

Integrated solar street light



Information
and technical sheet

Hello sun exposure,

VENUS-EV50 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



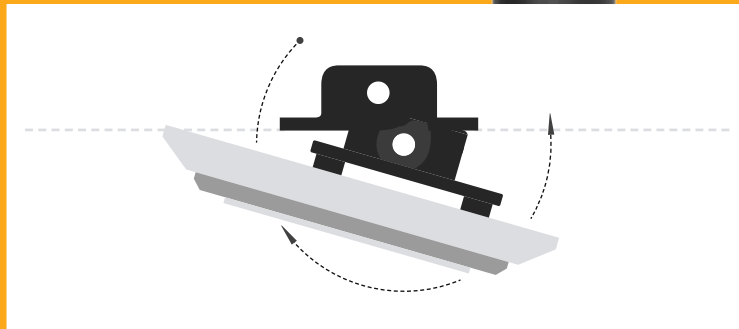
In one word - Articulated

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,



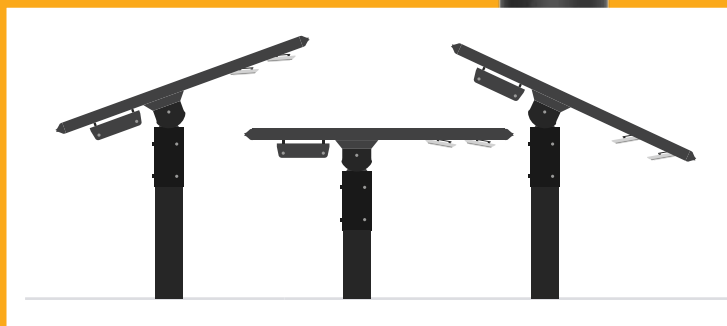
Tiltable Module | Optimum lighting



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.

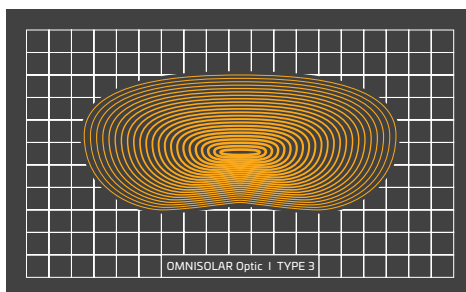
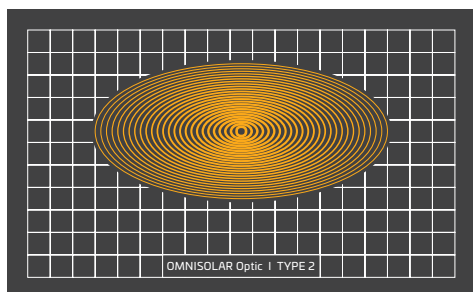
Furthermore, the luminaire adheres to **DARK SKY** requirements for light pollution, ensuring minimal upward lighting at just 0.31%.



- Led : 3030 | Led Q. (Pcs) : 2 x 40 | Optics: 4 | CRI > 80

Different Optics available

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



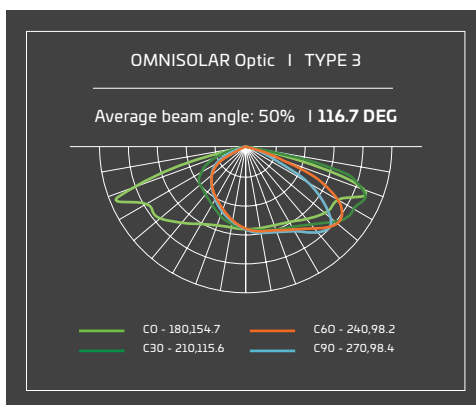
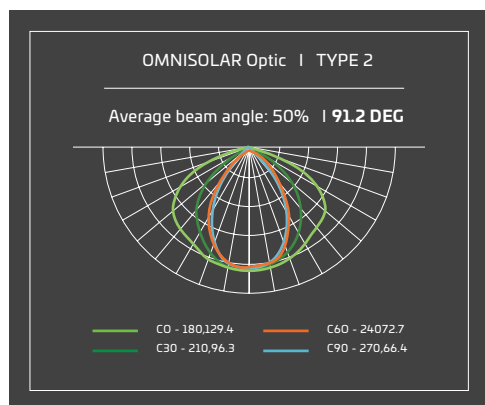
(Please contact us for more Optics)

Powered
& certified by

LUXEON
BY PHILIPS LUMILED



Light distribution curves



Contact us for a tailor
made light study



The **VENUS-EV50** 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.

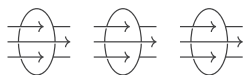


Extreme conditions ready
-10° to 70° (optional - 40°)

BMS System by OMNISOLAR

Electronic battery management system

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



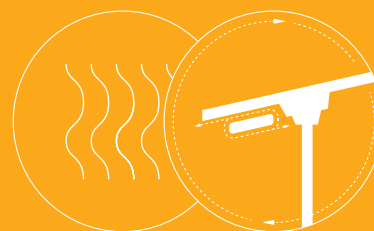
Over & Under current - Overload
Over & Under Voltage - Over & Under Charge
Temperature management

- 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

Lifetime & cycles at 50% DOD

OMNISOLAR LIFE.P04 Acid

Nimh

Lithium Ion



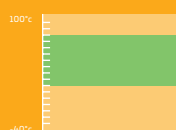
5000 cycles

450 cycles

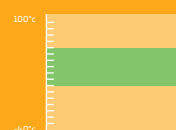
1400 cycles

1000 cycles

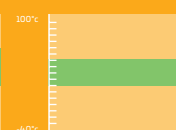
Charging temperature range without capacity loss



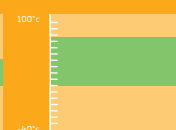
-10 to 70°



-10 to 50°



-10 to 30°



-10 to 65°

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.

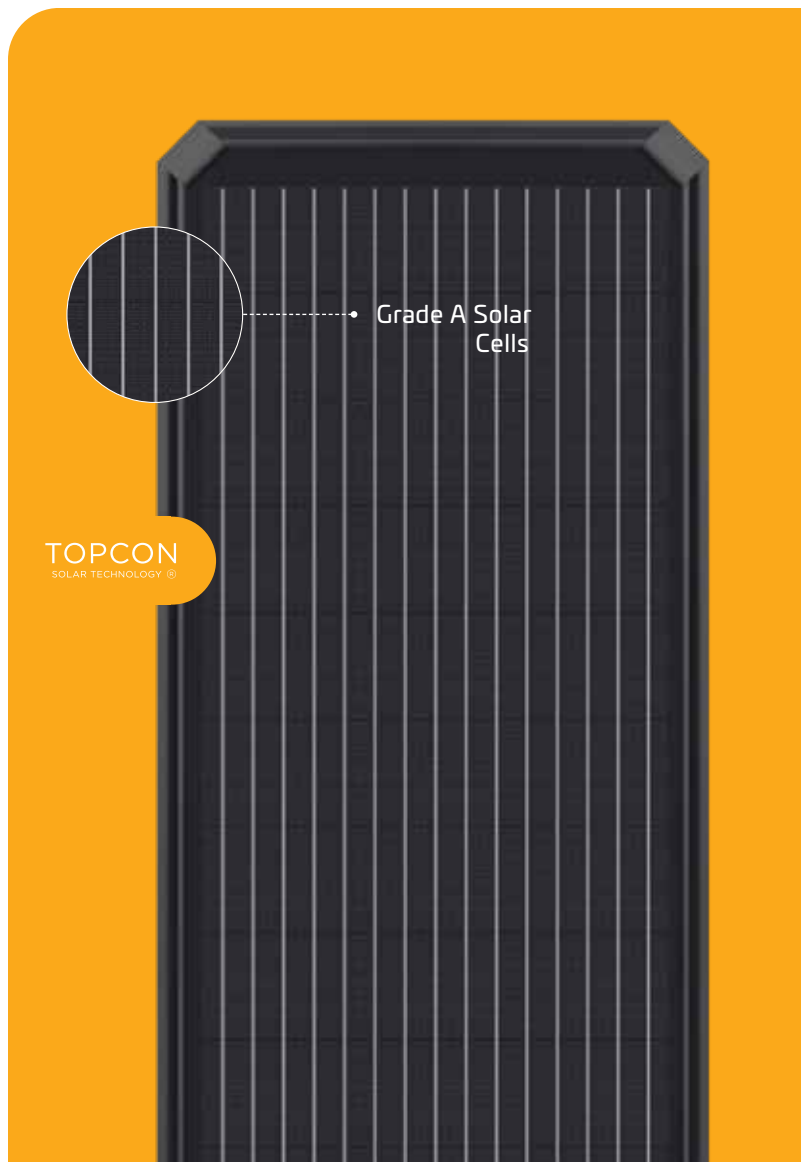
Available as an option



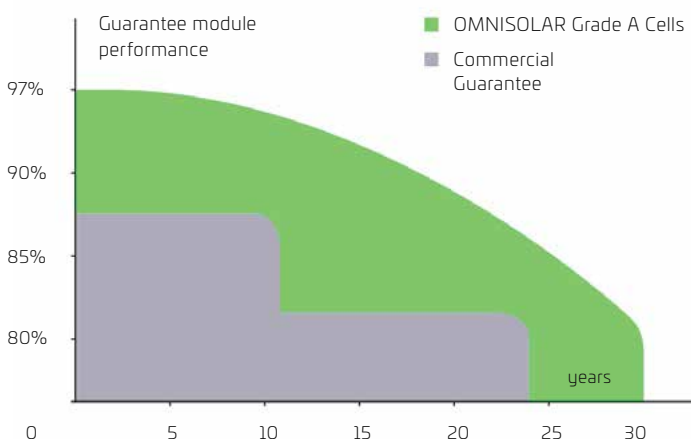
Hybrid system

Topcon Monocrystalline solar panel

Anodized aluminium frame for longevity



PV Performance



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.

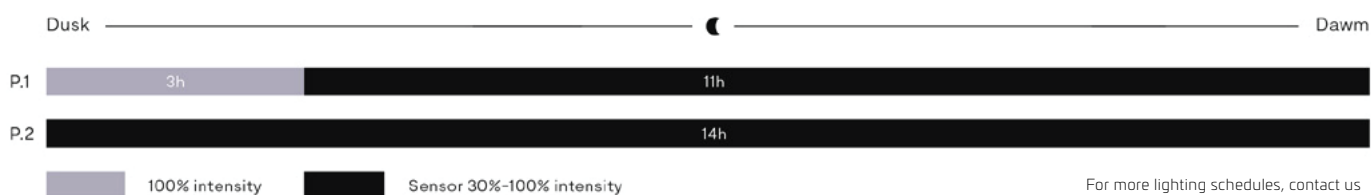


Presence detection



Operation mode and lighting schedule

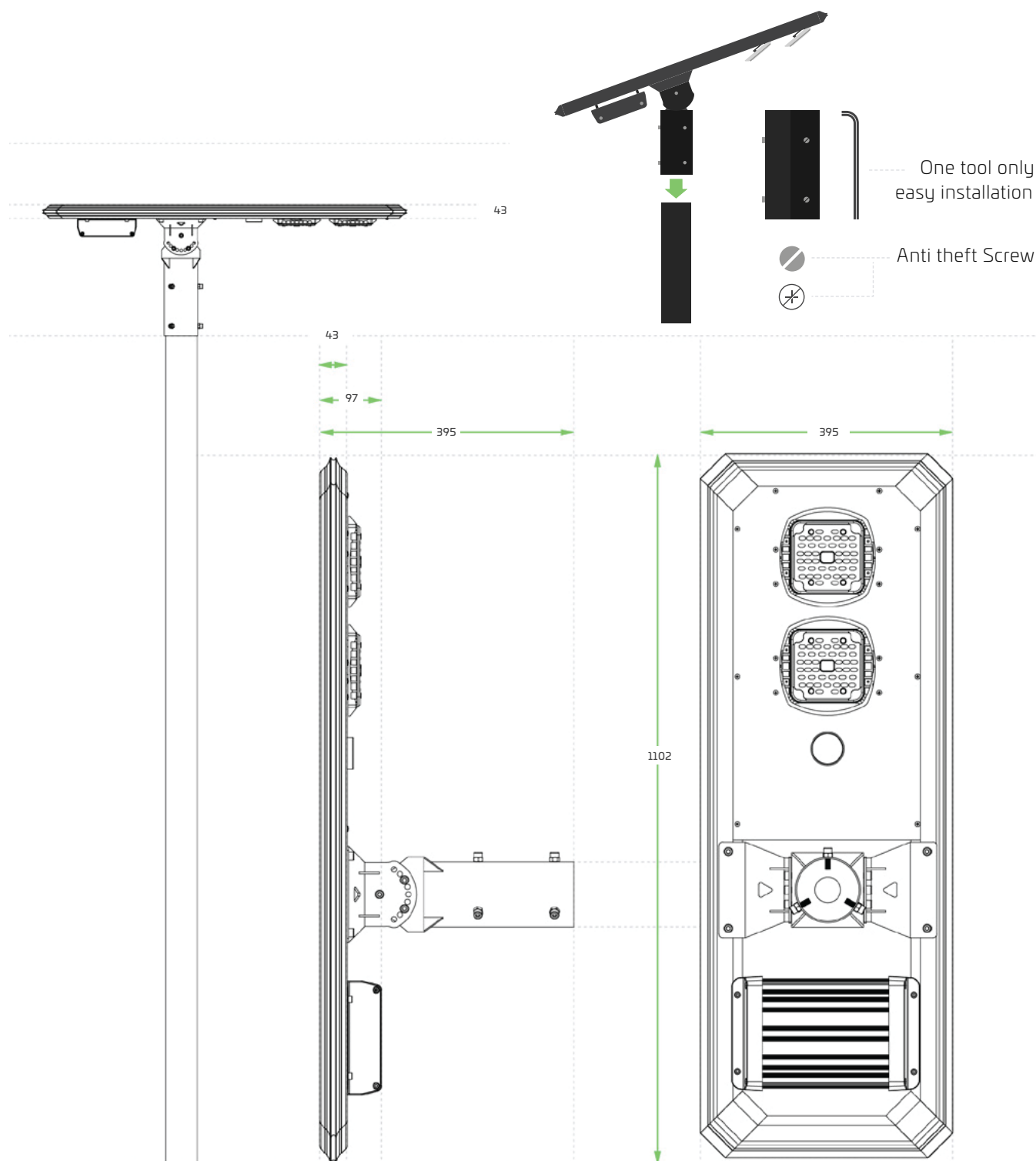
In addition to automatic switching on and off, you can choose from different modular operating modes to suit the specific needs of your project. So, whether your project demands part-night brightness, early evening lighting, or anything in between, our flexible lighting programs have you covered!



For more lighting schedules, contact us

Product Dimensions

Easy installation | No cabling - No trenching



Dimensions are in mm | millimeters

- **Nominal flux** | 9800 Lumens
- **Nominal power** | 50 watts



Dimensions per VENUS EVOLUTION

Product	1103 x 398 x 343
Carton size	1165 x 460 x 260
Net weight	15 KG
Gross weight	17.5 KG
Qty / Ctn 20" / 40"	216/450

Product code

VENUS-EV50



Certifications

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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

Efficiency	196 Lumens/Watts
Led	PHILIPS Luxeon 30-30
Lifetime	Over 100.000 Hrs - LM80
Optics	TI / T35 / 2300 to 6500K
Light height	From 4 to 5 meters

Battery

Technology	Lithium Iron Phosphate LIFEPO4
Capacity	307 Wh
Autonomy	> 24 hours at full charge - 4 Rainy Days back up
Charging time	5/6 Hours
Lifespan	Over 5000 CYCLES @ 50% DOD over 10y lifetime
Working temp	-10°C to 70 °C (optional -40°C TO 85 °C)

Energy

Solar panel	72W / 18V
Cells type	TOPCON Monocrystalline Panel
	Grade A 25 years
Certificate	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	76mm to 89mm
Material	Aluminium & Stainless steel

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



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