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TECHNICAL DATASHEET · AIRPORT LIGHTING · BATTERY-POWERED PORTABLE LIGHTS

# Polaris V2 – Low/Medium Intensity Portable Lights

EcoSolaris code **ECO-AL-2891**

Ordering code **AL-145/146/148/160-XX-XX**

**Made in Romania** Manufactured in the EU



A range of battery-powered LED portable lights, low and medium intensity, for non-precision approach airports. It covers runway edge, threshold, runway end, approach and taxiway for temporary, emergency or backup lighting.

RUNWAY EDGE (REL)
**AL-148-06-WH**

WHITE, 10% / 30%
**1000 cd / 3000 cd (average)**

YELLOW, 10% / 30%
**400 cd / 1200 cd**

RED, 10% / 30%
**150 cd / 450 cd**

Price on request

EcoSolaris technical support · Dubai

## Technical specifications

| | |
|---|---|
| **Runway edge (REL)** | AL-148-06-WH |
| **Other variants** | AL-146-03-GR, AL-145-04-GR-RE, AL-144-02-RE, AL-160-03-WH, AL-147-01-BL |
| **White, 10% / 30%** | 1000 cd / 3000 cd (average) |
| **Yellow, 10% / 30%** | 400 cd / 1200 cd |
| **Red, 10% / 30%** | 150 cd / 450 cd |
| **Circling beam** | 50 cd omnidirectional, up to 15° vertical |
| **Toe-in** | 3.5° (45 m runway) / 4.5° (60 m runway) |
| **Brightness steps** | 1%, 3%, 10%, 30%, 100% |
| **Battery** | NiMH 12 V – 2.7 Ah |
| **Max. power at 100%** | 7.5 W (REL) / 3.75 W (THR-END) / 1.75 W (END) |
| **REL autonomy** | 4 h at 100% … 400 h at 1% |
| **END autonomy** | 18 h at 100% … 1800 h at 1% |
| **Charging time** | 15 h (charger / rack) |
| **Solar panel** | min. 20 W, optional 30 / 40 W |
| **Radio** | LoRa 868 / 915 MHz, optional 433 MHz |
| **Control range** | up to 10 km line of sight |
| **Ingress protection** | IP68 |
| **Temperature** | -55 °C … +55 °C |
| **Humidity** | 0–100% |
| **Weight** | 3 kg |
| **LED lifetime** | 100,000 h |

## Features

- ICAO low and medium intensity, colours per Fig. A1-1b
- Five brightness steps and battery status LEDs
- Local control, radio remote or Polaris application with base station
- ARCAL pilot activation (optional)
- Sensors: temperature, GPS, LED current and voltage, battery voltage, charging current, ambient light
- Battery disconnect for storage and transport (zero consumption)
- Optional IR LEDs for NVG compatibility

## Standards and compliance

- ICAO Annex 14, Vol. 1 – Aerodromes
- IEC TS 61827 – inset and elevated aerodrome luminaires

## Materials and construction

- Powder-coated aluminium housing, RAL 1004 (aviation yellow)
- Hardened glass diffuser
- Nickel-plated brass cable gland
- Stainless steel fasteners
- Anti-condensation valve

## Configuration options

- IR LEDs (NVG)
- Photocell – night-only operation
- One- or two-way radio control
- Built-in GPS
- ARCAL activation
- Solar panel 20 W, 30 W or 40 W
- Toe-in 3.5° or 4.5°

## Ordering code structure

`AL - 148 - 06 - WH/YE - 3,5`

| | |
|---|---|
| **AL** | Airfield lighting series |
| **148** | Product indicator (148 runway edge; 144 end; 145 threshold/end; 146 threshold wing; 160 approach; 147 taxiway) |
| **06** | Number of LEDs (increases by 1 when IR is included, e.g. 07) |
| **WH/YE** | Colour: WH/WH, WH/YE, WH/RE, GR, RE, GR-RE, BL |
| **IR** | Optional: IR LED |
| **3,5 / 4,5** | Optional: toe-in 3.5° or 4.5° (runway edge) |

## Compatible accessories

| | |
|---|---|
| **AL-173-AX** | Tripod |
| **AL-102-AX** | Φ260 mm base plate |
| **AL-213-AX** | 2.5" frangible coupling |
| **AL-141-AX** | Polaris photovoltaic panel |
| **AL-165-AX** | Polaris remote control |
| **AL-159-AX** | Polaris base station |

## Applications

**Non-precision approach airports** · **Temporary lighting during runway works** · **Emergency and backup lighting** · **Remote airfields and temporary airstrips** · **Military NVG operations**