COMPLIANT

AMB Spectral Diagram

Relative Radiant Power

Wavelength (nm)

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

More Custom Finishes Available Upon Request
Consult factory for pricing and lead times

Oak   Cherry   Beech   Carbon

Walnut   Chestnut   Bamboo   Galvanized

Pine   Mahogany   Birch   Steel

Example: Inspired by Nature Finish

Example: Two-Tone Style

ETL Intertek

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 20
- ULH-10821-2w-176lm
- ULH-10822-4w-352lm
- ULH-10823-6w-528lm