

Portable Lighting Systems



Portable LED lighting systems for airports



Solar powered
Polaris



Polaris

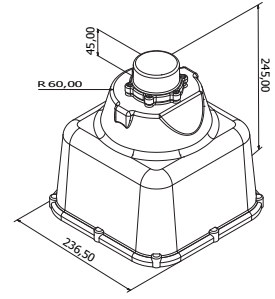


Charging

Polaris - Portable Light Fixtures



- Specially designed for remote aerodromes
- APP** - Approach Centre Light and Crossbars (white)
 - THR** - Threshold Wing Bar light (green)
 - RWE** - Runway Edge light (white)
 - TND** - Runway End light (red) / Threshold light (green)
 - TWE** - Taxiway Edge light (blue light)



The POLARIS light unit is lightweight, durable, waterproof and has been developed for fast deployment by non-skilled operators and will operate in the worst environmental conditions.

All the units are equipped with high power LEDs, matched by dedicated optics to drastically increase photometric performances, save on power consumption and reduce life cycle costs (compared to incandescent lamps).

Autonomy depends on the operating mode, the level of light and number of LEDs. The Running time is from 14 hours (full power, steady, RWE omnidirectional) up to 24 days (low power, flashing, APP).

Features

- No lamp changing for the entire lifetime of the light unit
- Extended battery life
- 15 hours maximum recharge time
- Simple drop-in charging system
- Low voltage battery protection
- Control options: manual, photocell or radio
- Flashing or steady signal
- Charge level indication



Battery Charging

The battery charger is made of individual trays designed to host the POLARIS fittings during storage.



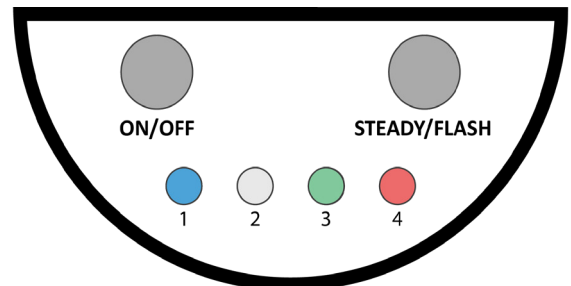
Charging rack with 5,10,15 or 20 charging posts



Individual charger

Battery Monitoring & Charging

The battery status is constantly monitored and a set of four LEDs gives a permanent indication.



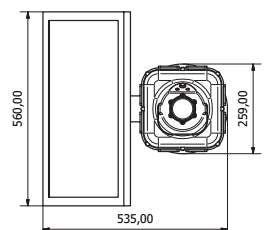
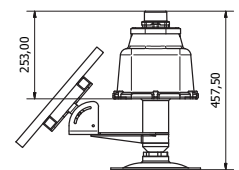
- 1 - 1ST STAGE OF CHARGING
- 2 - 2ND STAGE OF CHARGING
- 3 - FULLY CHARGED BATTERY
- 4 - DISCHARGED BATTERY

Polaris - Solar Powered

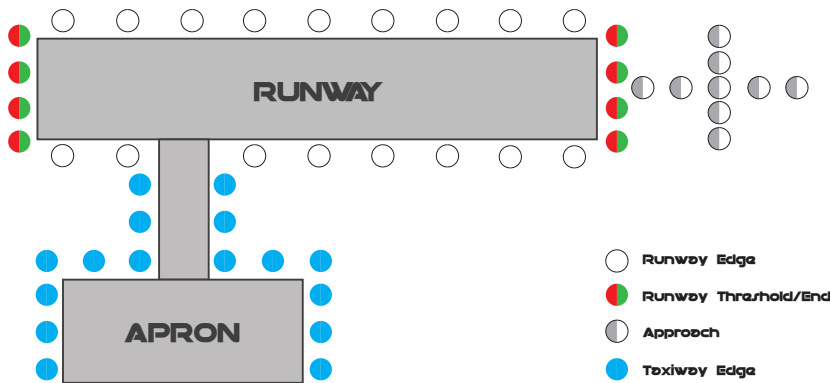


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- 6.100 cd** light output for Approach Centre light and Crossbars

- Wireless control and emergency ON/OFF button
- Casing made of UV-stabilized polycarbonate.
- Total battery capacity of 216W. 20W solar panel power supply.



Polaris System



The 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 in order 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.

The POLARIS meets the standards of International Civil Aviation Organization (ICAO) Annex 14, Federal Aviation Administration FAA (specifically: FAA AC 150/5345-46D; FAA AC 150/5345-50B for portable runway lighting);

Radio Control System

The system uses bidirectional RADIO communication to control and monitor each light fixture.

The screenshot shows the ElectroMax web interface. At the top, there's a navigation bar with 'MAP', 'SETTINGS', 'HELP', 'ABOUT', and 'SIGN OUT'. The main header displays 'System Status: 3 Devices, 0 Notifications' and 'System Mode: Performance'. Below this, there are control buttons for 'ON', 'OFF', '10%', '30%', '100%', 'TIMER', and 'LIGHT'. The central part of the interface is a map showing the location of the system in Romania. On the left, there's a sidebar for 'Polaris 01' with a 'DELETE' button, coordinates (Latitude: 45.40866, Longitude: 23.37028), and a 'VIEW GROUP' button. Below the map, there are 'LAMP CONTROL' and 'GROUP CONTROL' sections, each with intensity sliders (OFF, 1%, 3%, 10%, 30%, 100%) and operating mode buttons ('STEADY', 'FLASHING'). The 'Flashing frequency' is set to 20 (min) to 60.

With this system, all units are automatically located and placed on a map using an internal GPS module installed in each fixture.

The software allows the user to: check the battery status; see the estimated time remaining until full discharge; change the brightness step; change the operating mode to steady or flashing. The fixtures can be controlled individually or in groups.

This screenshot shows the 'Groups Management' section of the ElectroMax web interface. It includes 'Create' and 'Delete' buttons, a dropdown for 'Airport 1', and two columns of 'Devices'. The left column contains 'POLARIS 01' and 'POLARIS 02'. There are navigation arrows between the columns and 'Select All' and 'Select None' buttons at the bottom.

Users can check the battery level and status of the battery. If the battery is low, the intensity can switch automatically to the lower level, in order to extend the autonomy. A software routine can be created, allowing to turn units ON, OFF or to change the status during the day or according to a preset calendar.

This screenshot shows the 'Auto Time Control' and 'Light Sensor Control' sections of the ElectroMax web interface. The 'Auto Time Control' section has a table with 'Time' and 'Intensity' columns, showing a schedule from 02:00 to 23:00. The 'Light Sensor Control' section has a table with 'Sensor' and 'Intensity' columns, showing a schedule from 8:00 to 20:00. There are 'Add', 'Save', and 'Delete' buttons for each section.

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