

# INVO SSLX Performance 100

The INVO SSLX PERFORMANCE maintains all of the same quality technology and components of the SSLX Pro Range, while offering a simpler design with the purpose of offering a more affordable solution without compromise on durability and performance.

## LIGHTING

<b>Nominal flux</b>	19,600 Lumens
<b>Nominal Power</b>	100 Watts
<b>Efficiency</b>	196 Lumens / Watts
<b>Chips LED</b>	Philips Luxeon 30-30
<b>LED Lifetime</b>	Over 100,000 hours LM80
<b>Optics &amp; CCT</b>	TIIS / T3-M / T-V 2300 to 6500K
<b>Light Height</b>	From 8-10 meters

## BATTERY

<b>Technology</b>	Lithium Iron Phosphate LIFEP04
<b>Capacity</b>	1280 Wh
<b>Autonomy</b>	Over 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 10 years lifetime
<b>Working Temp</b>	-10°C to 70°C (Optional -40°C to 70°C)

## ENERGY

<b>Solar Panel</b>	250 Watts / 18V
<b>Cells Type</b>	Monocrystalline Panel Grade A 25 years
<b>Certificates</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, Plug and Play
<b>Protection</b>	Battery Management System (BMS)

## MECHANICAL

<b>Pole Mounting</b>	89mm - 76mm
<b>Material</b>	Aluminium and Stainless Steel

## DIMENSIONS

<b>Product</b>	1260 x 880 x 271
<b>Carton Size</b>	1320 x 945 x 245
<b>Net Weight</b>	25 kg
<b>Gross Weight</b>	30 kg
<b>Qty / Ctn 20"/40"</b>	81/162



Hiking Trails



Car Parks & Rest Areas



Main Roads



Secondary Roads

## CERTIFICATIONS

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

\*Procure Direct offers a 5 Year Limited Warranty for the SSLX Performance 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 PD instructions. Fixture suitable for ambient temperature from -10° to 50°. PV Panels: 20 year performance warranty. 3 year warranty on battery.

# LUMINAIRE HOUSING & LEDS

19,600 LUMENS - 2300 TO 6500 K

Extruded low-copper aluminium. **Protection class (IP65)**. We use 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 colour retention for this product.

Our Luminaire is equipped with **PHILIPS LUXEON HE PLUS** High efficiency chips offering **196 Lumens per Watt efficacy**.

Our luminaire also complies with the **DARK SKY** requirement for light pollution with an **Upward lighting of 0.31%**



IP65

LED	LED QTY (PCS)	LENS (PCS)	CRI
3030	72	35	> 80



## DIFFERENT OPTICS\*

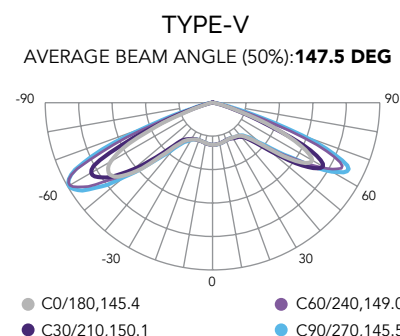
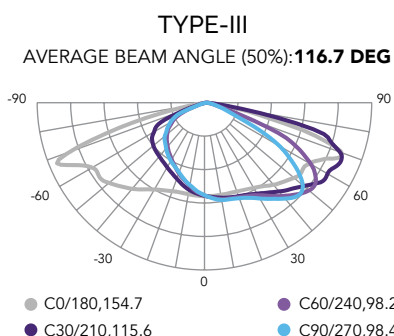
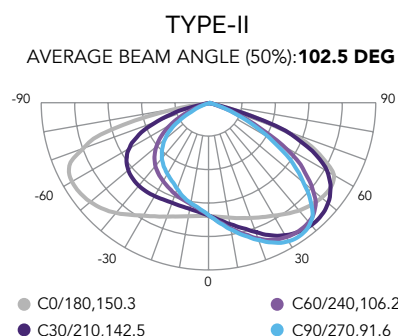
Our different optics will allow you to optimise the lighting results of your projects

SSLT-II

SSLX T-III

SSLX T-V

## LIGHT DISTRIBUTION CURVES



# INVO SSLX Performance 120

The INVO SSLX PERFORMANCE maintains all of the same quality technology and components of the SSLX Pro Range, while offering a simpler design with the purpose of offering a more affordable solution without compromise on durability and performance.

## LIGHTING

<b>Nominal flux</b>	23,520 Lumens
<b>Nominal Power</b>	120 Watts
<b>Efficiency</b>	196 Lumens / Watts
<b>Chips LED</b>	Philips Luxeon 30-30
<b>LED Lifetime</b>	Over 100,000 hours LM80
<b>Optics &amp; CCT</b>	TIIS / T3-M / T-V 2300 to 6500K
<b>Light Height</b>	From 8-10 meters

## BATTERY

<b>Technology</b>	Lithium Iron Phosphate LIFEP04
<b>Capacity</b>	1536 Wh
<b>Autonomy</b>	Over 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 10 years lifetime
<b>Working Temp</b>	-10°C to 70°C (Optional -40°C to 70°C)

## ENERGY

<b>Solar Panel</b>	250 Watts / 18V
<b>Cells Type</b>	Monocrystalline Panel Grade A 25 years
<b>Certificates</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, Plug and Play
<b>Protection</b>	Battery Management System (BMS)

## MECHANICAL

<b>Pole Mounting</b>	89mm - 76mm
<b>Material</b>	Aluminium and Stainless Steel

## DIMENSIONS

<b>Product</b>	1260 x 880 x 271
<b>Carton Size</b>	1320 x 945 x 245
<b>Net Weight</b>	25 kg
<b>Gross Weight</b>	30 kg
<b>Qty / Ctn 20"/40"</b>	81/162



Hiking Trails



Car Parks & Rest Areas



Main Roads



Secondary Roads

## CERTIFICATIONS

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## LUMINAIRE HOUSING & LEDS

23,520 LUMENS - 2300 TO 6500 K

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IP65



LED	LED QTY (PCS)	LENS (PCS)	CRI
3030	72	35	> 80

## DIFFERENT OPTICS\*

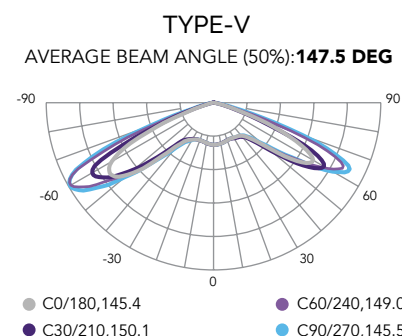
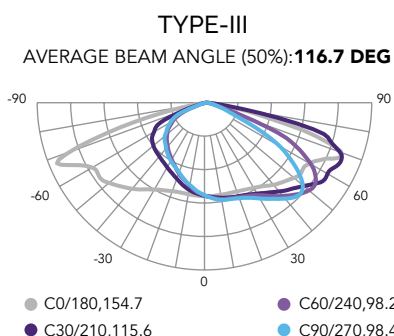
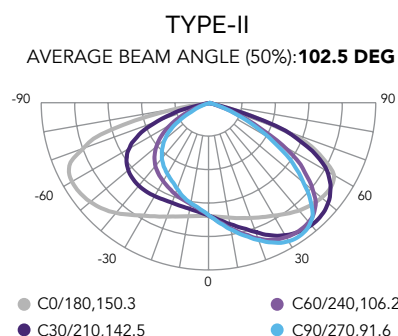
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SSLT-II

SSLX T-III

SSLX T-V

## LIGHT DISTRIBUTION CURVES



# INVO SSLX Performance Dual 50

The INVO SSLX PERFORMANCE maintains all of the same quality technology and components of the SSLX Pro Range, while offering a simpler design with the purpose of offering a more affordable solution without compromise on durability and performance.

## LIGHTING

<b>Nominal flux</b>	2 x 9,800 Lumens
<b>Nominal Power</b>	2 x 50 Watts
<b>Efficiency</b>	196 Lumens / Watts
<b>Chips LED</b>	Philips Luxeon 30-30
<b>LED Lifetime</b>	Over 100,000 hours LM80
<b>Optics &amp; CCT</b>	TIIS / T3-M / T-V 2300 to 6500K
<b>Light Height</b>	From 5-6 meters

## BATTERY

<b>Technology</b>	Lithium Iron Phosphate LIFEP04
<b>Capacity</b>	1280 Wh
<b>Autonomy</b>	Over 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 10 years lifetime
<b>Working Temp</b>	-10°C to 70°C (Optional -40°C to 70°C)

## ENERGY

<b>Solar Panel</b>	250 Watts / 18V
<b>Cells Type</b>	Monocrystalline Panel Grade A 25 years
<b>Certificates</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, Plug and Play
<b>Protection</b>	Battery Management System (BMS)

## MECHANICAL

<b>Pole Mounting</b>	89mm - 76mm
<b>Material</b>	Aluminium and Stainless Steel

## DIMENSIONS

<b>Product</b>	1260 x 880 x 271
<b>Carton Size</b>	1320 x 945 x 245
<b>Net Weight</b>	25 kg
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# LUMINAIRE HOUSING & LEDS

2 X 9,800 LUMENS - 2300 TO 6500 K

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IP65

LED	LED QTY (PCS)	LENS (PCS)	CRI
3030	72	35	> 80



## DIFFERENT OPTICS\*

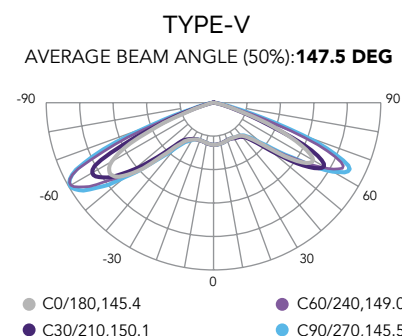
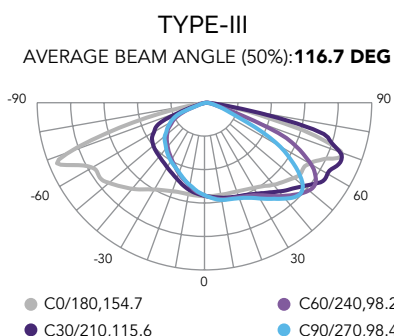
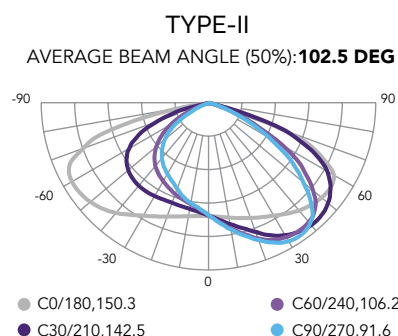
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SSLT-II

SSLX T-III

SSLX T-V

## LIGHT DISTRIBUTION CURVES





# BATTERY LIFEPO4

## + OVER 10 YEARS LIFETIME

The SSLX Performance Series is equipped with **Iron Phosphate Lithium LiFePo4** battery. This technology is proved to be **the best chemical technology for solar applications on the market.**

With a cycle life of over 5000 Cycles @ 50% DOD, **the battery enjoys a lifespan of over 10 years.**

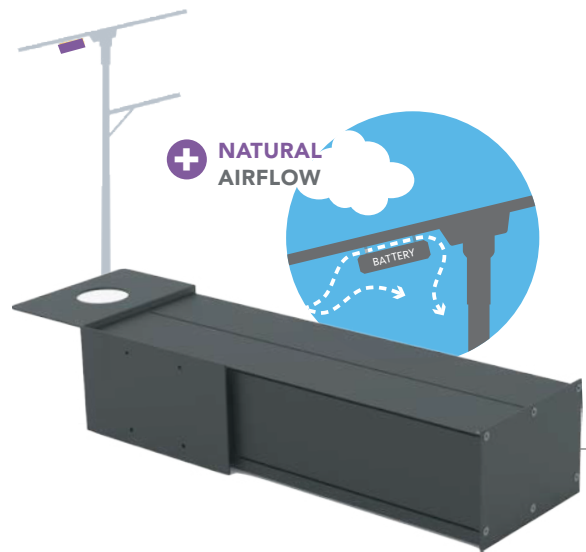


### EXTREME TEMPERATURE -10 °C TO 70 °C (-40 °C OPTIONAL)

Most suppliers offer a standard Lithium LiFePo4 batteries with a working temperature range from -10°C TO 70 °C. However, upon request we can offer a new Special LIFEPO4 battery, with working range of -40 °C. to 70 °C.

### EASY MAINTENANCE & ANTI-THEFT SCREWS

Easy and direct access to the battery casing for maintenance. The fixation are made with anti-theft screws, which request special tooling to unscrew.



## ALUMINUM WATERPROOF CASING & NATURAL AIRFLOW

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

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

## BMS ELECTRONIC PROTECTION BATTERY MANAGEMENT SYSTEM

Our batteries are equipped with **electronic circuit boards for a higher protection**, ensuring battery function optimisation no matter what the situation.



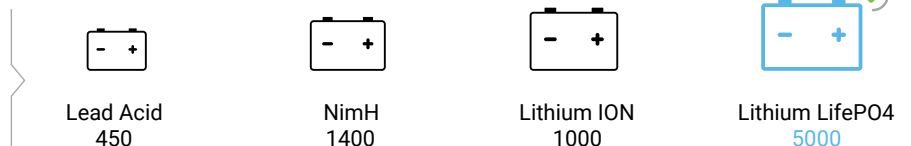
The BMS Protects against :

- OVER/UNDER CURRENT
- OVERLOAD
- OVER/UNDER VOLTAGE
- OVER/UNDER CHARGE
- TEMPERATURE MANAGEMENT

### COMPARISONS OF DIFFERENT BATTERY TECHNOLOGIES

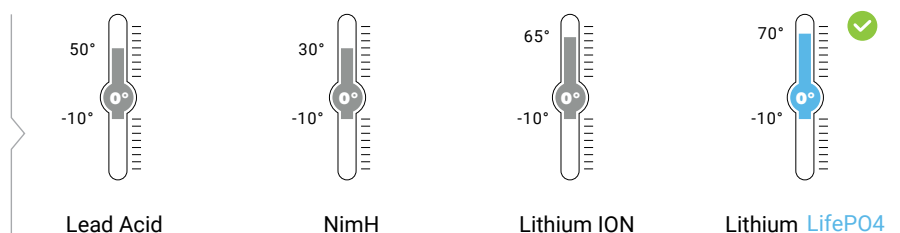
#### LIFETIME & CYCLES AT 50% DOD\*

Comparison of different battery technologies



#### CHARGING TEMPERATURE RANGE WITHOUT CAPACITY LOSS

Minimum & maximum temperature range for optimal charging during the day



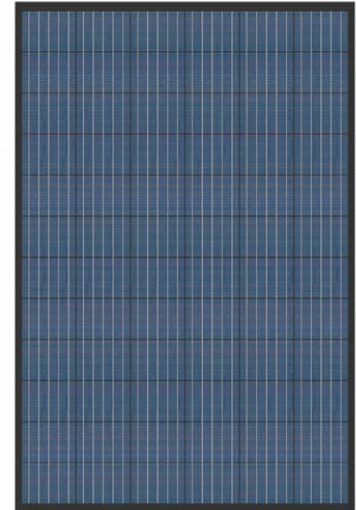
# SOLAR PANEL

## 250 WATTS

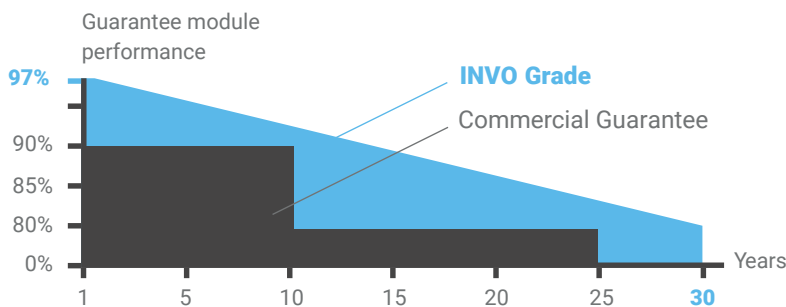
High efficiency mono-crystalline **Solar panels** with carefully selected **Grade A** Solar cells. Up to 20.4% efficiency, all protected by self-cleaning **tempered glass at 30 degrees** of inclination.

Its **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.

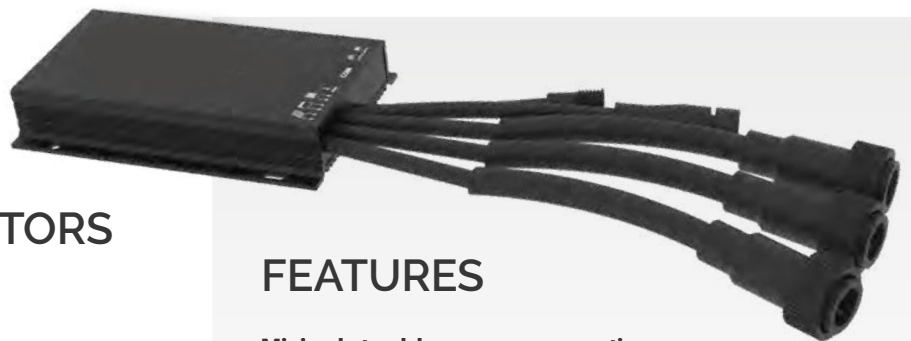
Solar Cells **GRADE A**



### OUR PV PERFORMANCE GUARANTEE



# 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, **our 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 ≤ 10mA**

**Intelligent battery management**

3 phases of 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
- Overcurrent
- Overtemperature
- Overvoltage / Overload
- Overdischarge

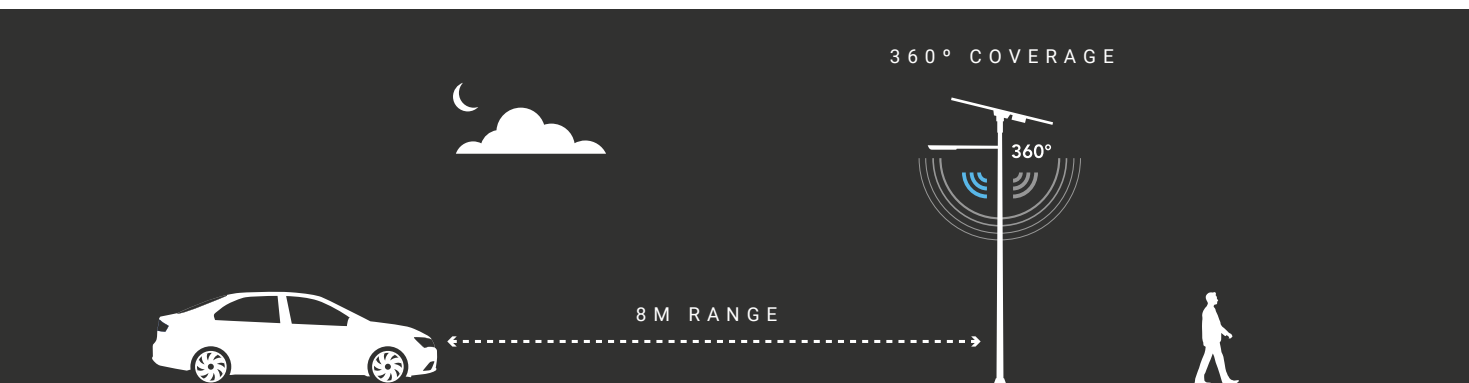


# MOTION SENSOR

## MICROWAVE

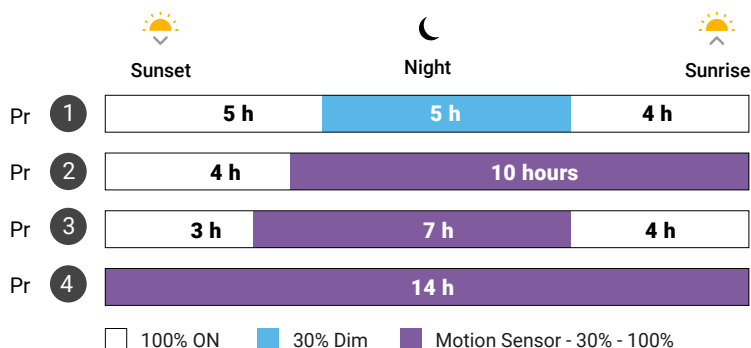
Our luminaires are equipped with microwave sensors that use the **Doppler effect** (like car radars) to detect nearby objects and measure the distance. The sensor emits a high frequency wave to reflect off of and analyse the objects in the vicinity. Since the microwaves **only detect specific objects**, detection reliability increases resulting in:

- Much better reliability compared to the Infrared sensor
- Up to **360°** Directivity



## 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.



## EASY INSTALLATION NO CABLING, NO TRENCHING

With a well designed bracket support, SSLX Performance is effortless and flexible to install. Free 360° rotation of the panel to always face the Sun.

INSERT, ORIENTATE & CHOOSE YOUR TILT.



For more information, or to book your **FREE** audit, call us on 01522 538212, email [info@procuredirect.co.uk](mailto:info@procuredirect.co.uk) or visit us at [www.procuredirect.co.uk](http://www.procuredirect.co.uk)