



**electric** Skyline™

LIGHT YEARS AHEAD



**ALL-IN-ONE**  
standalone design



**55W**  
10,285lm



**DEFENDER**  
ALL IN ONE SOLAR SERIES

**SOLAR STREET LIGHTING  
BUILT FOR IRISH CONDITIONS**

## SAM → Solar Activity Monitoring

SAM enables the remote monitoring and control of solar lighting assets with an easy to use dashboard.



## Defender → Battery Specifications

DEFENDER solar lights are powered with the most advanced LiFePO<sub>4</sub> (lithium iron phosphate) battery available including on-board battery management system and passive cell balancing technology.

### Lithium Iron Phosphate

- MORE POWER / LESS WEIGHT (<1/2)
- LONGER LIFESPAN / QUICKER CHARGING
- SUPERIOR COLD TEMP. PERFORMANCE
- CAN BE DISCHARGED BELOW 50%

### Lithium-Ion

- TWICE THE BATTERY CAPACITY AS AGM
- HANDLES HIGHER TEMPERATURES
- LIGHTER WEIGHT THAN AGM
- CAN BE DISCHARGED BELOW 50%

### Absorbent Glass Mat

- LOW MAINTENANCE
- MOUNTS IN ANY ORIENTATION
- LOWER COST THAN LI-ION
- READILY AVAILABLE REPLACEMENTS



### DEFENDER-55

LiFePO<sub>4</sub>

24Ah  
307.2Wh

UP TO  
102  
HOURS  
AUTONOMY

PASSIVE CELL  
BALANCING  
TECHNOLOGY

## Defender → Solar Panel Specifications

DEFENDER monocrystalline solar panels include the flexibility to harness the power of an additional solar panel for increased solar yield.

### PANEL TYPES

→ There are two main solar panel technologies, **polycrystalline** and **monocrystalline**. Monocrystalline panels are made of higher quality silicon, have a higher output per m<sup>2</sup> and last longer than polycrystalline panels.

### PANEL EFFICIENCY

→ Panel efficiency is a measure of the % of solar energy that is converted into electrical energy. Simply explained higher values are better with current technology producing maximum solar panel efficiencies of up to 25%.

### OPTIONAL / ADDITIONAL PANELS

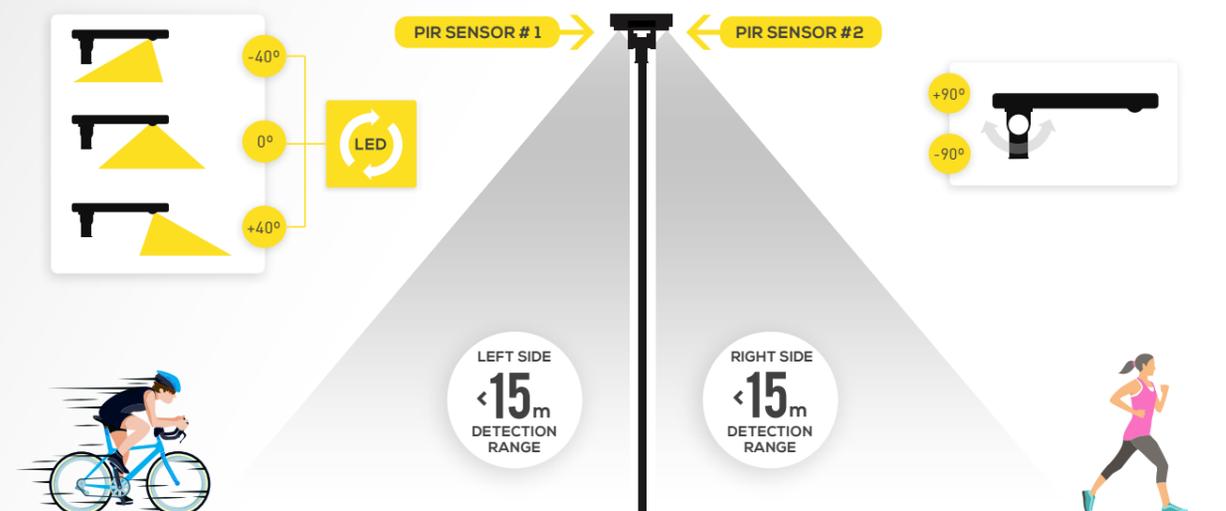
→ A key feature of the Defender range is the ability to attach an additional solar panel. This helps to ensure that enough energy will be harvested during overcast conditions and the darkest winter months.



[acrosfireproducts.com/solar-panels-explained](https://acrosfireproducts.com/solar-panels-explained)

## Defender → Adjustable Features

The DEFENDER solar light comes with Twin Passive Infrared Sensors providing an increased motion detection zone. The LED banks are adjustable to enable optimal light coverage.



WORLD'S FIRST SOLAR LIGHT

# DEFENDER

DESIGNED FOR UK CONDITIONS

ALL IN ONE SOLAR SERIES

### ADJUSTABLE MOUNTING & LED

FOR OPTIMISED CHARGING & LIGHT DISTRIBUTION

### SAM IoT HARDWARE

BUILT FOR FUTURE IoT CONTROL SYSTEM UPGRADE

### MPPT CONTROLLER

PROGRAMMABLE ON / OFF / DIM & OPERATION SCHEDULING

### INTELLIGENT POWER SCALING

ENHANCED OPERATING PROFILE UP TO 102 HOURS AUTONOMY

### DC INPUT & OUTPUT

EXTERNAL CHARGING PORT / POWER ADD ON DEVICES  
CAMERAS • USB CHARGING • HAND SANITISER DISPENSER • IOT SENSORS •



### ADVANCED OPTICS

LEDIL LENS TYPES II-V  
CREE XP-G 3 LED CHIPSET

### TWIN PIR SENSORS

HIGH DETECTION RANGE WITH PANASONIC MOTION SENSORS

### LiFePO<sub>4</sub> BATTERY

NANO-PARTICLE TECHNOLOGY WITH PASSIVE CELL BALANCING



### ADDITIONAL PANEL

32W MONOCRYSTALLINE PANEL  
INPUT VIA DC CHARGING PORT

### SMART CITY READY

FUTURE COMPATIBLE FOR IoT WITH SAM  
REMOTE ACCESS MONITORING & CONTROL PLATFORM



## DEFENDER LANTERN FAQ'S

### ARE THEY A REPLACEMENT FOR TRADITIONAL STREET LIGHTING?

The defender Solar Lantern Range are intended for non-critical applications i.e. non-critical roadways – they are not a direct replacement for standard street lighting where its required.

### COULD I USE THEM IN A HOUSING ESTATE OR ON MY COMMERCIAL PROPERTY?

It would depend on your requirements - they are not suitable for housing estates or commercial properties where a constant lighting level is required from dusk until dawn. We do however, have other solar solutions available for critical applications.

### WHATS THEIR IDEAL APPLICATION?

They are ideal for greenways, cycle tracks, walkways, access roads, parks, play areas, bottle banks, remote locations, places without mains power - Almost anywhere there is low traffic volume and low pedestrian usage at times.

### HOW IS IT ACTIVATED?

The lantern is activated through voltage monitoring of the panel - When the voltage drops below 5v the lantern switches on but these and other settings like activation distance and light levels can all be adjusted via the software included with the lights.

### WHATS THE OUTPUT?

As stated these are all adjustable but a typical example would be after the lantern switches on @dusk its light output is at 80% for the first 3 hrs and then drops to 25% light output until dawn. If the PIR on the lantern is triggered the lantern switches on to 100% for 30 secs.

### WHATS THE LIMITATIONS IN IRELAND?

The defender is designed to maximise the energy available, in climates like Ireland's. In Ireland in the middle of winter when the daylight harvesting potential is at its minimum the lantern will switch off to protect the battery, however if required the harvesting potential can be increased by the addition of an external solar panel which will increase the lantern light output to 6 hrs per day.

### WHAT IS THE LEAD TIME FOR DEFENDER LANTERNS?

Supply Lead Time for Defender Solar Lanterns is 6 weeks.

### IS THERE A WARRANTY ON THE DEFENDER?

Yes the defender has a 5 year warranty.

### CAN I SEE THE LIGHTS IN ACTION?

Yes of course - Contact us today and we will be happy to refer to you to the nearest installation to you.

### HOW CAN I ORDER?

Phone Electric Skyline on 094 9360954 or email us at [solarlighting@electricsskyline.ie](mailto:solarlighting@electricsskyline.ie) and we will be happy to quote for your project or answer any questions or queries.