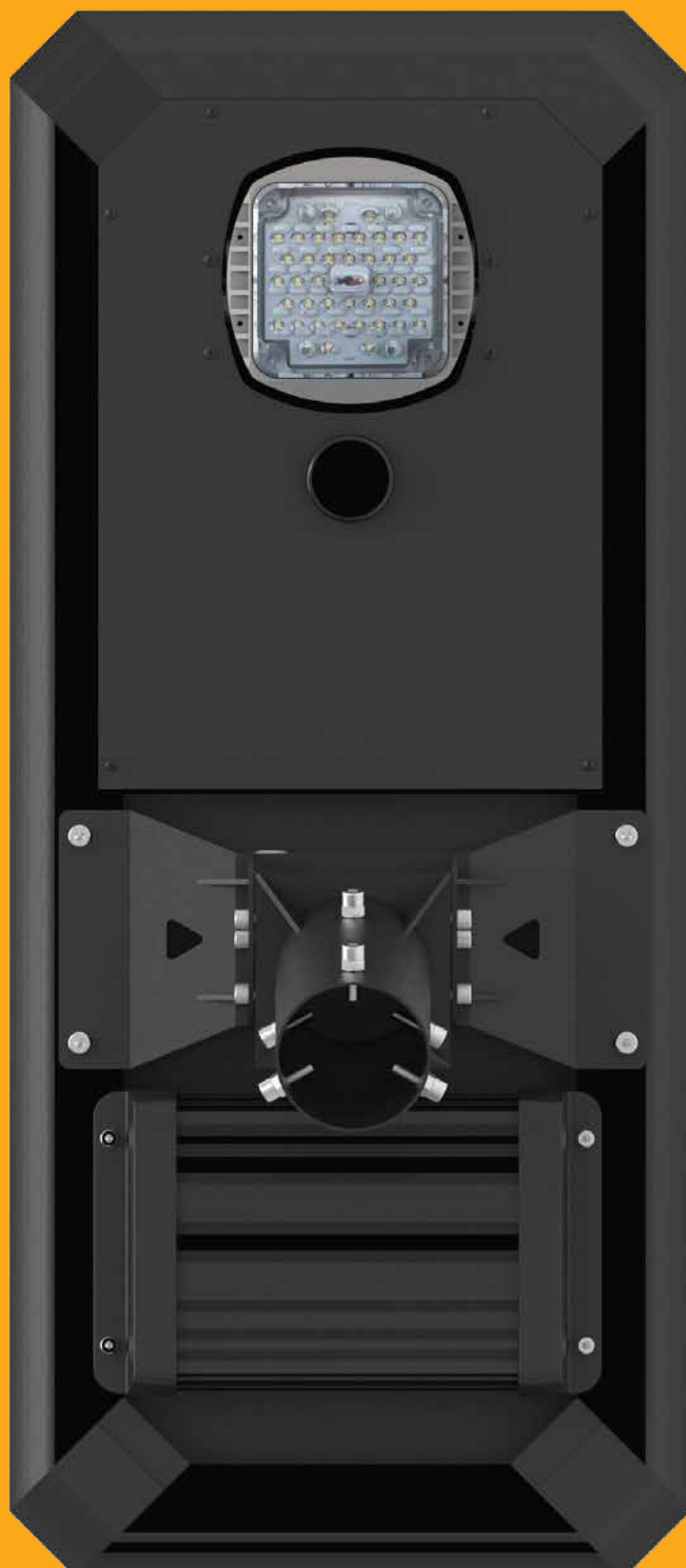


Integrated solar street light



Information  
and technical sheet

## Hello sun exposure,

VENUS-EV20 is an advanced solar street light system with all components integrated into a single unit. It features independently tiltable solar panels and LED modules, optimizing solar energy capture and road illumination.

Designed for simple installation and operation, this unit is an efficient solution for area lighting.

## Suitable for



Park & garden



Campsites



Places



Pedestrian



Pathway & Hike

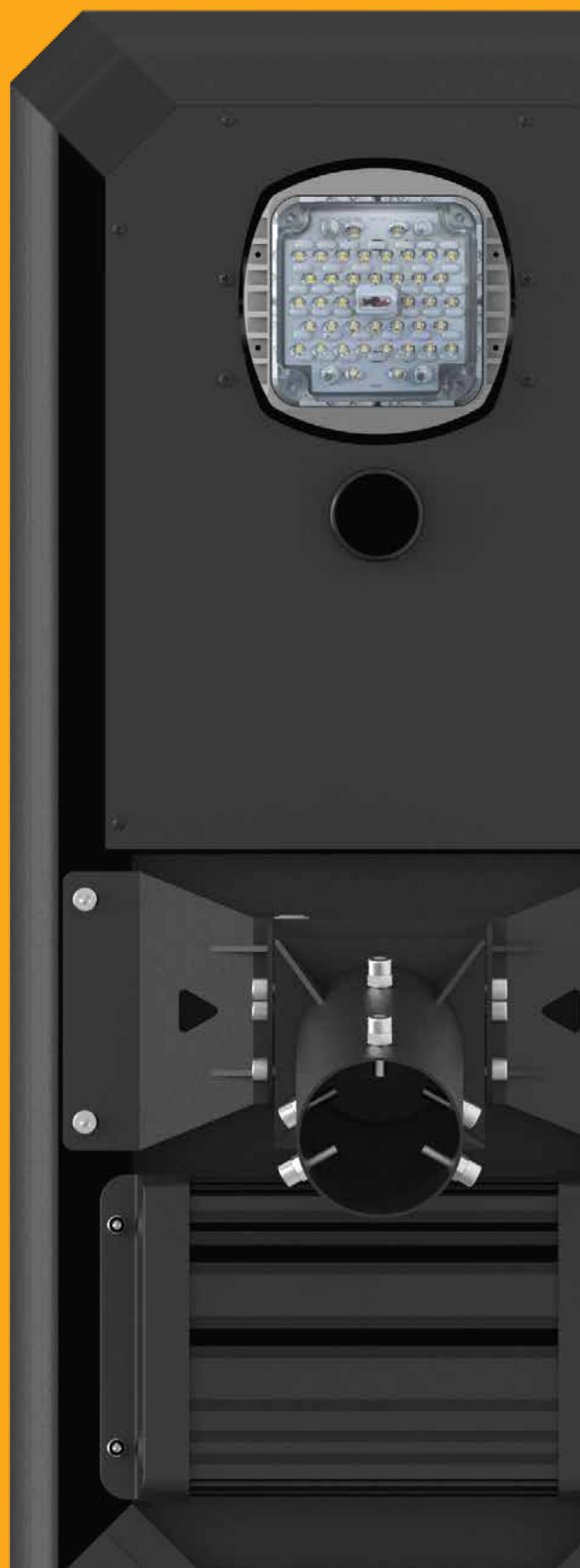


Main Roads



Small Roads

## Certified by



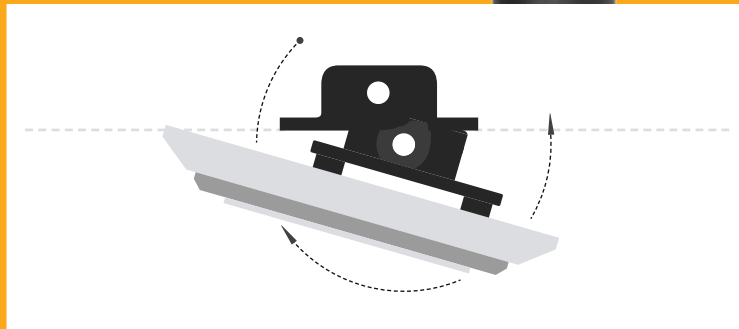
## In one word - Articulated

Recognizing the challenge where the ideal direction for street lighting does not always match the optimal orientation for solar panels, we've engineered a solution with **independently tiltable solar panels and LED modules**.

This innovative design ensures **maximum solar energy capture and targeted area illumination**, effectively addressing this common issue in All in one solution,



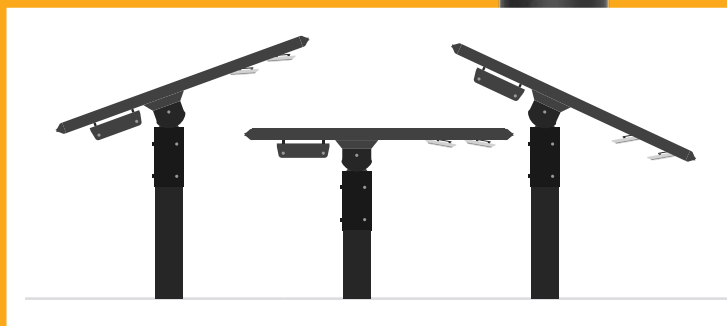
### Tiltable Module | Optimum lighting



Thanks to its smart construction, the led module can be easily tilted without tools to always face the road.



### Tiltable Solar panel | Optimum sun exposure



Tiltable solar panel - 9 positions for a exceptiona sun exposure.

100%  
charging

50%  
charging

Made with High pressure die-cast low-copper aluminum reaching **IP66 protection class**.

Our Led module is equipped with PHILIPS LUXEON HE PLUS High efficiency Chips -delivering an impressive **196 Lumens per Watt** efficacy.

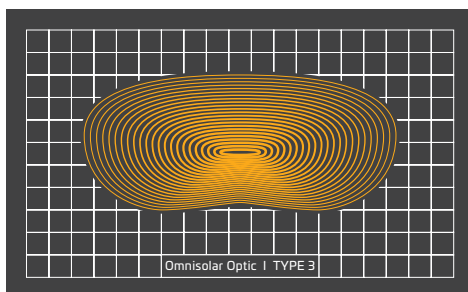
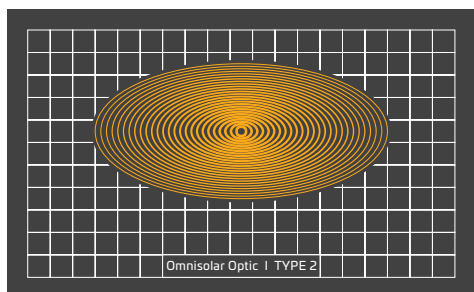
Furthermore, the luminaire adheres to **DARK SKY** requirements for light pollution, ensuring minimal upward lighting at just 0.31%.



- **Led : 3030 | Led Q. (Pcs) : 1 x 40 | Optics: 4 | CRI > 80**

## Different Optics available

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



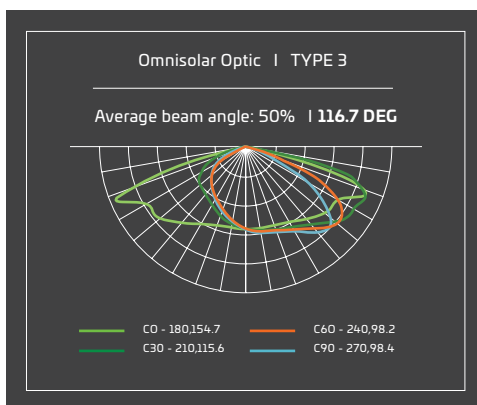
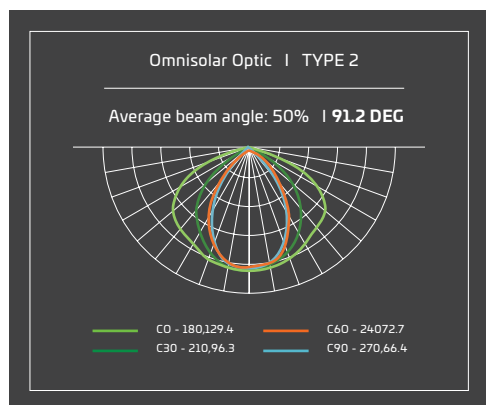
(Please contact us for more Optics)

Powered  
& certified by

**LUXEON**  
BY PHILIPS LUMILED



## Light distribution curves



Contact us for a tailor  
made light study



Aluminium waterproof casing &  
Natural Airflow

The **VENUS-EV20** 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 5000 Cycles @ 50% DOD**, the battery enjoys over 10 years lifetime.

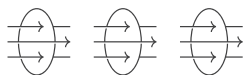


**Extreme conditions ready**  
-10° to 70° ( optional - 40° )

### BMS System by Omnisolar

#### Electronic battery management system

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



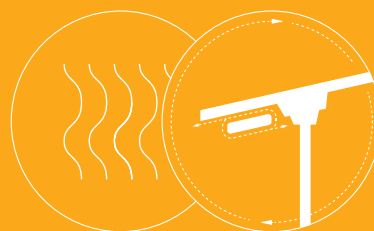
Over & Under current - Overload  
Over & Under Voltage - Over & Under Charge  
Temperature management

- Direct battery access | Anti theft Screw 

**13+y**  
LIFETIME

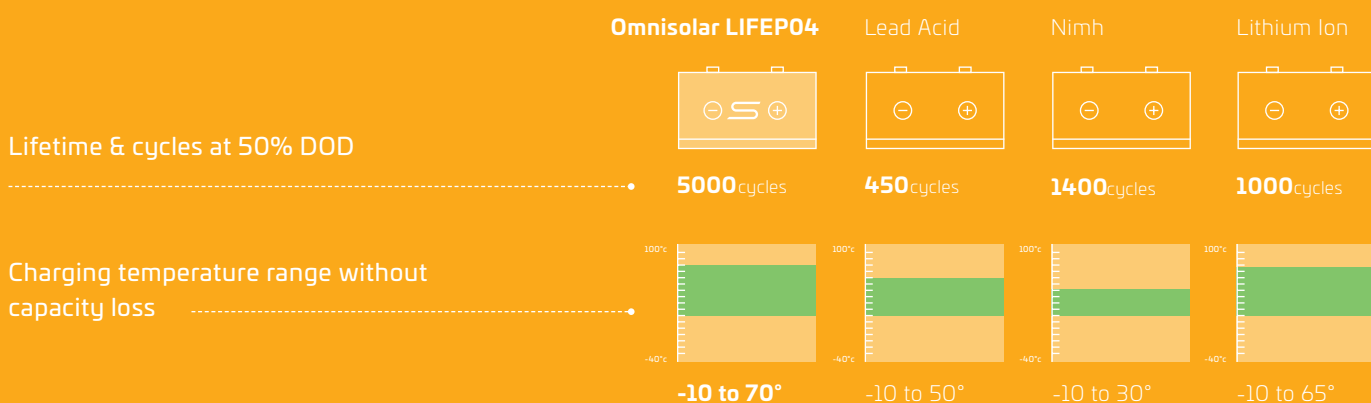
High temperatures greatly negatively affect the battery's lifespan. This is why our batteries are encapsulated in an aluminum waterproof casing for a perfect heat dissipation.

In addition to that, the casing enjoys a natural airflow which keeps the battery to ambient temperature.



Natural Airflow  
design  
Lithium Life.P04  
battery

### Comparison of different battery technologies



High efficiency TOPCON mono-crystalline Solar panels. Carefully selected **Grade A** Solar cells. Up to 25,5% 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.

## Remote control



In order to facilitate all maintenance operations: (Omnisolar exclusivity)

- Real time diagnosis
- +
- Diagnosis of issue
- State of charge
- Production history
- Temperature history

## MPPT Controller



**Waterproof connectors | Performance & reliability | Up to 98% efficiency**

Switch to grid connectivity when needed with our Hybrid AC/DC MPPT Controller and MEAN WELL Driver.

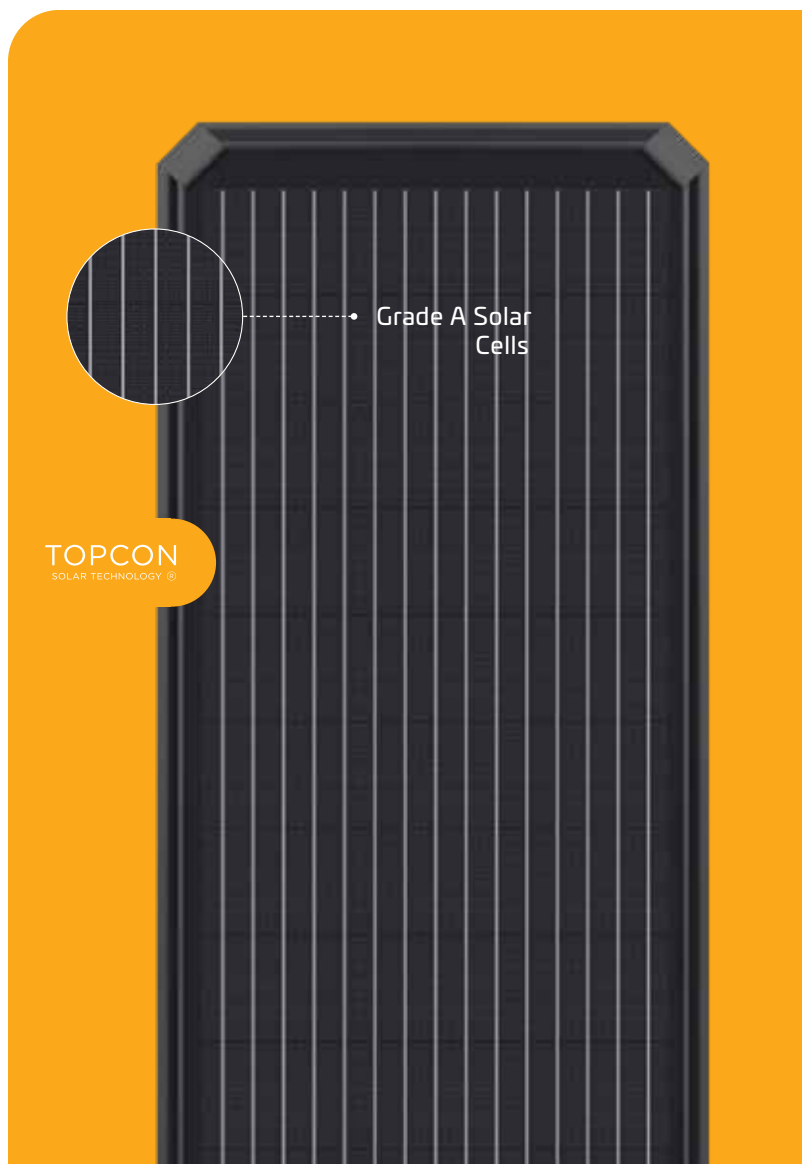
Available as an option



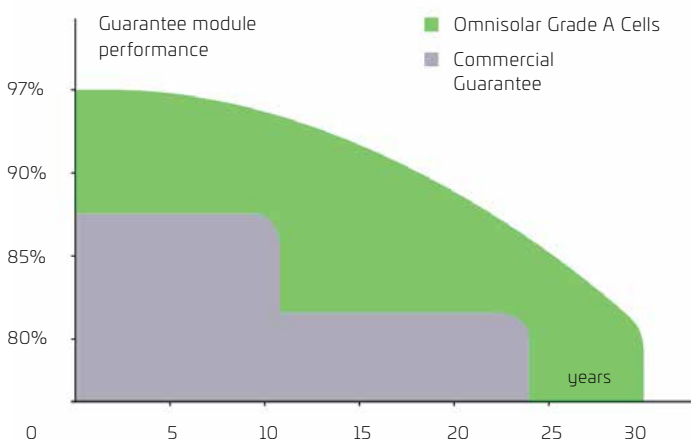
Hybrid system

## Topcon Monocrystalline solar panel

Anodized aluminium frame for longevity



## PV Performance



## Microwave sensor

Omnisolar exclusive sensor

Omnisolar luminaires are equipped with microwave detectors that use the Doppler effect, just like car radars, to detect nearby objects and measure their distance. The sensor emits a high-frequency wave that reflects off objects, allowing for precise analysis.

Because these microwaves only detect specific objects, our sensors offer increased detection reliability, 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.

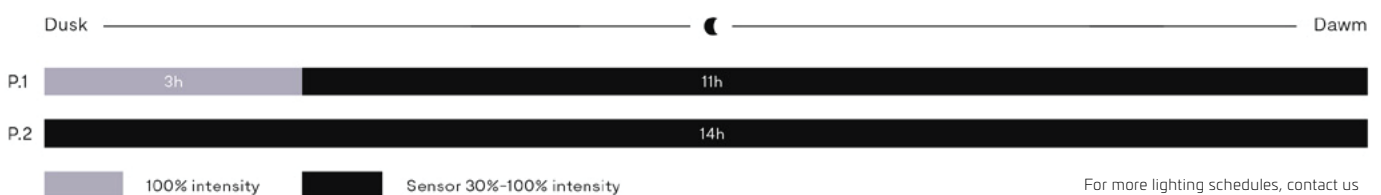


### Presence detection



### Operation mode and lighting schedule

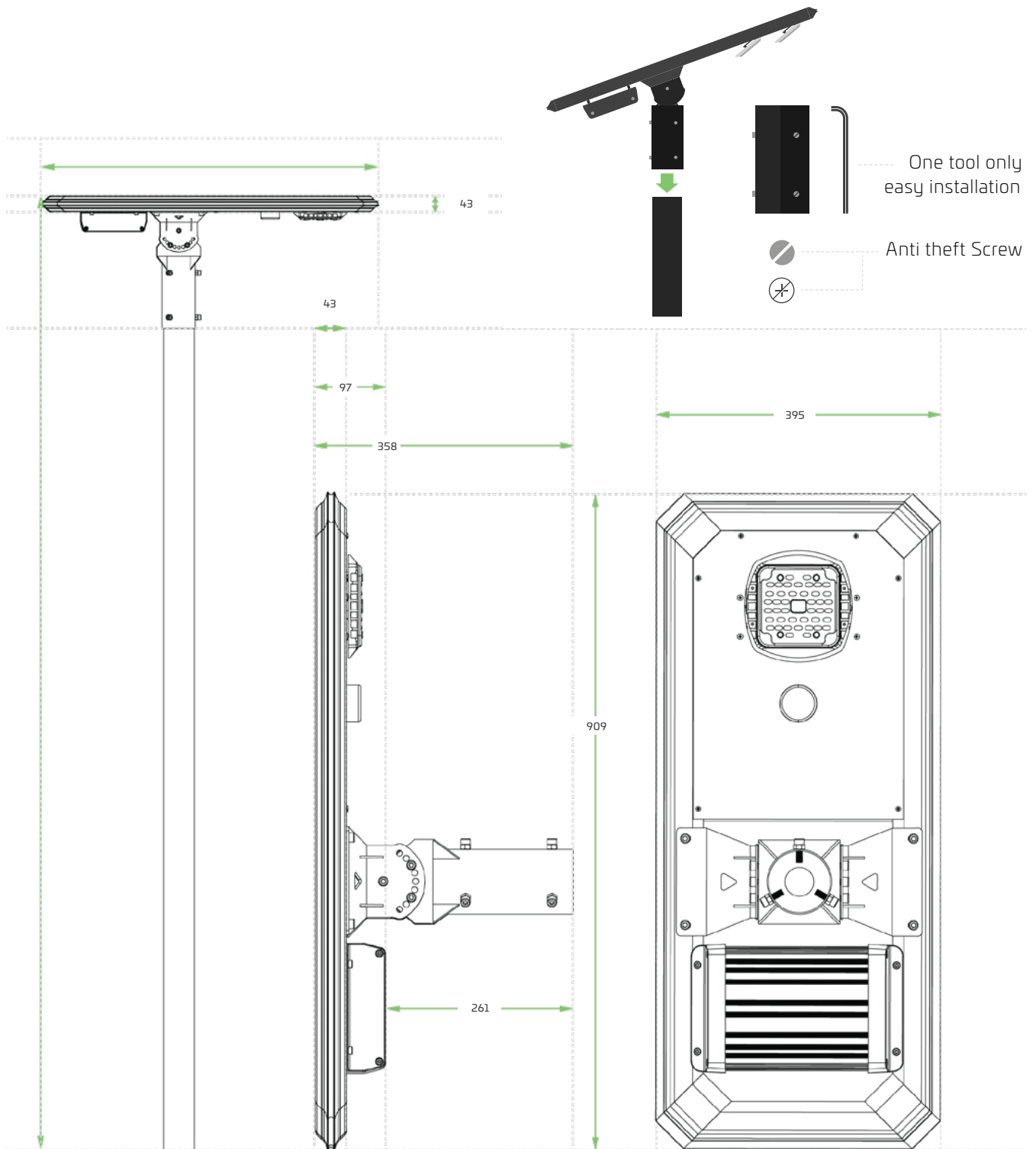
In addition to automatic switching on and off, you can choose from different modular operating modes to suit the specific needs of your project. So, whether your project demands part-night brightness, early evening lighting, or anything in between, our flexible lighting programs have you covered!



For more lighting schedules, contact us

## Product Dimensions

**Easy installation** | No cabling - No trenching



Dimensions are in mm | millimeters

- **Nominal flux** | 3920 Lumens
- **Nominal power** | 20 watts



### Dimensions per VENUS EVOLUTION

|                            |                 |
|----------------------------|-----------------|
| <b>Product</b>             | 910 x 398 x 343 |
| <b>Carton size</b>         | 980 x 460 x 260 |
| <b>Net weight</b>          | 11,5 KG         |
| <b>Gross weight</b>        | 15 KG           |
| <b>Qty / Ctn 20" / 40"</b> | 240/505         |

### Product code

**VENUS-EV20**



### Certifications

-  
**IEC / TUV / EMC / LM-80 test standards / IK8 / IP68 / CE / ULOR / UKCA**

Omnisolar offers a 5 Years Limited Warranty for the VENUS EVOLUTION 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 Omnisolar instructions. Fixture suitable for ambient temperature from -10° to 70°. PV Panels - 25 year performance warranty Controller & Batteries : 5 years

### Lighting

|                     |                          |
|---------------------|--------------------------|
| <b>Efficiency</b>   | 196 Lumens/Watts         |
| <b>Led</b>          | PHILIPS Luxeon 30-30     |
| <b>Lifetime</b>     | Over 100.000 Hrs - LM80  |
| <b>Optics</b>       | TI / T35 / 2300 to 6500K |
| <b>Light height</b> | From 3 to 4 meters       |

### Battery

|                      |                                                  |
|----------------------|--------------------------------------------------|
| <b>Technology</b>    | Lithium Iron Phosphate LIFEPO4                   |
| <b>Capacity</b>      | 230 Wh                                           |
| <b>Autonomy</b>      | > 24 hours at full charge - 4 Rainy Days back up |
| <b>Charging time</b> | 5/6 Hours                                        |
| <b>Lifespan</b>      | Over 5000 CYCLES @ 50% DOD over 10y lifetime     |
| <b>Working temp</b>  | -10°C to 70 °C (optional -40°C TO 85 °C )        |

### Energy

|                    |                                            |
|--------------------|--------------------------------------------|
| <b>Solar panel</b> | 60W / 18V                                  |
| <b>Cells type</b>  | TOPCON Monocrystalline Panel               |
|                    | Grade A 25 years                           |
| <b>Certificate</b> | IEC 61215 - IEC 61730 I and II - IEC 60904 |

### Electronic

|                   |                                       |
|-------------------|---------------------------------------|
| <b>Controller</b> | MPPT Smart Controller                 |
| <b>Sensor</b>     | Microwave 360° Motion Sensor          |
| <b>Cabling</b>    | Waterproof Connector<br>Plug and Play |
| <b>Protection</b> | Battery Management System (BMS)       |

### Mechanical

|                      |                             |
|----------------------|-----------------------------|
| <b>Pole mounting</b> | 76mm to 89mm                |
| <b>Material</b>      | Aluminium & Stainless steel |

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



Unit 1 Marnshaw Industrial Estate,  
Warrington Lane, Lymm, England, WA13 0SW

Phone: +44 (0) 1942 763 133

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[enquiries@Omnisolar.co.uk](mailto:enquiries@Omnisolar.co.uk)

[www.omnisolar.co.uk](http://www.omnisolar.co.uk)