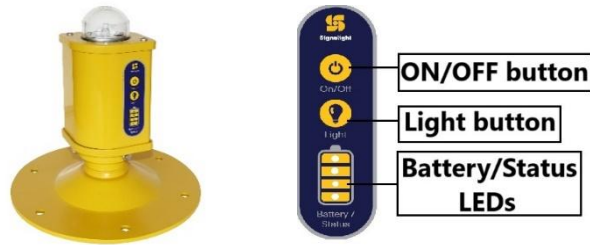


Polaris V2 TLOF Heliport



Control options

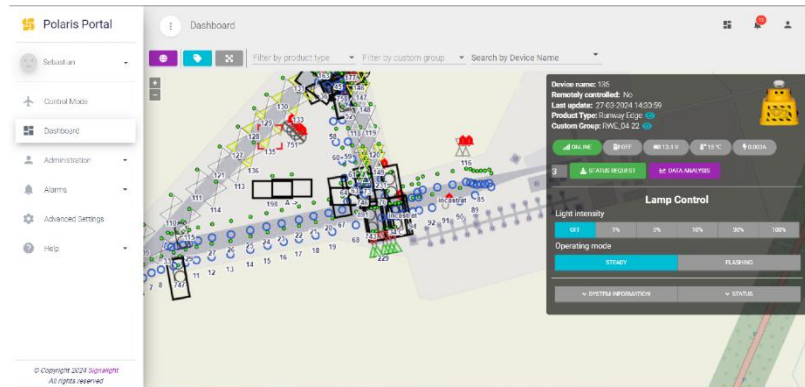
- Local with Polaris buttons



- Via remote controller using LORA technology in 868 MHz for Europe, 915 MHz for US, optional 433 MHz



- Via POLARIS computer interface using a POLARIS base station.








Description

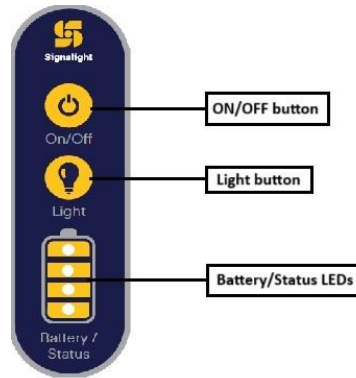
Housing - powder coated aluminum RAL 1004 (aviation yellow) ●
Disperser - glass
Cable gland - nickel plated brass
Fasteners - stainless steel
Casing - powder coated aluminum RAL 1004 (aviation yellow)

Environment

Temperature range: - 55° to +55°
Degree of protection: IP67
Humidity: 0-100%

<p>Mounting</p>	<p>On a base plate or tripod</p> 	<p>Including Solar panel stand</p> 
<p>Electrical Characteristics</p>	<p>Power consumption: maximum 0,5 W powered at 100% brightness</p> <p>Power supply: Power supply is provided by 1 rechargeable NiMh battery 12 V – 2,7 Ah</p> <p>Solar panel: 10 W</p> <p>Autonomy under ideal conditions (new battery, fully charged at 100%, external temperature of 20° Celsius)</p> <p>Brightness level: 100% - 60hrs 30% - 200hrs 10% - 600hrs</p> <p>At 1% and 3% intensities, the lamps have an estimated autonomy of at least twice that at 10% intensity, depending on factors such as operating environment, temperature, battery self-discharge, and more.</p>	
<p>Charging</p>	<p>Charging can be done using individual chargers for 1/6/10 lamps, racks designed for multiple lamps, or a solar panel.</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="558 1433 893 1702"> <p>Individual charger 1/6/10</p>  <p>Charging time: 15 hours</p> </div> <div data-bbox="1053 1433 1372 1702"> <p>Rack</p>  <p>Charging time: 15 hours</p> </div> </div> <div style="text-align: center; margin-top: 20px;"> <p>Solar panel</p>  <p>Charging time: Depending on weather conditions</p> </div>	

**Local/manual
Control**



After mechanical installation is done, push the ON/OFF button. This will connect the battery and the POLARIS unit will be powered. As long as the unit is powered the yellow LED from the SIGNALIGHT LOGO will flash every 5 seconds. In this moment the lights are in STANDBY mode.

To start the MAIN LEDs push the "Light button". At the first push the battery level will be indicated with the signal LEDs:

- First LED ON means the battery is between 0 to 25 % charged
- First two LEDs ON means the battery is between 25 to 50 % charged
- Three LEDs ON means the battery is between 50 to 75 % charged
- All four LEDs ON means the battery is between 75 to 100 % charged

The battery level indication expires in about 10 seconds and the status LEDs will turn OFF.

If the "Light button" will be pushed again MAIN LEDs will turn ON at 1%, after another push will go to 3%, then to 10%, 30% and 100%. After another push the light will turn OFF and the POLARIS unit will go in STANDBY.

Disconnecting the battery

If the "Light button" is pressed for longer than 3 seconds the battery will be disconnected. This operation is recommended if the lamps are going to be stored for a longer period of time or during transport. In this stage the consumption is zero. When the Polaris is disconnected, the main LEDs will flash for 3 times.

Photocell option function

Optional, the POLARIS lights can work on base of photocell just during the night. In this case the cycle made with the push button is: - battery status, 1 %, 3 %, 10%, 30%, 100%, photocell mode, standby When the photocell mode is selected, the main LEDs will flash for 5 times.

Control of the lamps can be done locally using the buttons on the control panel of the lamps or via the control application.

LOCAL CONTROL

All lamps have a control panel that includes two buttons and four signaling LEDs. Additionally, there is an orange LED in the middle of the LOGO SIGNALIGHT symbol.



After installation, pressing the On/Off button closes the power circuit between the battery and the lamp. After pressing the button, the first LED of the battery status will light up:



At this moment, the lamp requests access to the system. After a few seconds, the lamp receives access to the system, at which point the third LED will light up:



Radio control

From this moment on, the lamp can also be controlled via the application. Locally, the "Light button" can be pressed. Upon the first press, the battery level can be viewed:

Battery Charged 75-100%	Battery Charged 50-75%	Battery Charged 25-50%	Battery Charged 0-25%
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On the second press, the lamp turns on at 1%. With another press, it turns on at 3%, then at 10%, then at 30%, and finally at 100%. If pressed again, the lamp turns off.

If the "Light button" is held down for more than 5 seconds, the lamp will flash three times and then turn off (disconnecting the power from the battery).

To restart it, the On/Off button must be pressed.

Optional the POLARIS lights can be radio controlled.

Radio control is made using LORA technology in 868 Mhz for Europe or 915 Mhz for US, optional 433 Mhz.

The lights can be controlled one way using a handled remote control.

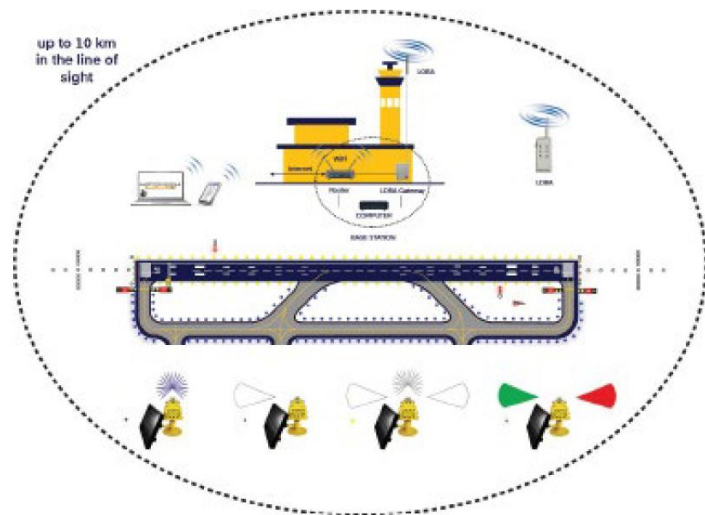


One way communications means all the lights can be started at 1%, 3%, 10%, 30% or 100% or switched OFF.

Optionally, the lamps can be controlled in groups, pre-set at the factory through a customized remote control

Another option is to control the lights using a base station, in this case the communication is bidirectional via POLARIS application.

The distance covered can be up to 10 km in line of sight.



From the POLARIS application the control is more complex. The lights can be controlled individual, in groups, on scenarios and the user can see all the parameters of the lights.

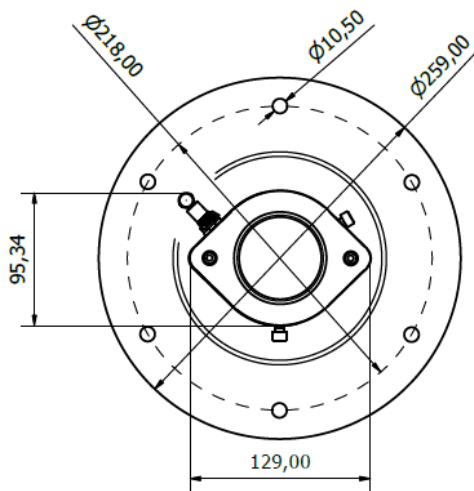
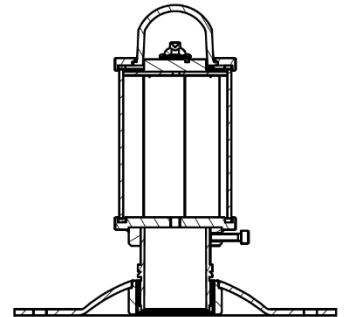
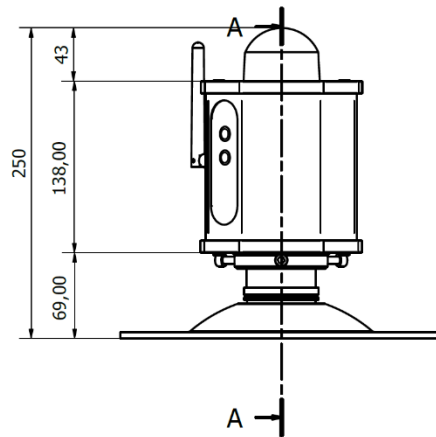
ARCAL – Pilot activation



This option allows pilots to activate the lights using the communication system. If you click three times on the microphone, the lamps will work at 10%, after five clicks, the lamps will work at 30% of intensity, and after 7 clicks, the lamps will work at 100%.

Mechanical
Characteristics

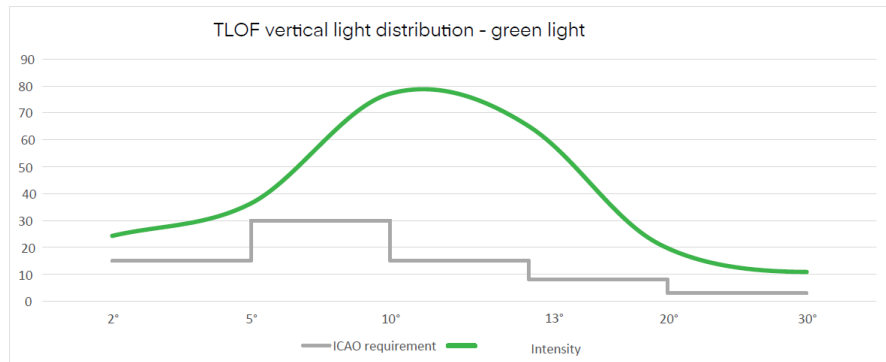
Dimensions:



**Photometric
Characteristics**

Intensity level: 1%, 3%, 10%, 30%, 100%
Horizontal output: 360°
Light color: Green light

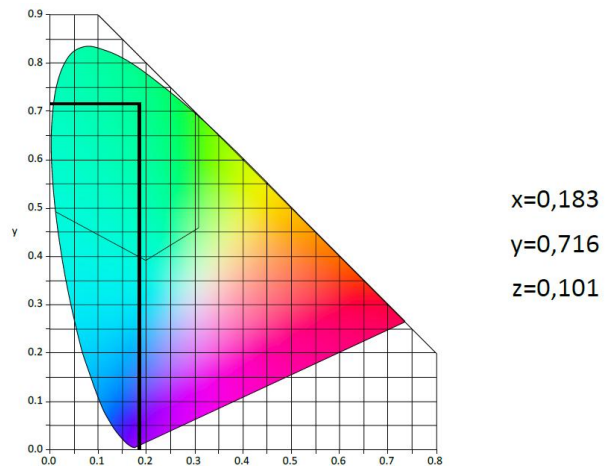
Vertical elevation angle	2°-5°	5°-10°	10°-13°	13°-20°	20°-90°
Required minimum intensity [cd]	15	30	15	8	3
Measured minimum intensity [cd]	24.3	36.4	71	111	11.3



The brightness intensity values comply with:

ICAO requirements Annex 14 Vol. 2 fig. 5.12 illustration 5

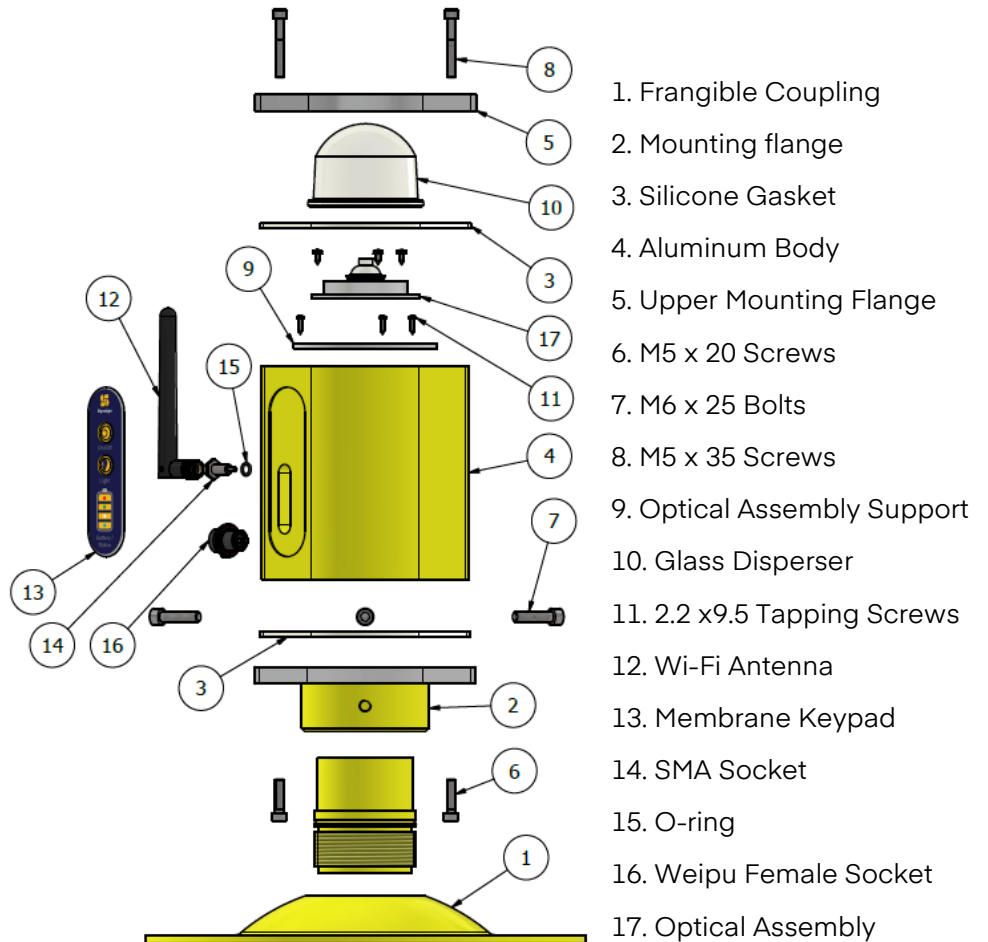
The light color emitted by the light fixture is green, with the trichromatic coordinates:



The measured trichromatic coordinates correspond to color range requirements in:

ICAO Annex 14 - Aerodromes Vol.1, fig. A1-1b. Colors for aeronautical ground lights (solid state lighting)

Spare Parts



1. Frangible Coupling
2. Mounting flange
3. Silicone Gasket
4. Aluminum Body
5. Upper Mounting Flange
6. M5 x 20 Screws
7. M6 x 25 Bolts
8. M5 x 35 Screws
9. Optical Assembly Support
10. Glass Disperser
11. 2.2 x9.5 Tapping Screws
12. Wi-Fi Antenna
13. Membrane Keypad
14. SMA Socket
15. O-ring
16. Weipu Female Socket
17. Optical Assembly



Signalight

+40 254 515 465
office@signalight.com

36 Lunca Street, Petrosani,
Hunedoara County, Romania

www.signalight.com