



**BULLARD
SOLAR**
One with the Sun

**OPLA
SOLAR POST-TOP**





FIXTURE TYPE: _____

PROJECT NAME: _____



GENERAL INFORMATION:

Our Solar Post-Top's sleek design is the perfect solution for Urban lighting. It meets a wide range of application needs from pathways, parks to compounds and so on as well as blends harmoniously into a wide variety of architectural contexts. Engineered to perform like conventional post top lighting, Bullard Solar Post-Tops feature high-performing LEDs fueled by Solar energy.

NOMINAL FLUX	3920 LUMENS
NOMINAL POWER	20 WATTS

LIGHTING

Efficiency	196 Lumens/Watts
Chips LED	PHILIPS Luxeon 30-30 / 2300K to 6500K
LED lifetime	Over 80 000 hours LM80
Optics/CCT	T-III / T-V -- 2300 to 6500K
Light Height	From 118.11" to 196.85" (From 3 to 5 Meters)

BATTERY

Technology	Lithium Iron Phosphate LIFEPO4
Capacity	320Wh
Autonomy	Over 24 hours at full charge - 4 Rainy Days back up
Charging time	6-7 hours
Lifespan	Over 3000 CYCLES @ 80% DOD over 10 years Lifetime
Working temp	14°F to 158°F (optional -40°F to 158°F) -10°C to 70°C (optional -40°C TO 70°C)

ENERGY

Solar panel	45 Watts /18V
Cells type	Monocrystalline Panel Grade A 25 years
Certificates	IEC 61215 - IEC 61730 I and II - IEC 60904

ELECTRONIC

Controller	MPPT SMART CONTROLLER
Sensor	Microwave 360° Motion Sensor
Cabling	Waterproof Connector, Plug and Play
Protection	Battery Management System (BMS)

MECHANICAL

Pole mounting	3.00" (76 mm)
Material	Aluminium and Stainless Steel

DIMENSIONS

Product	D 23.62" x H 18.50" (D 60 cm x H 47 cm)
Carton size	26.77" x 26.77" x 22.05" (68 cm x 68 cm x 56 cm)
Net Weight	22,27" (10.1 KG)
Gross Weight	29,87" (13.55 KG)
QTY / CTN 20"/40".....	96/204



CERTIFICATIONS

**IEC / TUV / EMC / LM-79- 08
AND LM-80 TEST STANDARDS
/ IK8 / IP65 / CE / ULOR**

**5
YEARS**

* Bullard Solar offers a 5 Year Limited Warranty for the Post Top-Series luminaire shall be free from defects in material and workmanship for up to five (5) years from date of shipment. This limited warranty covers all components when installed and operated according to Bullard Solar instructions. Fixture suitable for ambient temperature from -10° to 50°. PV Panels - 20 year performance warranty Controller & Batteries: 5 years

Bullard Solar retains the right to modify or change product specifications without prior notice, as part of our ongoing commitment to improvement

ONE WITH THE SUN

sales@gordonbullard.com
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LUMINAIRE HOUSING & LEDS

3920 LUMENS - 2300 TO 6500 K

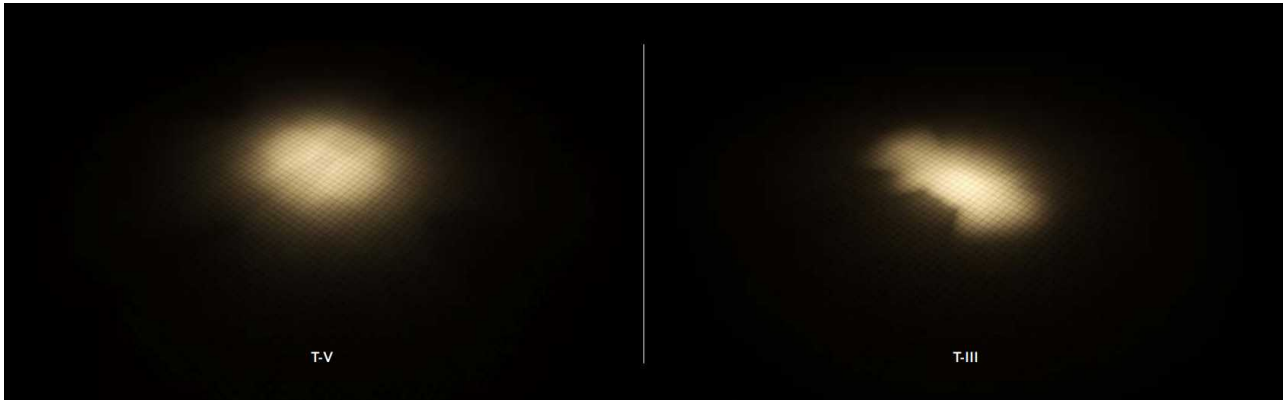
High pressure die-cast low-copper aluminum. Protection class (IP65). Bullard Solar uses a high quality Polyester Powder Coating from AKZO NOBEL. This powder coating provides an excellent salt and humidity resistance as well as ultra violet resistance for color retention for this product.

Our Luminaire is equipped with PHILIPS LUXEON HE PLUS High efficiency Chips offering and overall 196 Lumens per Watt efficacy. Our luminaire also complies with the DARK SKY requirement for light pollution with an Upward lighting of 0,71%.

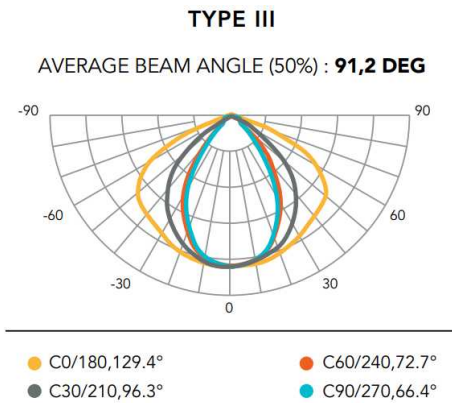
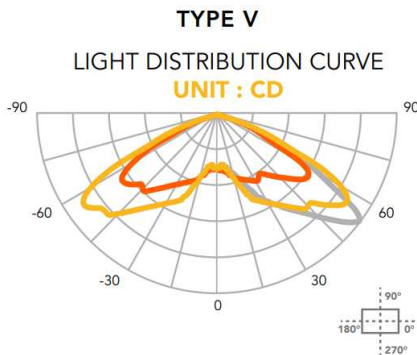


DIFFERENT OPTICS *

Our different optics will allow you to optimize the lighting results of your projects



LIGHT DISTRIBUTION CURVES



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+ OVER 10 YEARS LIFESPAN

The POST-TOP Series is equipped with Iron Phosphate Lithium LiFePo4 battery. This technology is proved to be the best chemical technology for solar application on the market.

With a cycle life of over 3000 Cycles @ 80% DOD, the battery enjoys over 10 years lifetime.

EXTREME TEMPERATURE

14°F to 158°F (-40°F OPTIONAL)
-10°C TO 70°C (-40°C OPTIONAL)

When Standard Lithium LiFePo4 batteries enjoy a working temperature range from 14°F to 158°F (-10°C TO 70 °C). Bullard Sollar offers as optional a new Special LIFEP04 battery with working range of -40°F to 158°F (-40 °C. to 70 °C).

**BATTERY
LIFEP04**



**BMS ELECTRONIC PROTECTION
BATTERY MANAGEMENT SYSTEM**

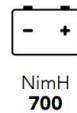
Our batteries are equipped with electronic circuit boards for a higher protection, ensuring battery functioning optimization no matter the situation.

THE BMS PROTECTS AGAINST

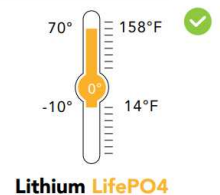
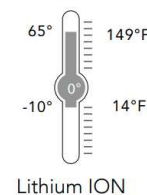
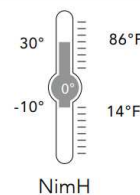
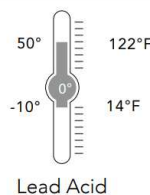
- OVER/UNDER CURRENT • OVERLOAD • OVER/UNDER VOLTAGE
- OVER/UNDER CHARGE • TEMPERATURE MANAGEMENT

COMPARISONS OF DIFFERENT BATTERY TECHNOLOGIES

LIFETIME & CYCLES AT 80% DOD*
Comparison of different battery technologies



**CHARGING TEMPERATURE RANGE
WITHOUT CAPACITY LOSS**
*Minimum & Maximum temperature range for
Optimal charging during the day*



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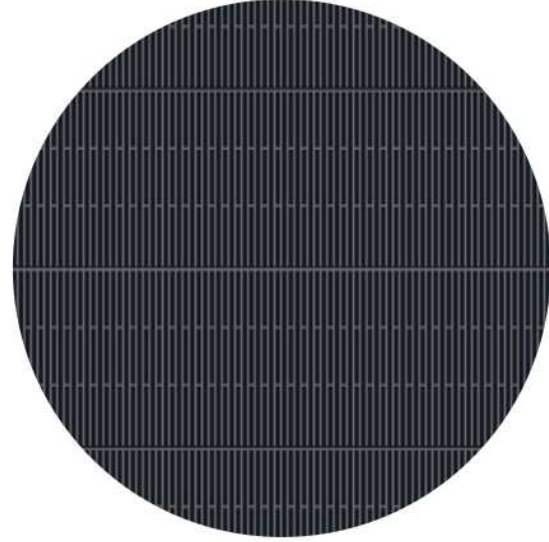
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SOLAR PANEL

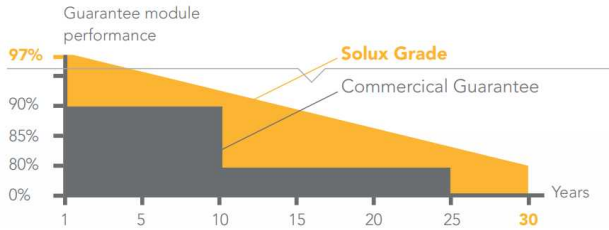
45 WATTS

High efficiency mono-crystalline Solar panels. Carefully selected Grade A Solar cells. Up to 20.4% efficiency, all protected by self-cleaning tempered glass at 30 degrees of inclination. They are also equipped with fully waterproof Plug and Play connectors for easy maintenance.

solar cells
GRADE A



OUR PV PERFORMANCE GUARANTEE



CONTROLLER MPPT



**WATERPROOF CONNECTORS
"PLUG & PLAY"**

All our components are assembled **seamless and easy to access**

In a search for performance and reliability, our products are equipped with MPPT technology controller offering the best charging efficiency on the market up to 98%

REMOTE CONTROL MONITORING

In order to facilitate all maintenance operations and above all to diagnose any possible problem, without having to intervene mechanically on the luminaire, BULLARD SOLAR luminaires are equipped with a wireless diagnostic system via remote control



**With a simple click it is possible
to have real-time information such as:**

- Automatic diagnosis in case of malfunction
- State of charge and battery history
- Real Time load and solar panel energy production history
- Age of the product and installation Temperature and its history

FEATURES

- Minimal stand-by power consumption
- Current consumption $\leq 10\text{mA}$
- Intelligent battery management

3 Phases charging:

- Charge MPPTT
- Constant voltage
- Floating voltage
- Intelligent LED driver Auto detecting of Dusk and Dawn for automatic operation, 7 Lighting Programs Configuration.
- ANTI BLACK OUT: Load adjust according to battery capacity assuring all night long lighting in any weather conditions.
- The controller also acts against:

- OVERLOAD
- OVERCURREN
- OVERTEMPERATURE
- OVERVOLTAGE / OVERLOAD
- OVERDISCHARGE

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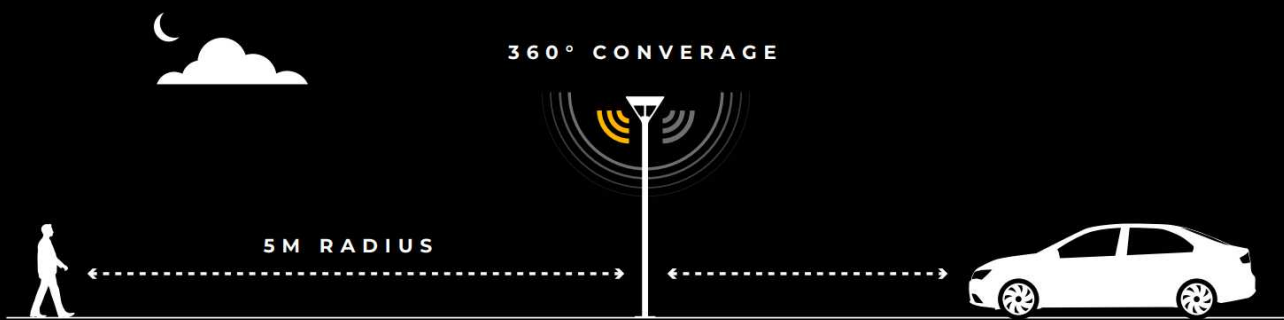
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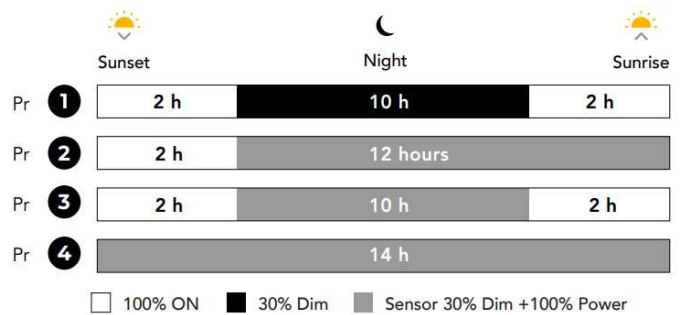
MOTION SENSOR MICROWAVE

Our Solar Post-Top comes with microwave motion sensors that detect pedestrians, cyclists and vehicles. The light level increases as they pass to ensure safety and security while respecting the environment



OPERATION MODE & LIGHTING SCHEDULE

In addition to automatic switching on and off, you have the possibility of choosing among different modular operating modes according to the needs of the project.



CONTACT US FOR MORE PROGRAM OPTIONS

EASY INSTALLATION NO CABLING NO TRENCHING

No cabling or teaching is required, Easy to install.
Insert on pole and switch ON.



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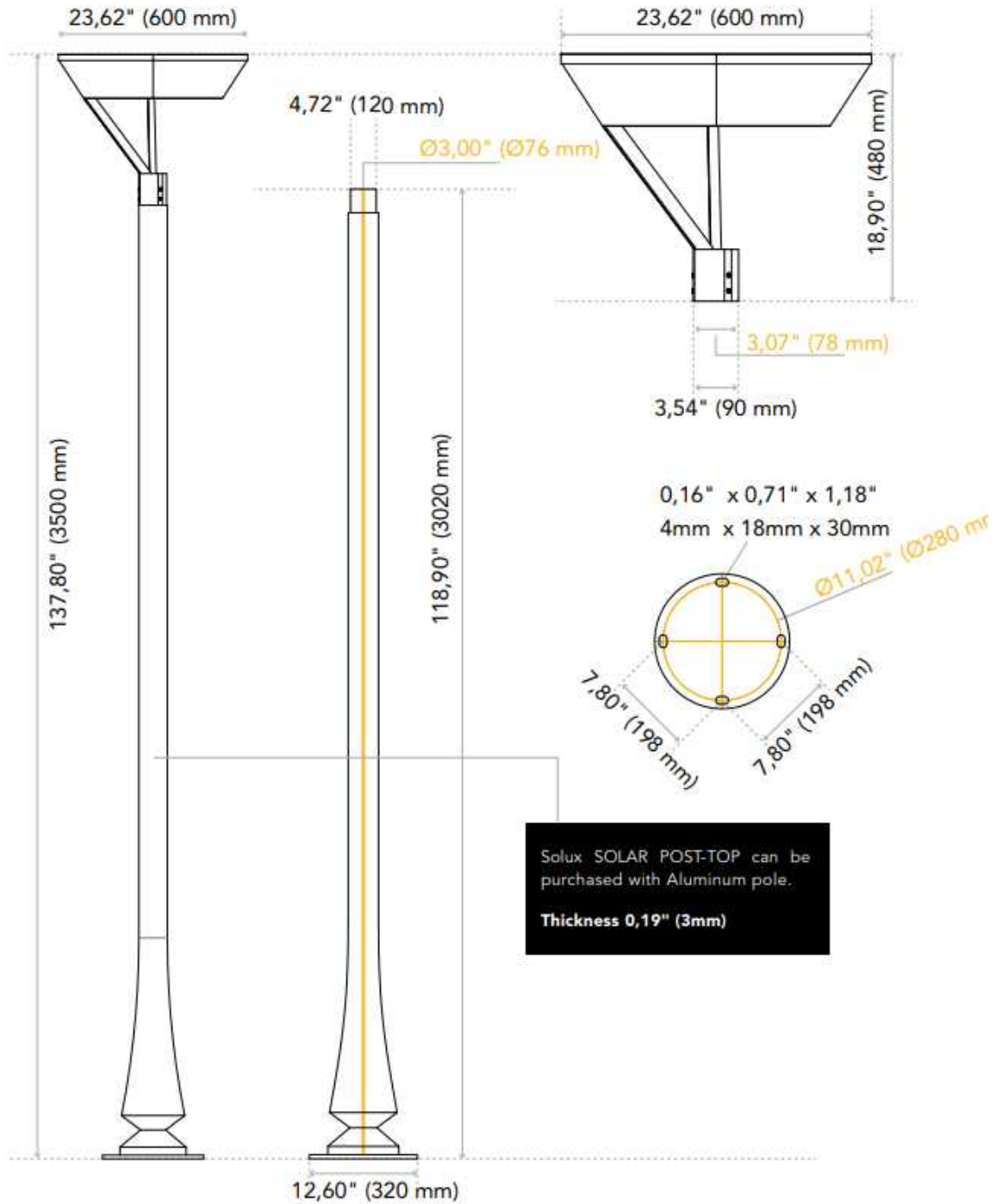
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DIMENSIONS *



* All dimensions are in mm

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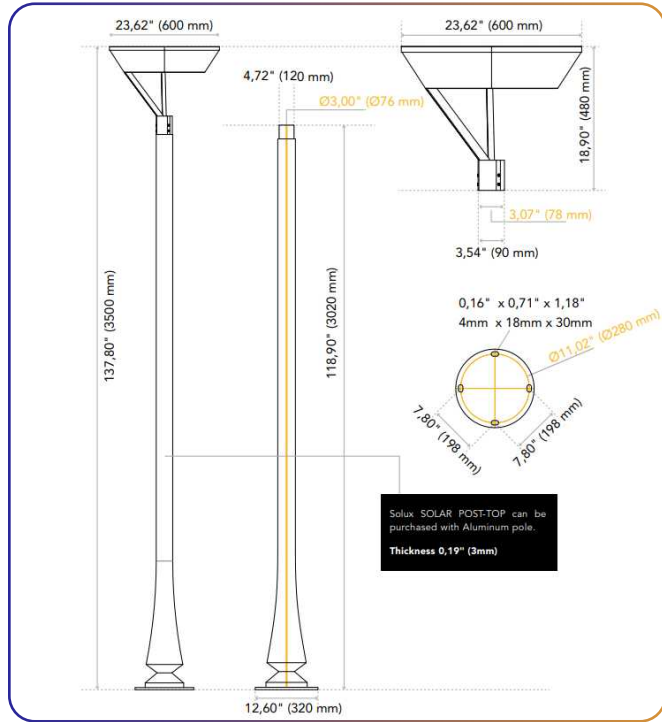


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HOW TO ORDER:

CODE:

Example:
CODE: PL-010-BL-30K

PL-010-BL-30K

DIMENSIONS:

D 23.62" x H 18.50" (D 60 cm x H 47 cm)

2 FINISH OPTIONS:

-BL

-BL Black

3 CCT:

-23K 2300K
-30K 3000K
-40K 4000K
-50K 5000K
-65K 6500K

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