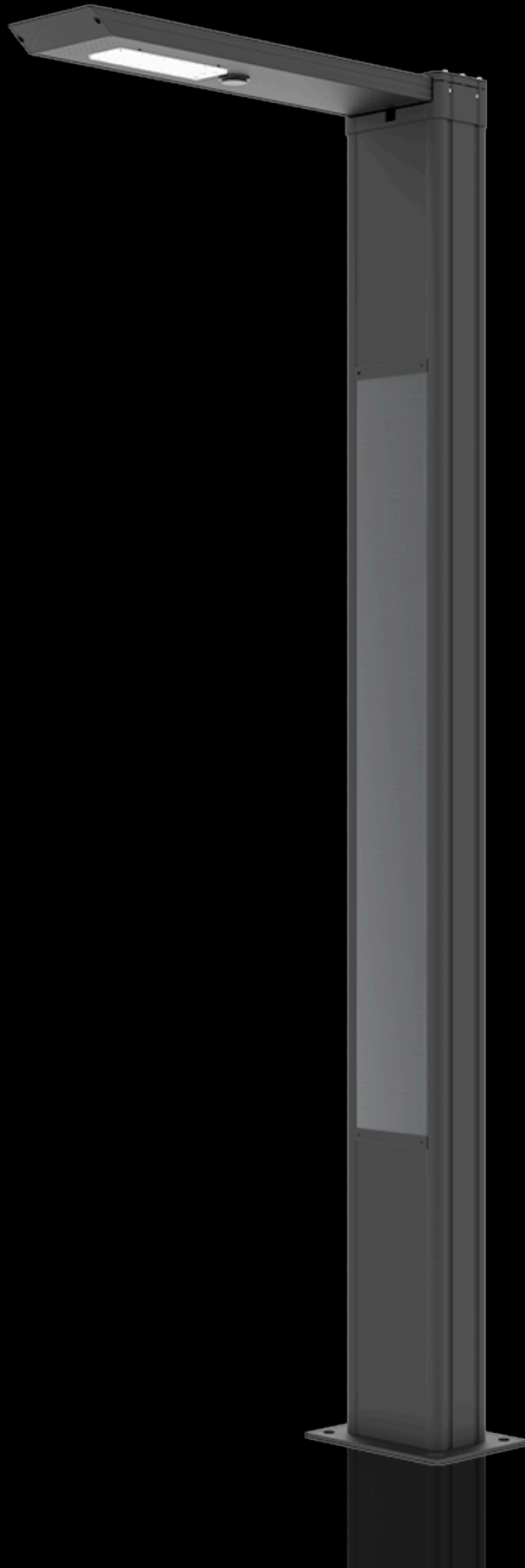




**BULLARD
SOLAR**
One with the Sun

TOTEM + 20 SOLAR STREET LIGHT COLUMN





**BULLARD
SOLAR**
One with the Sun

CODE:
BS-TT20-SLX

FIXTURE TYPE: _____

PROJECT NAME: _____

Sleek and efficient from every angle

Totem (+) redefines solar lighting with a sleek, modern design. Unlike traditional streetlights with bulky top panels, its integrated solar panels remains discreet while ensuring maximum efficiency. Its innovative luminaire provides powerful illumination while optimizing energy capture and autonomy, even in low-light conditions. Available in single or double-headed versions, it can be adapted to both urban and street applications, with quick installation.



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

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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.

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Updated 07/09/2024



FIXTURE TYPE: _____

PROJECT NAME: _____



CERTIFICATIONS

**IEC / TUV / EMC /
LM-80 TEST STANDARDS /
IK08 / IP66 / CE / ULOR /
UKCA / LVD**

**5
YEARS**

*Bullard Solar offers a 5 Years Limited Warranty for the Totem (+) 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 70°. PV Panels - 25 year performance warranty Controller & Batteries: 5 years

NOMINAL FLUX 3920 Lumens
NOMINAL POWER 20 Watts

LIGHTING

Efficiency 196 Lumens/Watts
Led PHILIPS Luxeon 30-30
Lifetime Over 100.000 Hrs - LM80
Optics/CCT T1 / TII / TIII / T-IV / T-V / T10 / T35 - 2300 to 6500K
Light Height 2.7 m

BATTERY

Technology Lithium Iron Phosphate LIFEPO4
Capacity 346 Wh
Autonomy Over 24 hours at full charge 4 Rainy Days back up
Charging time 6-7 Hours
Lifespan Over 8000 CYCLES - 30% DOD / Over 10y lifetime
Working temp -10°C to 70 °C (optional -40°C TO 70°C)

ENERGY

Solar panel Vertical 115 Watts / 18V
Solar panel Horizontal 33 Watts / 18V
Cells type Monocrystalline Panel Grade A 25 years
Certificate IEC 61215 - IEC 61730 I and II - IEC 60904

ELECTRONIC

Controller MPPT Controller, (Bullard Solar Bridge Optional)
Sensor Microwave 360° Sensor
Cabling Waterproof Connector, (Plug and Play)
Protection Battery Management System (BMS)

MECHANICAL

Wind speed 160km/h
Material Aluminium and Stainless Steel

DIMENSIONS

Product 106.30" (270 cm) x 12.20" (31 cm) x 14.57" (37 cm)
Carton size 108.27" (275 cm) x 13.00" (33 cm) x 11.02" (28 cm)
Net Weight 38 KG (49,60 lb)
Gross Weight 40 KG (60,53 lb)

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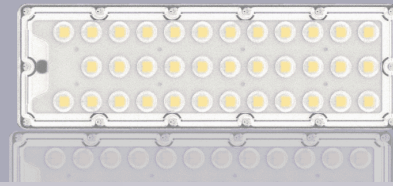
FIXTURE TYPE: _____

PROJECT NAME: _____

LUMINAIRES & LEDS
3920 Lumens - 2300 to 6500 K

The innovative luminaire features an integrated solar panel, while its versatile optics offer adaptable lighting solutions. Constructed from extruded low-copper aluminum with IP66 protection, it guarantees durability. Its AKZO NOBEL Polyester Powder coating enhances resistance to salt, humidity, and UV exposure, ensuring long-lasting performance.

Fitted with PHILIPS LUXEON HE PLUS high-efficiency chips, this luminaire achieves an impressive 196 lumens per watt output. Totem (+) also complies with strict ULR (Upward Light Ratio) standards, effectively minimizing light pollution while delivering optimal illumination performance.



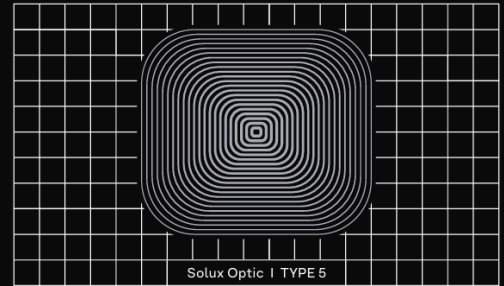
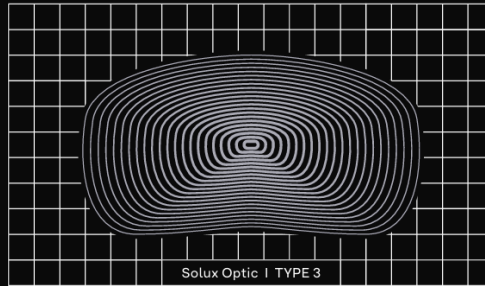
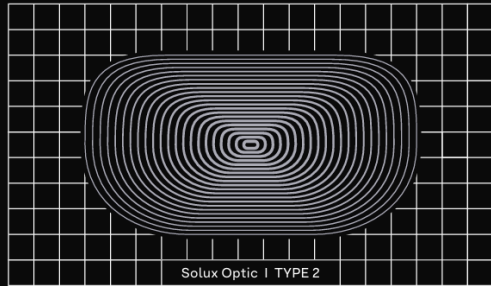
Led: 3030 | LedQ.(Pcs): 72 | Optics: 4 | CRI>70

LUXEON
BY PHILIPS LUMILED

DIFFERENTS OPTICS AVAILABLE

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

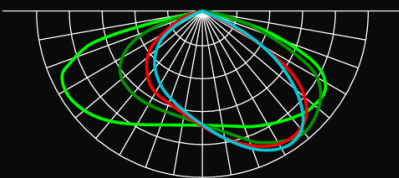
(please contact us for more optics)



LIGHT DISTRIBUTION CURVES

Solux Optic | TYPE 2

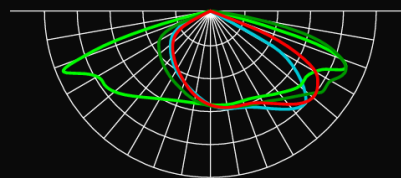
Average beam angle: 50% | 102.5 DEG



CO - 180,150.3 | C60 - 240,106.2
C30 - 210,142.5 | C90 - 270,91.6

Solux Optic | TYPE 3

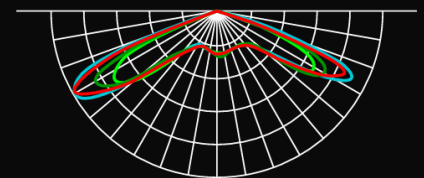
Average beam angle: 50% | 116.7 DEG



CO - 180,154.7 | C60 - 240,98.2
C30 - 210,115.6 | C90 - 270,98.4

Solux Optic | TYPE 5

Average beam angle: 50% | 147.5 DEG



CO - 180,145.4 | C60 - 240,149.0
C30 - 210,150.1 | C90 - 270,145.5

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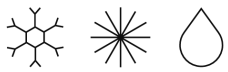
FIXTURE TYPE: _____

PROJECT NAME: _____

BATTERY LIFEPO4 Made to last

The TOTEM (+) 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 8000 Cycles @ 30% DOD, the battery enjoys lifespan of over 10 years.

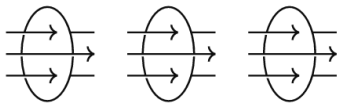


Extreme conditions ready
-10° to 70° (optional - 40°)


BMS System by Bullard Solar

Electronic battery management system

Our batteries are equipped with electronic circuit boards for a higher protection



Over & Under current - Overload
Over & Under Voltage - Over & Under Charge
Temperature management

DIRECT BATTERY ACCESS | ANTI THEFT SCREW 

13+y
LIFETIME

Aluminium
Box

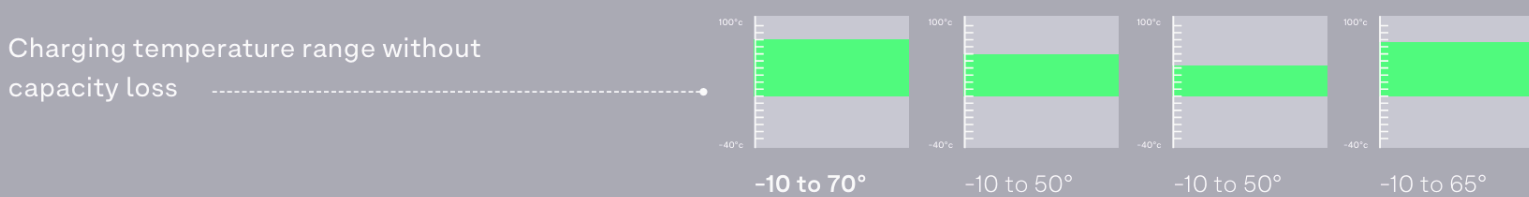


COMPARISON OF DIFFERENT BATTERY TECHNOLOGIES

Lifetime & cycles at 30% DOD



Charging temperature range without capacity loss



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FIXTURE TYPE: _____

PROJECT NAME: _____

MICROWAVE SENSOR

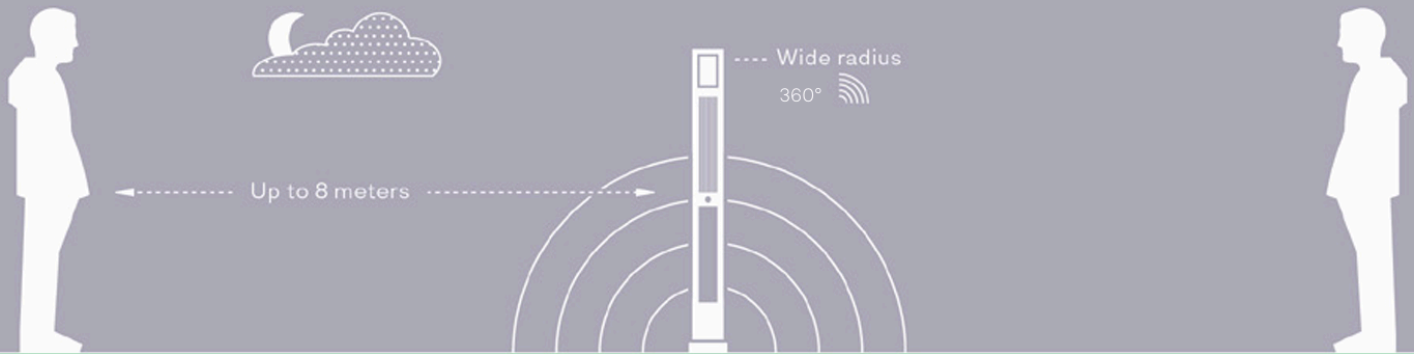
Light when you need

Motion sensor Microwave

The microwave detectors are directly integrated in the luminaires, which use the Doppler effect to detect and quantify the distance of adjacent objects, much like car radars do. In order to evaluate and reflect off of nearby objects, the sensor sends out a high frequency pulse.

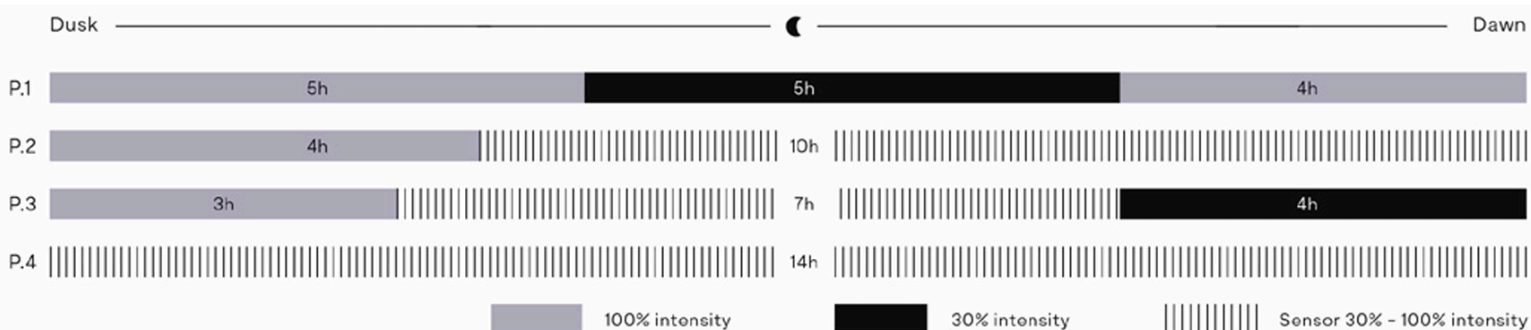
- Much better reliability compared to the Infrared detector
- Up to 360° Directivity
- Insensitivity to other environmental variations such as light, color, temperature, etc.

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



OPERATION MODE AND LIGHTING SCHEDULE

In addition to automatic switching on and off, you can choose from different modular operating modes to suit the specific needs of your project. So, whether your project demands part-night brightness, early evening lighting, or anything in between, our flexible lighting programs have you covered!



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FIXTURE TYPE: _____

PROJECT NAME: _____

HORIZONTAL & VERTICAL SOLAR PANEL

Invisible Solar Panels

Total Solar Panel: 148 W

For top-tier performance and a sleek design, Totem (+) features SHINGLED PERC photovoltaic technology, with solar panels integrated into both its structure and luminaire. This cutting-edge system ensures exceptional efficiency, even in low-light conditions, while maximizing power output. With seamless integration and no visible connections, TOTEM+ blends effortlessly into any environment, ensuring both functionality and aesthetic appeal.

POWER LOSS DUE TO SHADING

Conventional panel

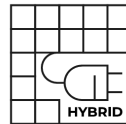


Shingled Perc



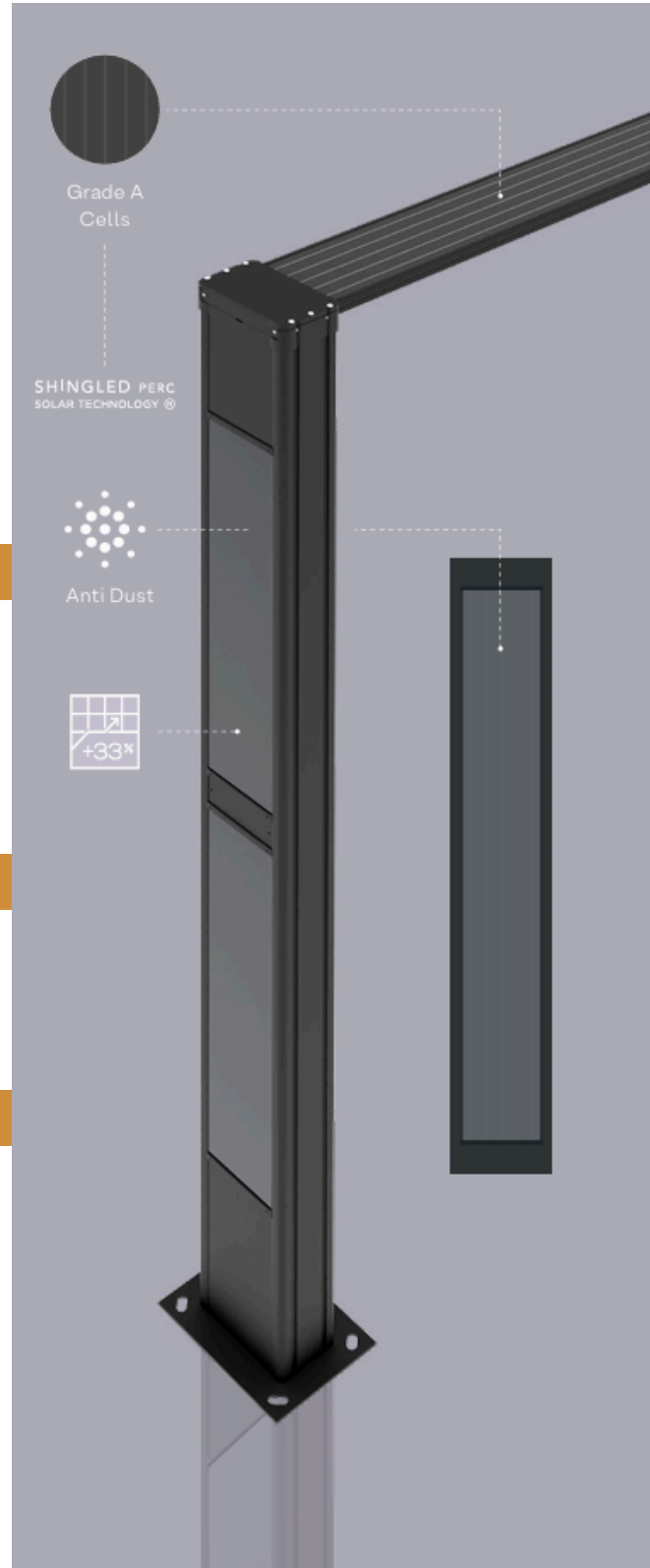
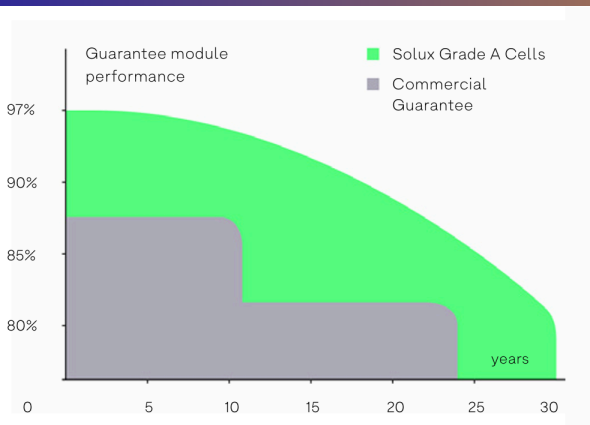
DISCRETION

With no visible connections or circuits, Totem (+) is fully integrated into its environment and most people will not notice the presence of solar panels.



Hybrid system

PV PERFORMANCE



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FIXTURE TYPE: _____

PROJECT NAME: _____

ELECTRONIC

Control & maintenance

Remote control



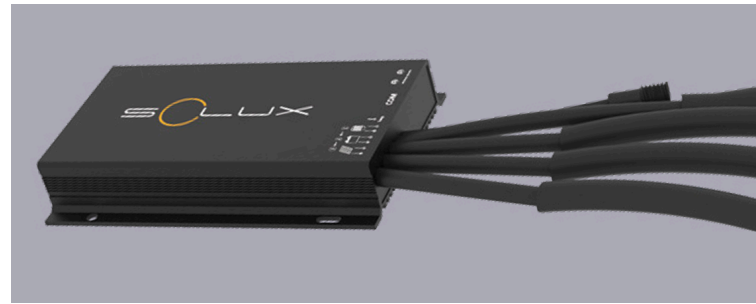
In order to facilitate all maintenance operations: (Bullard Solar exclusivity)

Real time diagnosis

+

Diagnosis of issue
State of charge
Production history
Temperature history

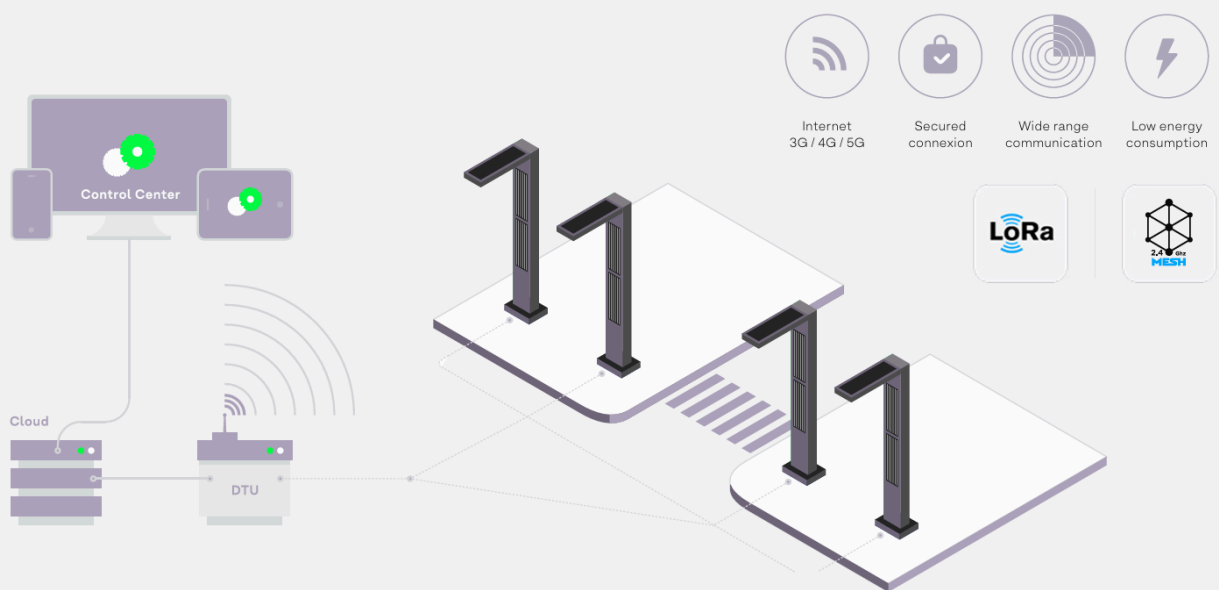
MPPT Controller



Waterproof connectors |
Performance & reliability
Up to 98% efficiency

BULLARD SOLAR BRIDGE REMOTE MONITORING (OPTIONAL)

As part of our continuous effort for development, Bullard Solar team is proud to have developed a special tool for remote monitoring of our solar street light. Bullard Solar Bridge uses low frequency technology LORA or 2,4 Mesh to monitor in real time a batch of solar street lights.



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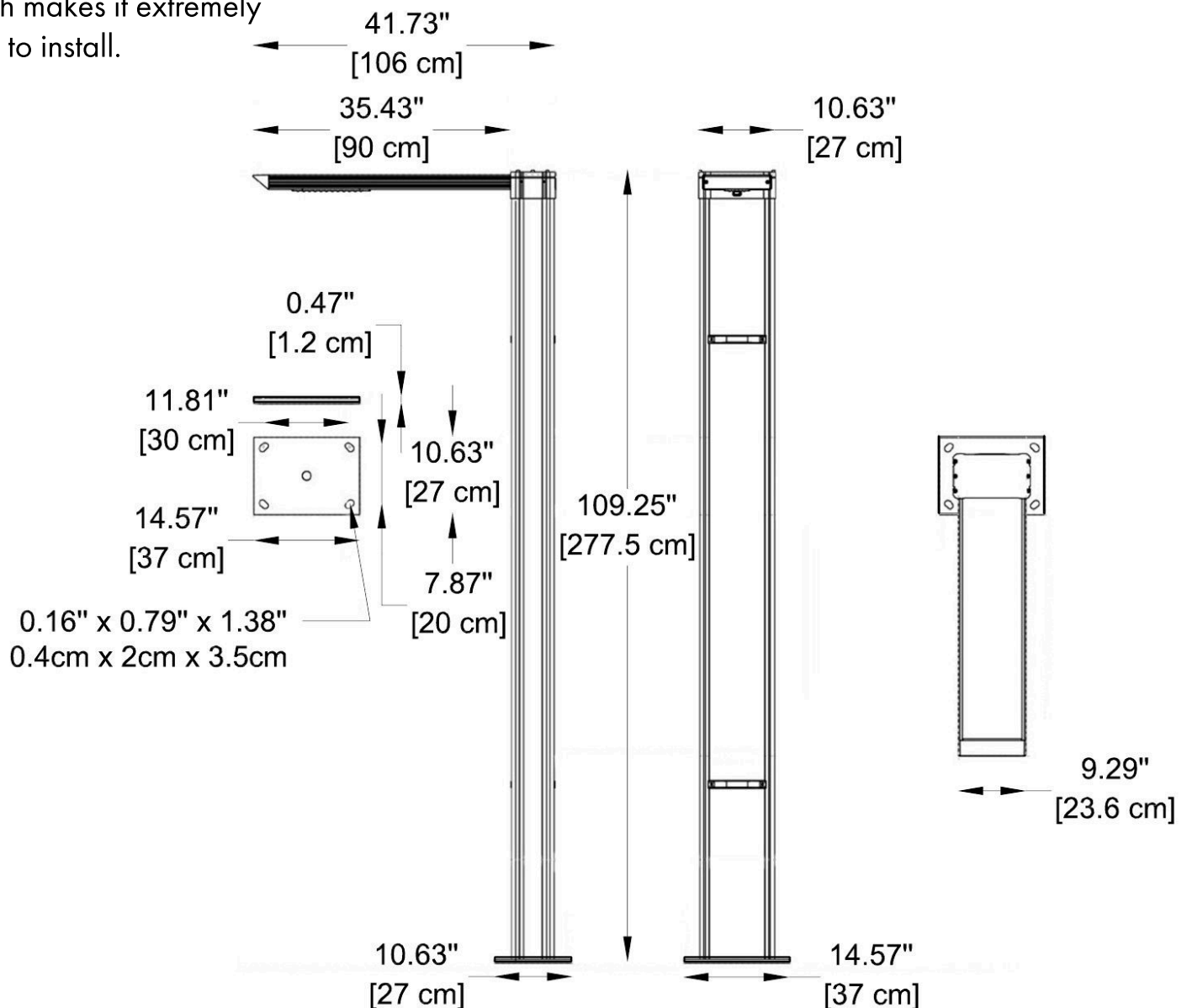
FIXTURE TYPE: _____
PROJECT NAME: _____

Technical drawing Model I 20

Product Dimensions

Easy installation | No cabling - No tranching

Totem (+) is a pole itself, delivered in a single piece which makes it extremely easy to install.



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FIXTURE TYPE: _____

PROJECT NAME: _____



HOW TO ORDER: _____ **CODE:** _____

Example:
CODE: BS-TT20-SLX-30K

BS-TT20-SLX-30K

1 DIMENSIONS: _____

106.30" (270 cm) x 12.20" (31 cm) x 14.57" (37 cm)

3 CCT: _____

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

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