

AOS PRO 20

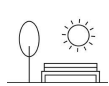
INTEGRATED SOLAR STREET LIGHT



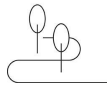
AOS PRO 20

**Designed to last
No matter the conditions**

AOS PRO is a fully integrated solar street luminaire designed for streets, parking areas, pathways, and other large outdoor spaces. Its solar panel, LED module, battery, controller, and motion sensor are combined within a single unit for simple installation and reliable operation. The series includes seven models: AOS PRO 20, 30, 40, 60, 80, 100, and 120, delivering outputs from 3,920 to 23,520 lumens. Its durable aluminum and steel construction is rated IP65 and IK08, while multiple CCT options allow the illumination to suit different environments. With efficient LED technology, intelligent controls, and no connection to the electrical grid required, AOS PRO provides a practical and sustainable area-lighting solution.



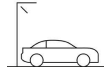
Park & Garden



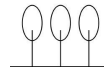
Hiking Trails



Places



Car Park & Rest



Pathways



Campsites



AOS PRO 20

FIXTURE TYPE: _____

PROJECT NAME: _____



5
YEARS

* Bullard Solar offers a 5 Year Limited Warranty for the AOSPRO-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



Due to the dynamic nature of lighting products and the associated technologies, luminaire data on all specification sheets is subject to change at the discretion of Gordon Bullard LLC and associated companies.

NOMINAL FLUX 3920 LUMENS
NOMINAL POWER 20 WATTS

GENERAL INFORMATION:

AOSPRO is a fully integrated solar street light system with all the components together in one single unit. The AOSPRO series is extremely simple to install and operate, making it the ultimate solution for area lighting with motion sensors.

LIGHTING:

Efficiency 196 Lumens/Watts
Chips LED PHILIPS Luxeon 30-30 / 2300K to 6500K
LED lifetime Over 80 000 hours LM80
Optics/CCT TII-S / 2300 to 6500K
Light Height From 3 to 4 meters (118.11" - 157.48")

BATTERY

Technology Lithium Iron Phosphate LIFEPO4
Capacity 230 Wh
Autonomy Over 24 hours at full charge - 4 Rainy Days back up
Charging time 5-6 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 60 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 (Bullard Solar BRIDGE optional)
Sensor Microwave 360° Motion Sensor
Cabling Waterproof Connector, Plug and Play
Protection Battery Management System (BMS)

MECHANICAL

Pole mounting 8.9cm - 7.6cm (3.50" x 3.00")
Material Aluminium and Stainless Steel

DIMENSIONS

Product 91 cm x 39.8 cm x 34.3 cm (35.83" x 15.67" x 13.50")
Carton size 98 cm x 46 cm x 26 cm (38.58" x 18.11" x 10.24")
Net Weight 11.5 KG (25.35 lb)
Gross Weight 15 KG (33.07 lb)
QTY /CTN 20"/40"..... 240/505

CERTIFICATIONS

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

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HOW TO ORDER:

CODE:

Example:
CODE: BS-AOSPR20-SLX-BL-40K

BS-AOSPR20-
SLX-BL-40K

1 DIMENSIONS:

Length - L: 35.83" (91 cm)
Height - H: 13.50" (34.3 cm)
Width - W: 15.67" (39.8 cm)

2 FINISH OPTIONS:

-BL Black

3 CCT:

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

910 mm (35,83")

POLE
RECOMMENDED HEIGHT
3 TO 4 METERS

125 mm (4,92")

Ø 95mm
3,74"

INSERT ON POLE
89 mm Ø **

125mm (4,92")

910mm (35,83")

343mm (13,50")

195 mm (7,68")

98mm
3,86"

95mm
3,74"

398mm
15,67"

43mm
1,69"



LED



IP65



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LUMINAIRE HOUSING & LEDS

20 WATTS - 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%.

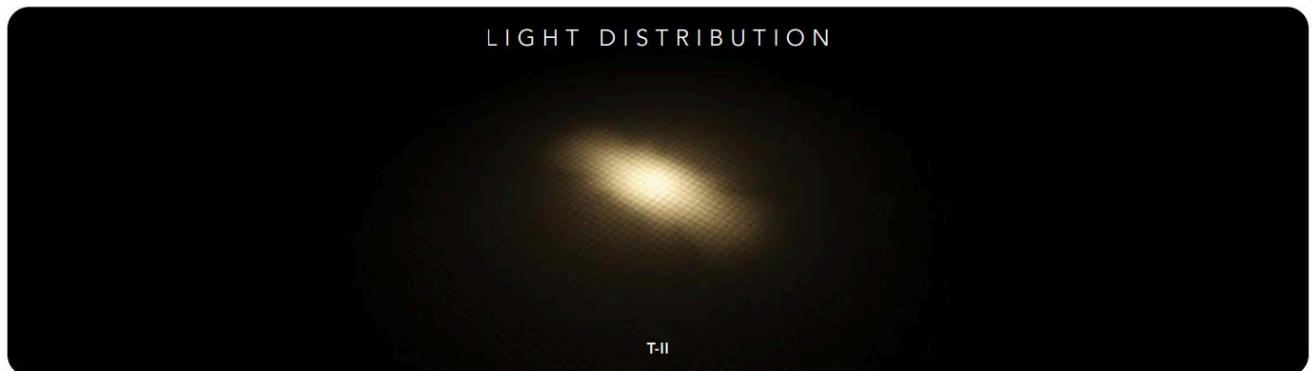
IP₆₅



LUXEON
BY PHILIPS LUMILEDS

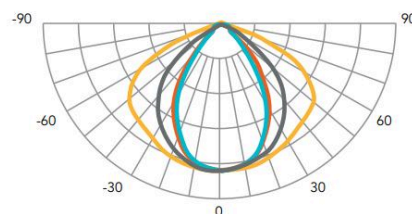
LED	3030	LED QTY (PCS)	40	LENS (PCS)	4	CRI	> 80
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LIGHT DISTRIBUTION



PHOTOMETRIC CURVE

AVERAGE BEAM ANGLE (50%) : **91,2 DEG**



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OVER 10 YEARS LIFESPAN

The AOSPRO 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.



LIFEPO4 BATTERY

EXTREME TEMPERATURE

14°F to 158°F (-10 °C to 70°C)

When Standard Lithium LiFePo4 batteries enjoy a working temperature range from 14°F to 158°F (-10°C TO 70 °C). Bullard Solar 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 in any situation.

THE BMS PROTECTS AGAINST
OVER/UNDER CURRENT • OVERLOAD • OVER/UNDER VOLTAGE
• OVER/UNDER CHARGE • TEMPERATURE MANAGEMENT

ALUMINUM WATERPROOF CASING & NATURAL AIRFLOW

High temperatures greatly negatively affect the battery's lifespan. This is why our batteries are encapsulated in an aluminum waterproof casing for a perfect heat dissipation. In addition to that, the casing enjoys a natural airflow which keeps the battery to ambient temperature.

COMPARISONS OF DIFFERENT BATTERY TECHNOLOGIES

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



Lead Acid
200



NimH
700

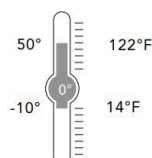


Lithium ION
800

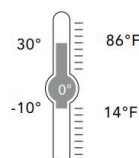


Lithium LifePO4
3 000

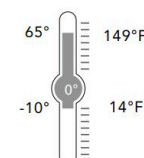
**CHARGING TEMPERATURE RANGE
WITHOUT CAPACITY LOSS**
*Minimum & Maximum temperature range for
Optimal charging during the day*



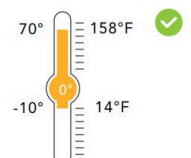
Lead Acid



NimH



Lithium ION



Lithium LifePO4



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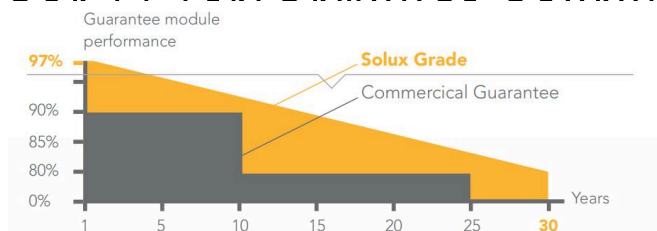
FIXTURE TYPE: _____

PROJECT NAME: _____

60 WATTS

High efficiency mono-crystalline Solar panels. Carefully selected Grade A Solar cells. Up to 19.4% efficiency. Its octagonal Anodized aluminium alloy frame gives it a modern and elegant design as well as perfect resistance to corrosion. They are also equipped with fully waterproof Plug and Play connectors.

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, 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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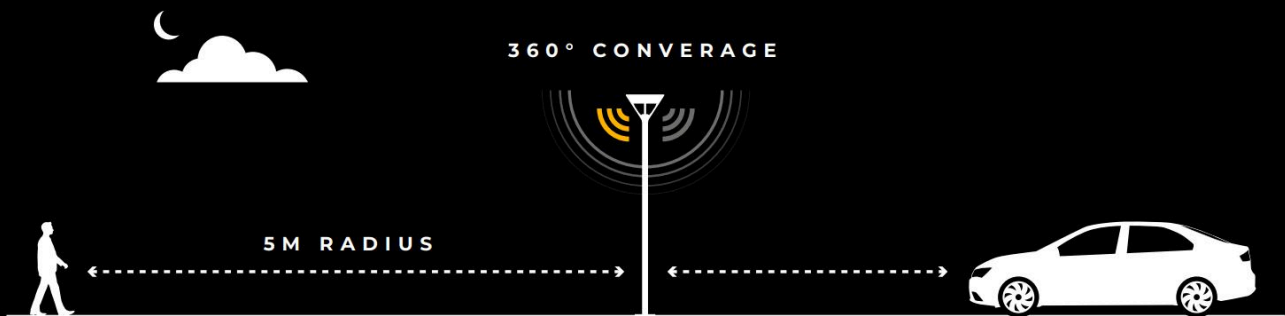
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Bullard Solar luminaires are equipped with microwave detectors that use the Doppler effect (like car radars) to detect a nearby objects and measure the distance. The sensor emits a high frequency wave to reflect off of and analyze the objects in the vicinity.

Since the microwaves only detect specific objects, detection reliability increases resulting in:

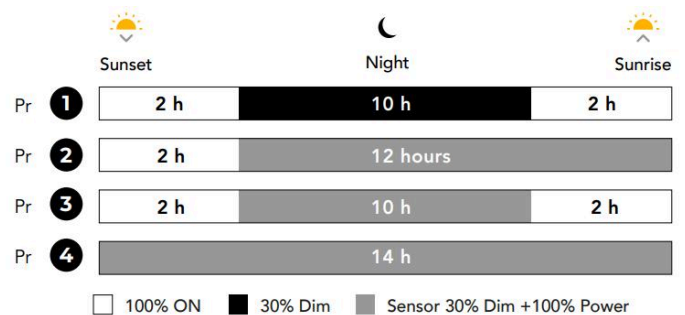
- Much better reliability compared to the Infrared detector
- Up to 360° Directivity
- Insensitivity to other environmental variations such as light, color, temperature, etc.

MOTION SENSOR MICROWAVE



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**



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EASY INSTALLATION

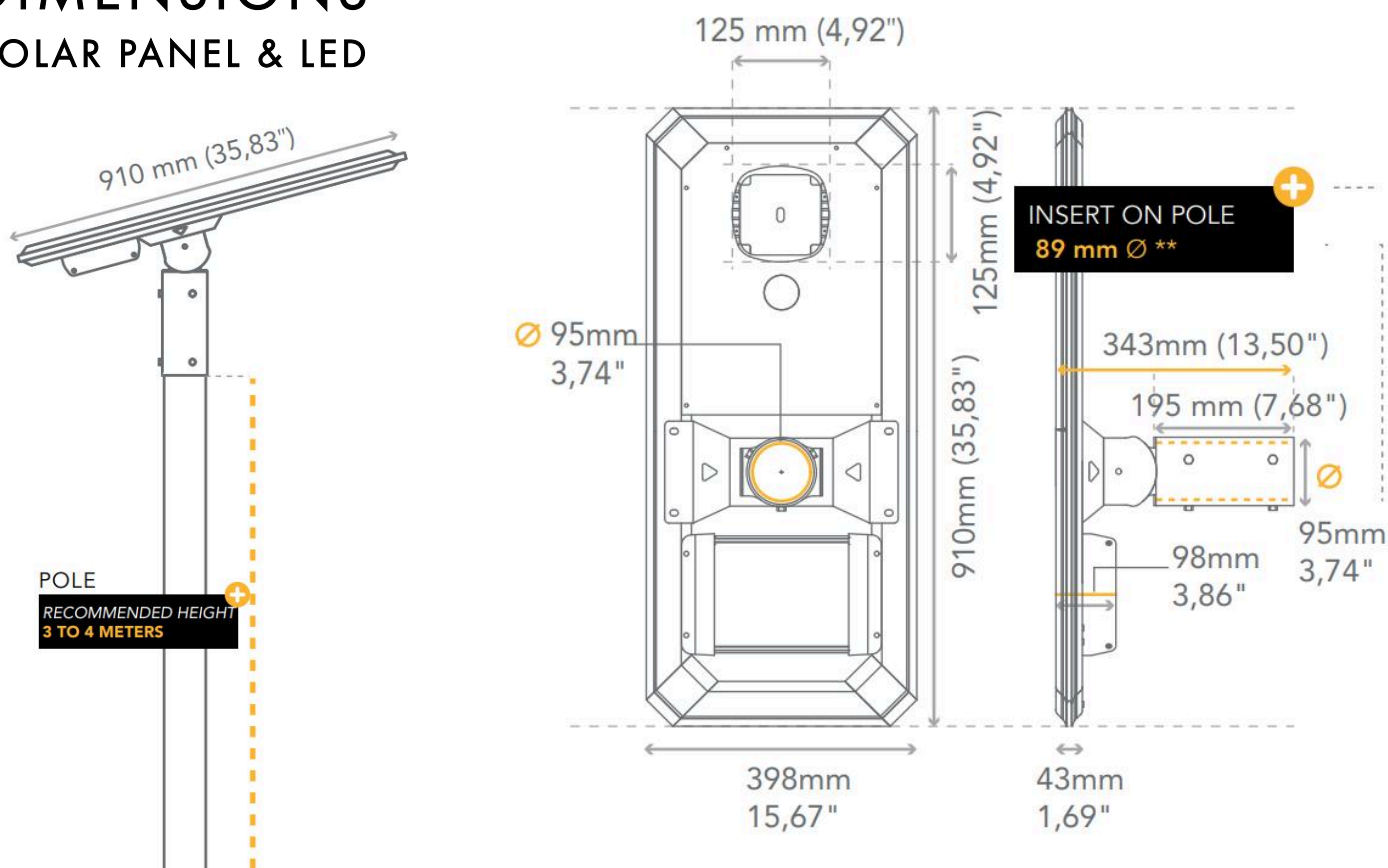
NO CABLING & NO TRENCHING

With a well designed bracket support AOSPRO is effortless and flexible to install.

INSERT, ORIENTATE & CHOOSE YOUR TILT

DIMENSIONS*

SOLAR PANEL & LED



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