



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

TYPICAL EXAMPLE

SAM → Solar Activity Monitoring

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



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 mono

→ There are two main solar panel technologies, **polycrystalline** and **monocrystalline**. Monocrystalline panels are made of higher quality silicon, have a higher output per m² and last longer than polycrystalline panels.

PANEL EFFICIENCY 21%

→ 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

Defender → Battery Specifications

DEFENDER solar lights are powered with the most advanced LiFePO₄ (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

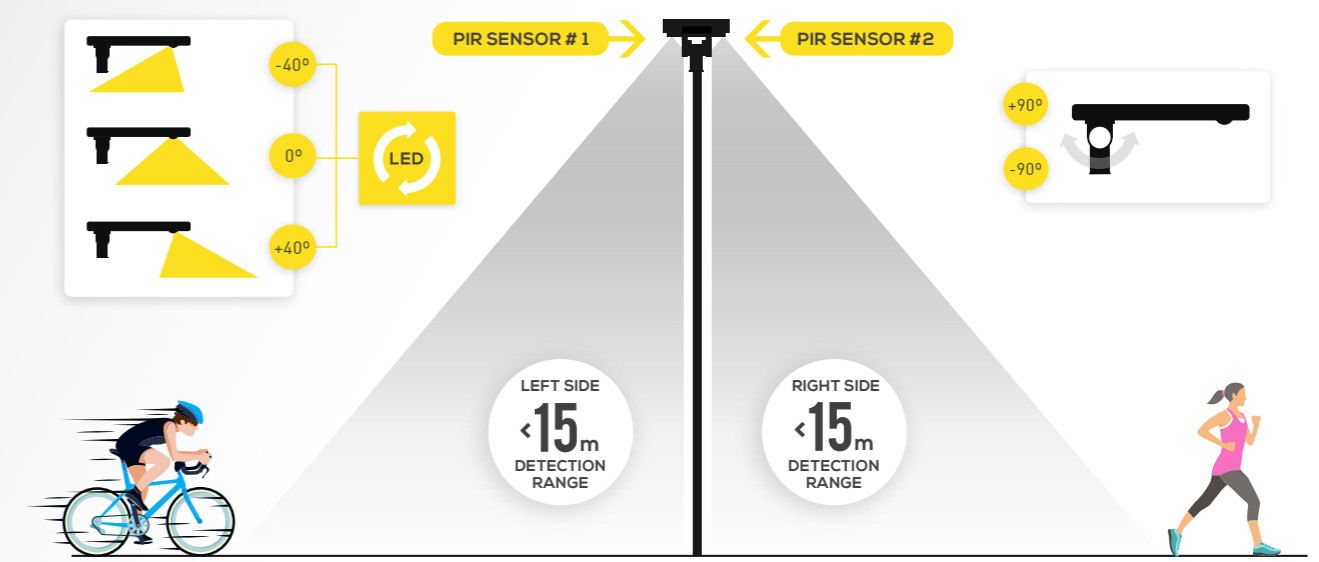
- LOW MAINTENANCE
- MOUNTS IN ANY ORIENTATION
- LOWER COST THAN LI-ION
- READILY AVAILABLE REPLACEMENTS

DEFENDER-55

- LiFePO₄ BATTERY**
- 24Ah 307.2Wh**
- UP TO 102 HOURS AUTONOMY**
- PASSIVE CELL BALANCING TECHNOLOGY**

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

LiFePO₄ 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 and we will be happy to quote for your project or answer any questions or queries.