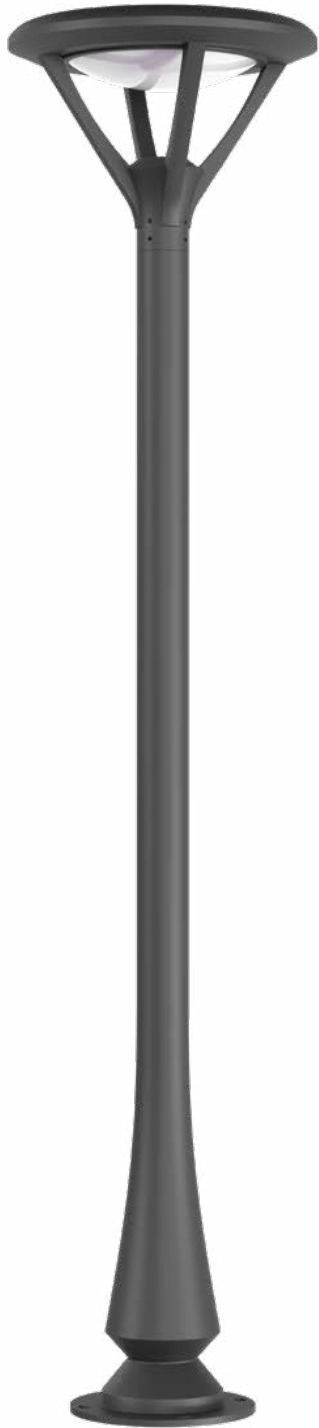


TIRAS

SOLAR POST-TOP



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, Solux Solar Post- Tops feature high-performing LEDs fueled by Solar energy.

NOMINAL FLUX **2744 LUMENS**
NOMINAL POWER **14 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 98,43" to 196,85" (From 2.5 to 5) Meters**

BATTERY

Technology **Lithium Iron Phosphate LIFEPO4**
Capacity **256 Wh**
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 **33 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 21,06" x 15,35"(D 535 mm x H 390mm)**
Carton size **22,83" x 22,83" x 17,00" (580mm x 580mm x 430mm)**
Net Weight **16,10 lb(7.3 KG)**
Gross Weight **21,61 lb(9.8 KG)**
Qty /Ctn 20"/40" **135/300**
Product code **PL-009**

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



Parks & Gardens



Places



Car Parks & Rest Areas



Pathways



Campsites

CERTIFICATIONS

IEC / TUV / EMC / LM-79- 08 and LM-80 test standards / IK8 / IP65 / CE / ULOR



*** Solux 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 Solux instructions. Fixture suitable for ambient temperature from -10° to 50°. PV Panels - 20 year performance warranty Controller & Batteries : 5 years





BULLARD
SOLAR
POWERED BY
SOLUX

LUMINAIRE HOUSING & LEDS

2744 LUMENS - 2300 TO 6500 K

High pressure die-cast low-copper aluminum. **Protection class (IP65)**. Solux 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%**.

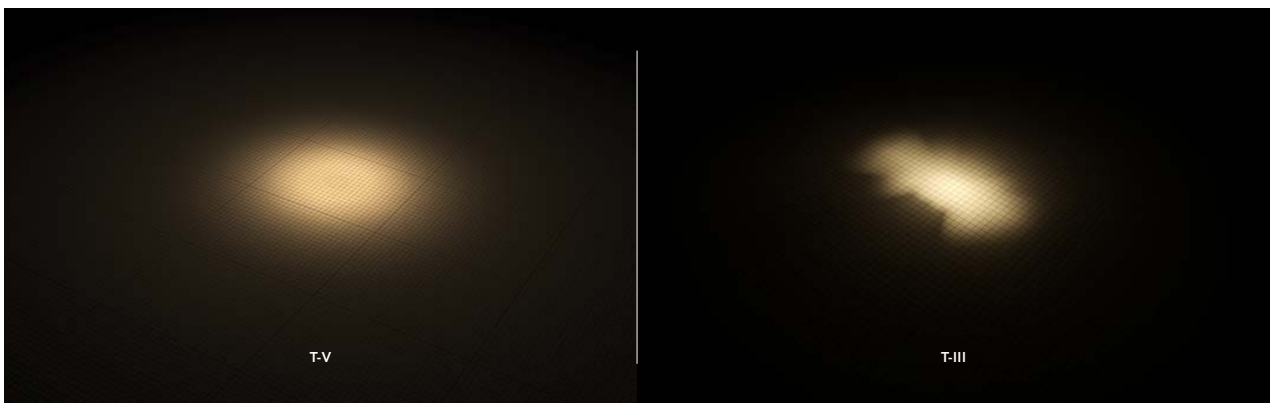


IP65

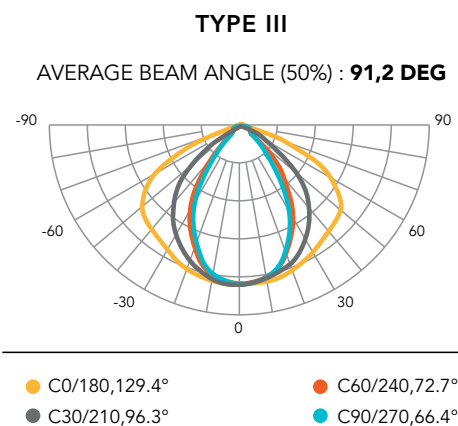
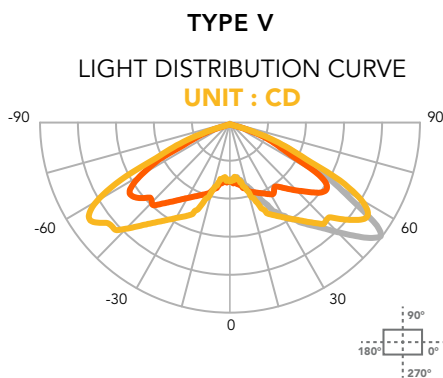
LUXEON
BY PHILIPS LUMILEDS

DIFFERENT OPTICS*

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



LIGHT DISTRIBUTION CURVES





BATTERY LIFEPO4

+ OVER 10 YEARS LIFETIME

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

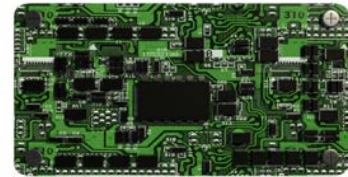
14°F to 158°F (-40 °F OPTIONAL)
-10 °C TO 70 °C (-40 °C OPTIONAL)



When Standard Lithium LiFePo4 batteries enjoy a working temperature range from **14°F to 158°F (-10°C TO 70 °C)**. Solux **offers as optional** a new Special LIFEPO4 battery with working range of **-40°F to 158°F (-40 °C. to 70 °C)**.

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



Lead Acid
200



NimH
700



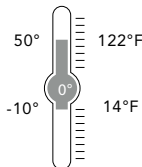
Lithium ION
800



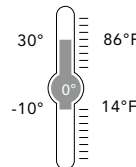
Lithium LifePO4
3 000

CHARGING TEMPERATURE RANGE WITHOUT CAPACITY LOSS

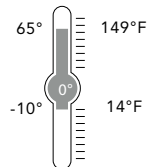
Minimum & Maximum temperature range for Optimal charging during the day



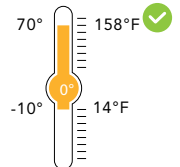
Lead Acid



NimH



Lithium ION



Lithium LifePO4





BULLARD
SOLAR
POWERED BY
SOLUX

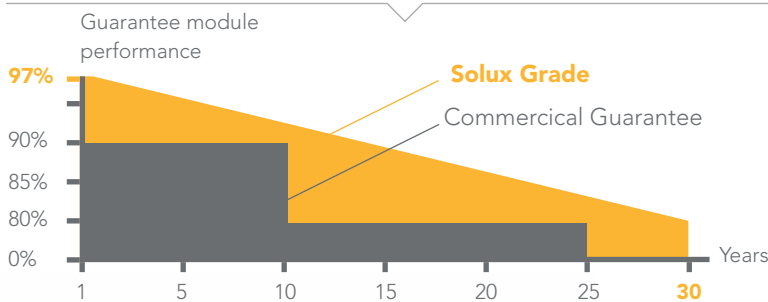
SOLAR PANEL

33 WATTS

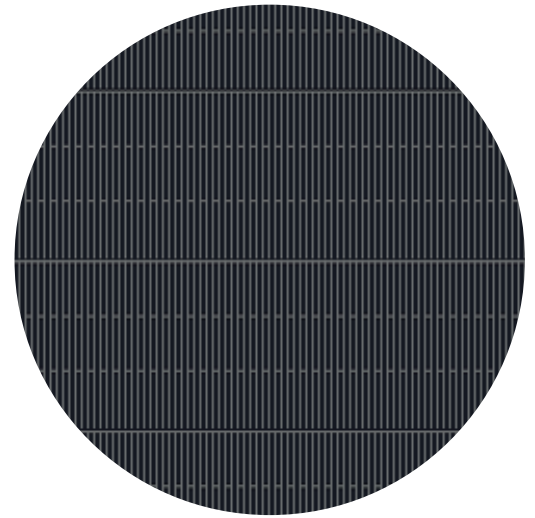
High efficiency mono-crystalline **Solar panels**. Carefully selected **Grade A** Solar cells. Up to 20.4% efficiency, all protected by self-cleaning **tempered glass at 30 degrees** of inclination.

They are also equipped with fully **waterproof Plug and Play connectors** for easy maintenance.

OUR PV PERFORMANCE GUARANTEE



solar cells
GRADE A



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, **Solux 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

F E A T U R E S

- Minimal stand-by power consumption
- Current consumption $\leq 10\text{mA}$
- Intelligent battery management
3 Phases charging :
 - Charge MPPT
 - 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
 - OVERCURRENT
 - OVERTEMPERATURE
 - OVERVOLTAGE / OVERLOAD
 - OVERDISCHARGE

TIRAS - SOLAR POST TOP - URBAN LIGHTING - DATA SHEET / Page 4 of 7

sales@gordonbullard.com
www.bullardbollards.com
1-877-964-4646

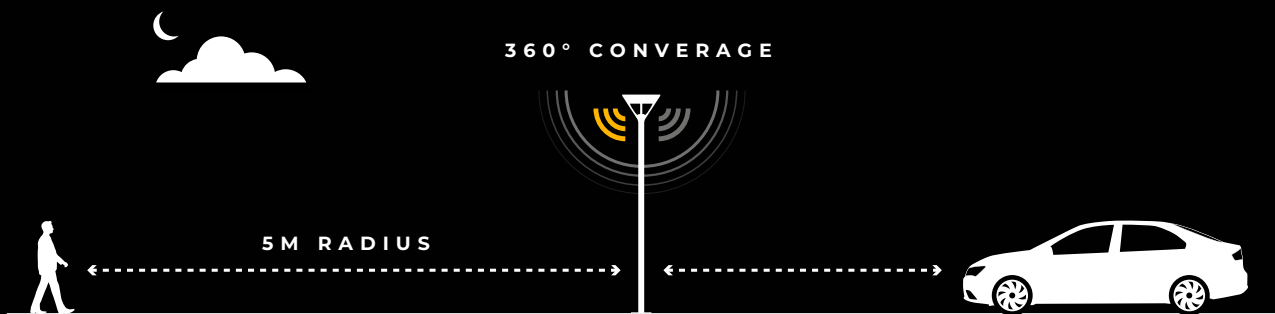


991 South Gull Lake Dr
Richland, MI 49083
USA

MOTION SENSOR MICROWAVE

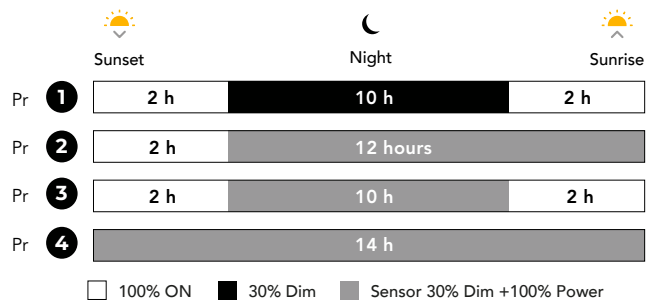
Our Solar Post-Top comes with microwave motion sensors that detect pedestrians, cyclists and vehicles.

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.



TIRAS - SOLAR POST TOP - URBAN LIGHTING - DATA SHEET / Page 5 of 7

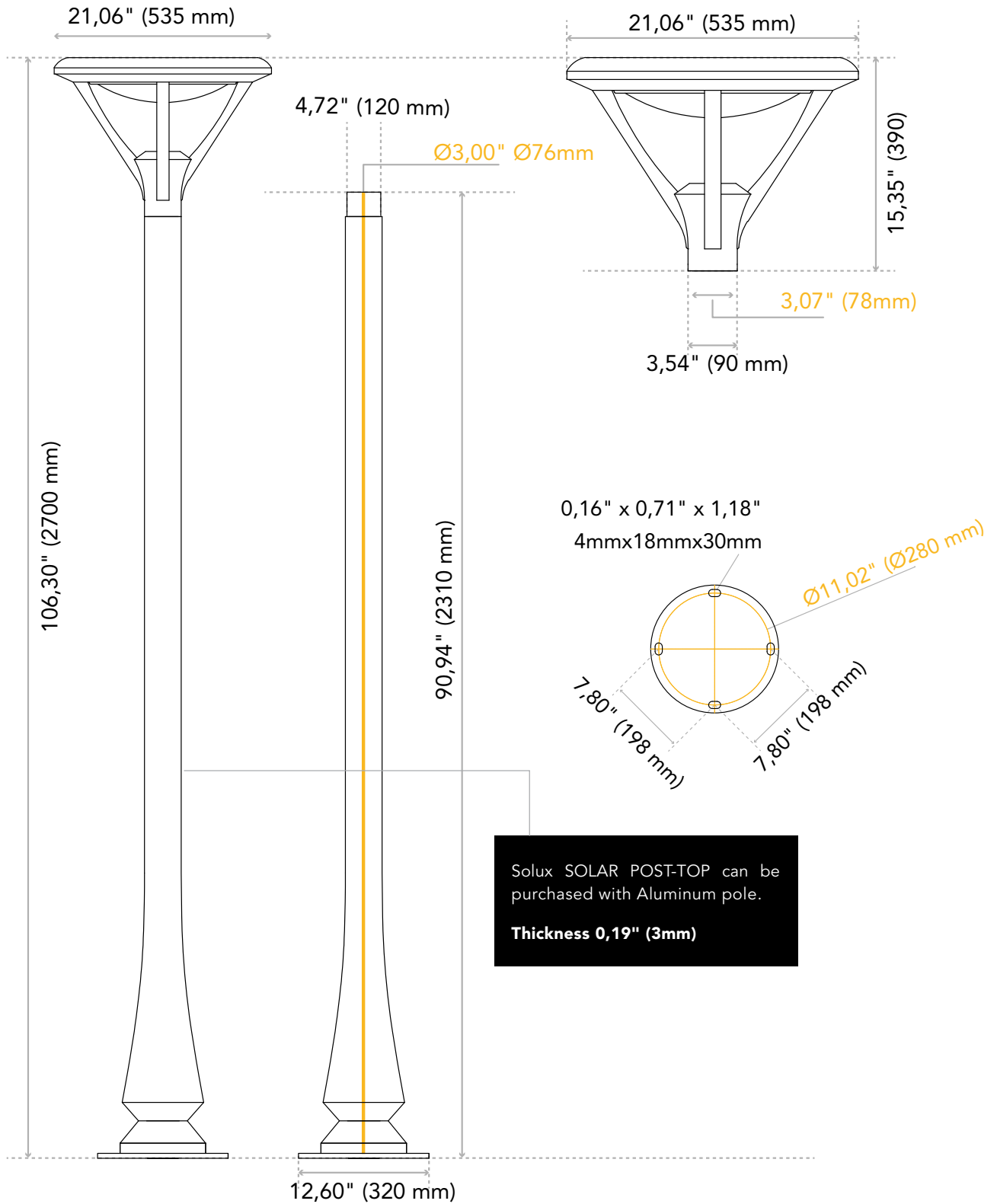
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991 South Gull Lake Dr
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USA



DIMENSIONS*



*All dimensions are in mm