EDITION 2026

PORTABLE AIRFIELD LIGHTING · AIRPORTS & HELIPORTS

POLARIS

Portable Lighting Systems

Battery-powered LED lamps for runways, taxiways and heliports – local, radio or software control, with AC, DC, drop-in dock or solar charging.



ABOUT US

About EcoSolaris

EcoSolaris Dubai provides **supply, technical consulting and quotations for airports, heliports and contractors in the UAE and GCC**. We help you select the right POLARIS configuration for permanent airfields, heliports, temporary landing strips and construction sites – from models, charging and control options to a complete quotation and delivery.

OVERVIEW

Key features

Control modes

- Local
- Photocell
- Radio
- Handheld remote
- PC software

Battery

- Sealed Lead Acid (SLA), NiMH or $LiFePO_4$
- Affordable and available worldwide
- **5 years lifetime**



LED technology

- **No lamp changing** for the entire lifetime of the light unit
- **Low power**, long autonomy

Sensors

- Photocell
- Temperature
- Clinometer (tilt)

Light output

- Available in **Low, Medium and High Intensity**
- Compliant with international and regional standards

Dimmable

Light intensity can be set in 5 steps:

1% | 3% | 10% | 30% | 100%

PRODUCT RANGE

POLARIS lamps

POLARIS lamps are battery-powered, robust and reliable fixtures that combine long-life LED technology with a rechargeable battery for effortless installation and maintenance.

With low energy consumption and optional features such as solar panels, radio control and **ARCAL** activation, they ensure maximum flexibility across a wide range of operations.

POLARIS lamps are available in three versions – **V1, V2 and V3** – each designed to meet specific operational requirements.

Versions



V1

Compact polycarbonate body



V2

Compact aluminium body



V3

Aluminium + 4 built-in solar panels

Models

Airport models

- Approach
- Threshold
- Threshold End
- Runway Edge
- Runway End
- Taxiway
- Unserviceability
- Emergency
- RTIL

Heliport models

- Approach
- TLOF
- FATO
- Taxiway

POLARIS VERSIONS

V1 · V2 · V3



POLARIS V1

POLARIS V1 is a lightweight, easy-to-handle portable lamp designed to simplify deployment and operation. Its compact polycarbonate body makes it exceptionally light and easy to manoeuvre, while its straightforward installation and low-maintenance design allow for rapid setup.

Polycarbonate body · Very lightweight · Straightforward installation · Low maintenance

POLARIS V2

POLARIS V2 is engineered for performance and efficiency in any environment. Its compact aluminium design provides a space-saving solution without compromising strength. The robust construction ensures enhanced durability even under intensive use, making it ideal for demanding conditions.

Aluminium body · Compact · Intensive use · Demanding conditions





POLARIS V3

POLARIS V3 is a versatile portable lamp designed for flexible deployment in diverse environments. Its durable aluminium body ensures long-lasting performance, while the **four built-in solar panels** provide efficient, sustainable energy for extended operation. POLARIS V3 combines robustness with adaptability, making it ideal for projects requiring reliable illumination and eco-friendly power.

Aluminium body · 4 built-in solar panels · Extended operation · Eco-friendly power

POWER

Charging options

POLARIS lamps offer flexible charging options to suit any operational need. They can be charged via **AC, DC, drop-in or solar power** – using either the built-in panels or external solar panels – ensuring reliable and convenient power in any situation.

AC charging

The lamp draws power directly from standard mains electricity. This ensures a reliable and consistent energy source, making it easy to recharge your POLARIS lamps wherever a wall outlet is available. Designed for convenience, it keeps your lamps ready for operation with minimal effort.

DC charging

The lamp can be powered directly from DC sources such as vehicles, batteries or generators. This ensures reliable charging in remote or mobile setups, providing flexibility wherever AC power is unavailable. Fast and convenient, it keeps your POLARIS lamps operational in any environment.

Drop-in charging

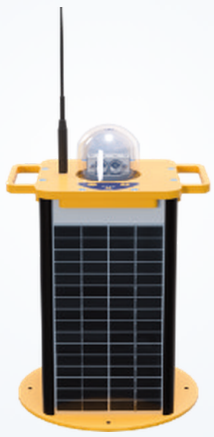
Quick and effortless charging is achieved by simply placing the lamp in the dock. This method ensures fast power restoration with minimal effort. Designed for speed and convenience, it allows your POLARIS lamps to be ready for use in no time.

Solar charging

POLARIS lamps can be charged using either built-in solar panels or external solar panels. This eco-friendly option provides reliable, sustainable power, making the lamps ideal for remote locations or off-grid operations. Designed for convenience and efficiency, it keeps your POLARIS lamps ready whenever needed.



External solar panel



Built-in solar panels (V3)

COMMAND & MONITORING

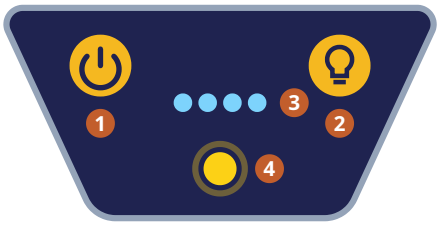
Control

POLARIS lamps offer versatile control options: **manually** via built-in buttons on the casing; **remotely using one-way radio** for simple command transmission; or through advanced **bidirectional radio communication** with GPS-enabled monitoring and software-based scheduling. This ensures maximum flexibility, convenience and reliability in any deployment scenario.

Manual control

Each POLARIS lamp features built-in control buttons on the casing, allowing users to easily adjust brightness, switch modes and turn the unit ON or OFF directly.

1. ON/OFF button
2. Light button
3. Battery / status LEDs
4. Yellow indicator LED



V1 panel



V2 panel

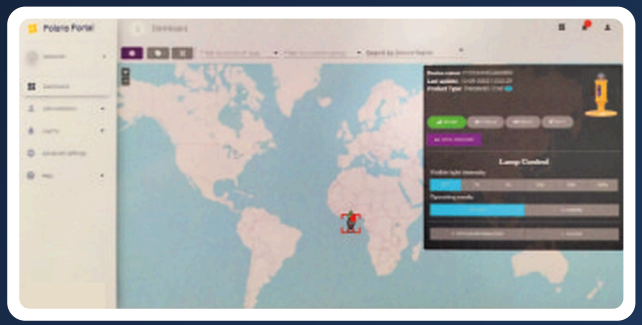
One-way radio control

Enables simple and reliable remote control by transmitting commands directly to the lamps without requiring feedback, providing efficient communication for managing multiple units over a dedicated radio channel.



Two-way radio control

The system uses bidirectional radio and built-in GPS to monitor and control each fixture. Users can check battery status, adjust brightness and modes, control units individually or in groups, and schedule automatic ON/OFF or mode changes. Low battery triggers automatic intensity reduction to extend operation.

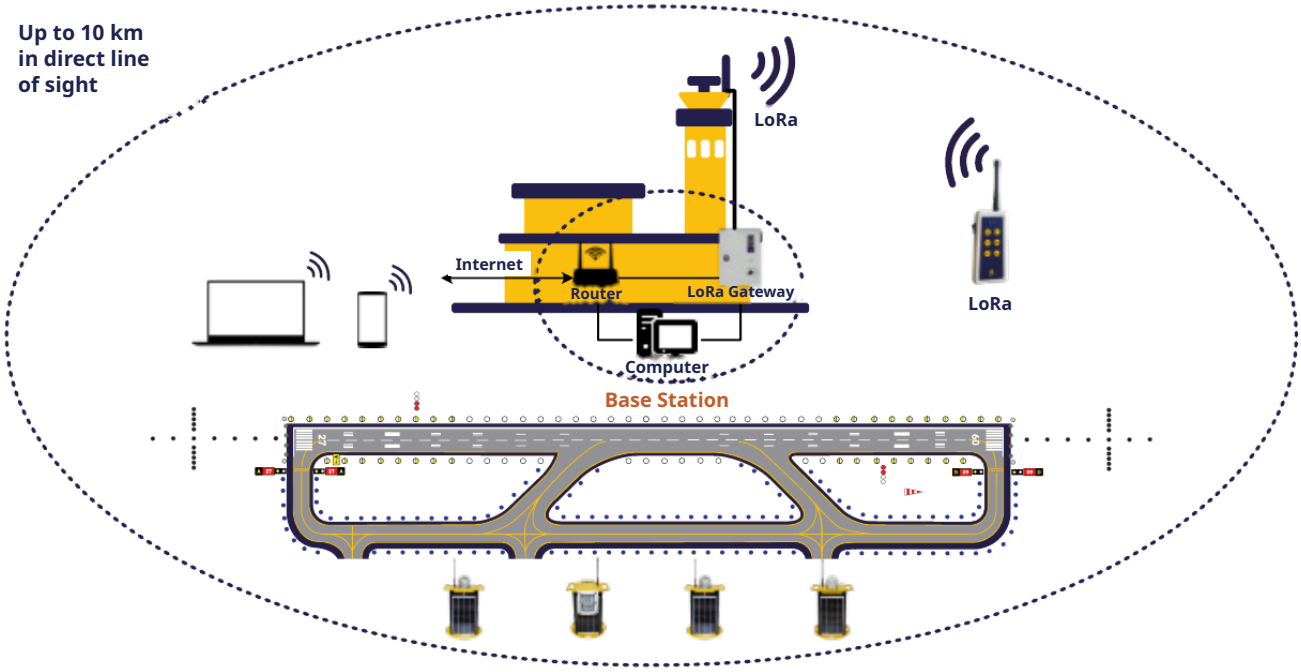


- GPS monitoring of every fixture
- Live battery status
- Individual or group control
- Scheduled ON/OFF and mode changes
- Automatic intensity reduction on low battery

COMPLETE SOLUTION

The POLARIS system

Airfield Portable Light Marking System POLARIS 2.0 features versatile signal lamps with magnetic assembly and resilient materials for all-weather use. It runs on independent or solar power and communicates via **LoRa**. It includes a base station, web app, remote control, video monitoring and a weather station.



POLARIS can be used as a **standalone fitting** or as part of a complete **Transportable Runway Lighting Kit**. The POLARIS lighting kit is used to set up a temporary or semi-permanent lighting system to allow aircraft to land on grass strips, frozen lakes, roadways, or as emergency runway lighting on major airports. Using optional IR LED sources, the system can also be **NVG compatible**.

- Grass strips
- Frozen lakes
- Roadways
- Emergency runway lighting
- Temporary or semi-permanent
- NVG compatible (optional IR LED)

Standards

POLARIS meets the standard of the International Civil Aviation Organization (**ICAO**) Annex 14 and the Federal Aviation Administration (**FAA**), specifically:

- ICAO Annex 14
- FAA AC 150/5345-46D
- FAA AC 150/5345-50B

for portable runway lighting.

SYSTEM COMPONENTS

Complementary equipment

The POLARIS kit can be completed with the following equipment for a full airfield marking system.



Runway Guard Light



Runway Threshold Identification Light



Location & Runway Hold Position sign



PAPI / APAPI



Windcone



Direction sign



Solar Power System

2.0

POLARIS

LoRa · GPS · Web app

Request a quotation

The EcoSolaris Dubai team provides technical consulting on version (V1, V2, V3), models, battery type, charging and control options – and prepares a complete quotation for projects in the UAE and GCC.

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POLARIS

Portable lighting systems for airports and heliports – supply, technical consulting and quotations by EcoSolaris Dubai.

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