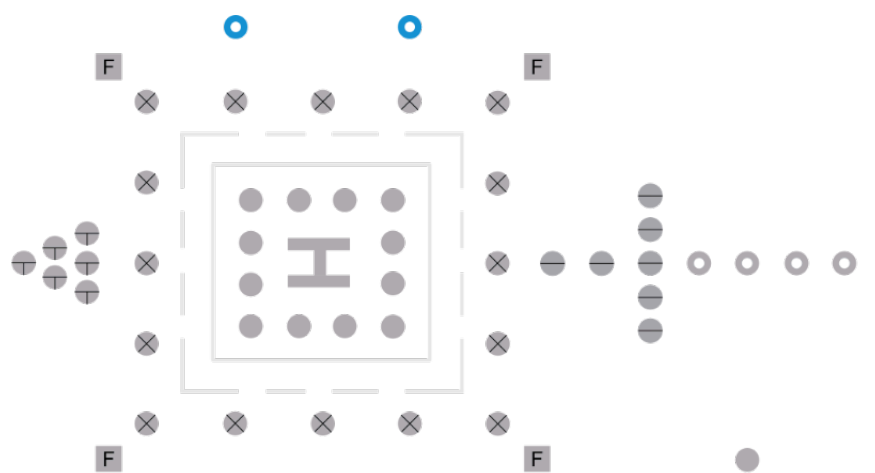

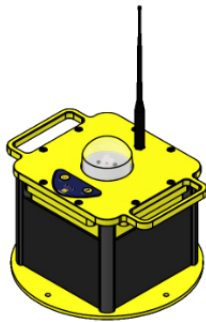
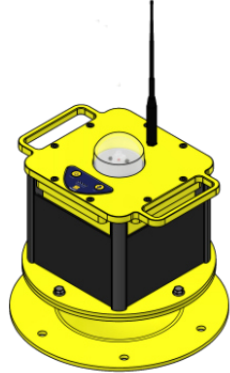
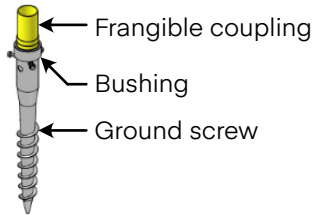


# Polaris V3 Taxiway Heliport



<p><b>Compliance to Standards</b></p>	<p><b>ICAO:</b> International Civil Aviation Organization, Aerodromes, Annex 14, Vol. 2 fig. 5.12 illustration 5.</p> <p><b>IEC TS 61827:</b> Electrical installations for lighting and beaconing of aerodromes. Characteristics of inset and elevated luminaires used on aerodromes and heliports.</p>
<p><b>Application</b></p>	<p>Taxiway lights</p>  <p> <span>○ Aiming Point Lights</span>    <span>⊗ FATO Lights</span>    <span>■ F Floodlights</span>    <span>○ Approach Lights</span>  <span>○ <u>Taxiway Lights</u></span>    <span>● TLOF Lights</span>    <span>— Approach</span>    <span>● Beacon Light</span> </p>
<p><b>Features</b></p>	<p>Designed and built with simplicity and ease of maintenance in mind.          High power LED technology (100 000 hrs lifespan).          Lightweight, low-energy and environment friendly lighting fitting.          Lead Acid battery          Local/manual control          Battery status LEDs</p> <p><b>Optional:</b></p> <p><b>Infrared</b> - invisible light to the naked eye, NVG compatible.  <b>Photocell sensor</b> - automatically switches between day and night operating modes.  <b>Radio control</b> - one or two way  <b>GPS incorporated</b>  <b>ARCAL</b> - pilot activation</p>

<p><b>Product Code</b></p>	<p><b>AL - 203 - 01 - BL</b></p> <p>Series Indicator (Airfield Lighting) <b>AL</b>                  Product Indicator <b>203</b>                  LEDs Number <b>01</b>                  LEDs Light Color (Blue) <b>BL</b></p> <p><i>When the infrared (IR) option is included, the IR LEDs are added to the number of visible LEDs indicated in the code. Depending on the configuration, one or two IR LEDs may be included.</i></p> <table border="1" data-bbox="523 647 1402 775"> <thead> <tr> <th colspan="2">Examples of codes:</th> </tr> </thead> <tbody> <tr> <td>IR not included</td> <td>AL-203-01-BL</td> </tr> <tr> <td>IR included (one IR led)</td> <td>AL-203-<b>02</b>-BL/IR</td> </tr> <tr> <td>IR included (two IR leds)</td> <td>AL-203-<b>03</b>-BL/IR</td> </tr> </tbody> </table>	Examples of codes:		IR not included	AL-203-01-BL	IR included (one IR led)	AL-203- <b>02</b> -BL/IR	IR included (two IR leds)	AL-203- <b>03</b> -BL/IR
Examples of codes:									
IR not included	AL-203-01-BL								
IR included (one IR led)	AL-203- <b>02</b> -BL/IR								
IR included (two IR leds)	AL-203- <b>03</b> -BL/IR								
<p><b>Description</b></p>	<p><b>Housing</b> - powder coated aluminum RAL 1004 (aviation yellow) </p> <p><b>Dispenser</b> - hardened glass</p> <p><b>Cable gland</b> - nickel plated brass</p> <p><b>Fasteners</b> - stainless steel</p> <p>Light fixtures are provided with anti-condensation valve.</p>								
<p><b>Environment</b></p>	<p><b>Temperature range:</b> -20°C to +55°C</p> <p><b>Degree of protection:</b> IP67</p> <p><b>Humidity:</b> 0-100%</p>								
<p><b>Mounting</b></p>	<div style="display: flex; justify-content: space-around;"> <div data-bbox="620 1368 826 1688">  <p>Installed directly on the ground (no fasteners required)</p> </div> <div data-bbox="1115 1317 1345 1688">  <p>On a base plate and a frangible coupling</p> </div> </div> <p>When installed directly on grass, sand, or soil without a solid foundation, the lamp can be mounted on a ground screw with an integrated bushing and frangible coupling.</p> <div data-bbox="1082 1827 1398 2040">  <ul style="list-style-type: none"> <li>← Frangible coupling</li> <li>← Bushing</li> <li>← Ground screw</li> </ul> </div>								

**Electrical Characteristics**

**Power consumption:** maximum 0.2 W powered at 100% brightness

**Power supply:** Power supply is provided by rechargeable LiFePO<sub>4</sub> Battery 3.6 V - 12 Ah

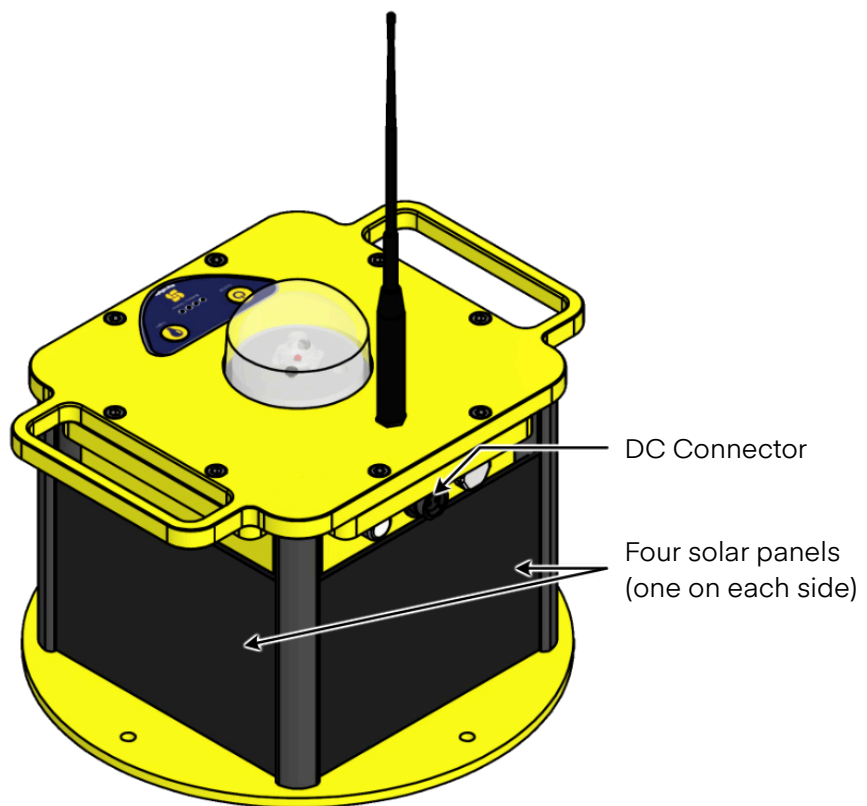
**Solar panels:** 4x2W

**Autonomy under ideal conditions**

(new battery, fully charged at 100%, external temperature of 20° Celsius) aprox. 216 hours.

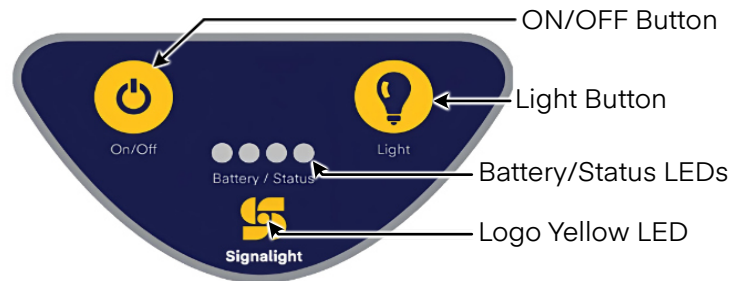
**Charging**

The primary charging method for Polaris V3 lamps is via the four integrated solar panels. Additionally, the lamps are equipped with a DC connector for optional external charging.



**Local/manual Control**

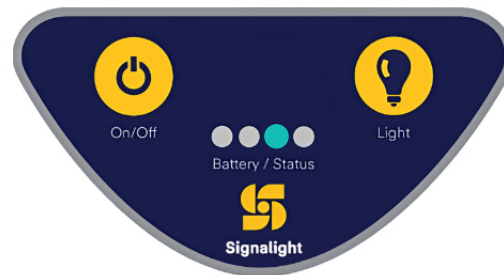
The lamps can be controlled locally using the buttons on the control panel of each lamp.



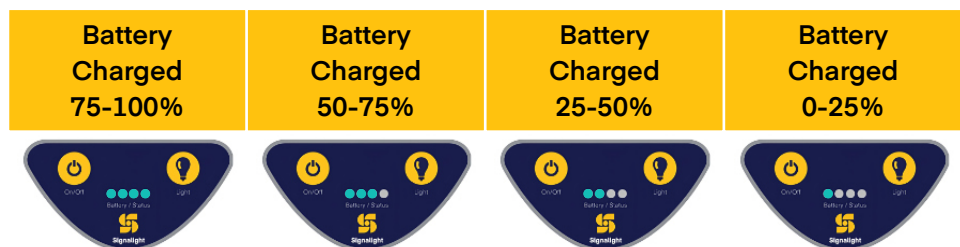
After installation, press the **ON/OFF button** to connect the internal battery and power on the unit. Once powered, the yellow LED in the SIGNALIGHT logo will blink every 5 seconds, indicating that the unit is in **Standby mode**. After pressing the button, the first LED of the battery/status will light 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:



Press the **Light button** once to display the current battery charge level using the 4 blue LEDs.



## Local/manual Control

Switching between modes can only be performed while the blue LEDs indicating the battery level are lit. These LEDs automatically turn off after approximately 8 seconds. Therefore, if the **Light button** is pressed after a longer period of inactivity, the first press will only activate the battery level indicators, and the lamp will switch to the next mode on the second press of the **Light button**.

Subsequent presses of the **Light** button will cycle through increasing light intensities as follows:

- 2nd press → 1% brightness
- 3rd press → 3% brightness
- 4th press → 10% brightness
- 5th press → 30% brightness
- 6th press → 100% brightness

### Photocell Mode (Optional)

Pressing the **Light button** a seventh time will activate **photocell mode** (if included), where the light operates automatically based on ambient light conditions.

When the lamp enters photocell mode, the main LED will flash six times, and the yellow LED in the SIGNALIGHT logo will blink three times, with the third flash being slightly longer than the first two. This sequence repeats every 5 seconds for as long as the lamp remains in photocell mode.

Pressing the **Light button** once more will turn off the light and return the unit to Standby mode.

In Standby, the yellow SIGNALIGHT logo LED will continue blinking once every 5 seconds.

When the lamp switches from photocell mode (if included) to standby mode, the main LED will flash rapidly four times.

### Disconnecting the battery

Holding down the **Light button** for more than 3 seconds will disconnect the battery. This step is advised when the lamps will not be used for an extended period or during transportation to ensure there is no power consumption. Prior to disconnection, the main LEDs will blink three times as an indicator. Once the battery is disconnected, the LED on the logo will turn off.



Look/See

**ON/OFF Button:** Connects the battery and the light enters standby mode

**Light Button:**

- 1st press → Battery status
- 2nd press → 1% light intensity
- 3rd press → 3% light intensity
- 4th press → 10% light intensity
- 5th press → 30% light intensity
- 6th press → 100% light intensity
- 7th press → Photocell mode (if included)
- 8th press → Standby mode

**Note:** The taxiway lamp allows selection of all five adjustable light intensity levels via the control panel, depending on operational requirements; however, only the 100% intensity level is ICAO compliant.

**Note:** If the photocell is not equipped, the unit enters Standby mode on the 7th press.

**Radio Control**

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



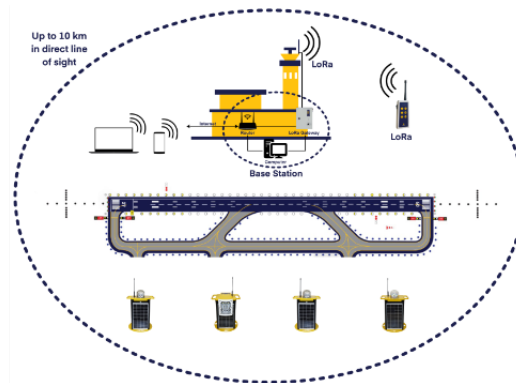
Look/See

**Note:** The taxiway lamp allows selection of all five adjustable light intensity levels via the remote control, depending on operational requirements; however, only the 100% intensity level is ICAO compliant.

**Polaris Portal**

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

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



From the POLARIS Portal 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.

**Pilot activation**

**ARCAL – Pilot activation**

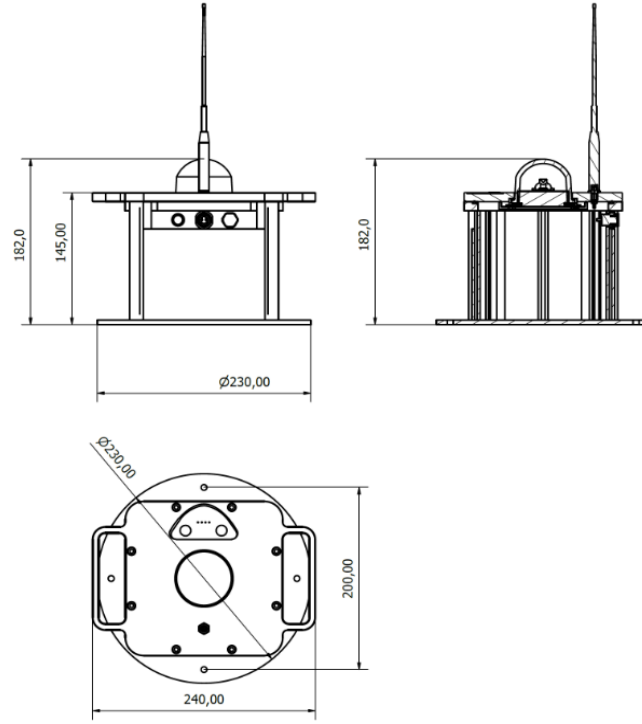


This option allows pilots to activate the lights using the communication system. **Three clicks** on the microphone set the lamps to **10%** intensity, **five clicks** to **30%**, and **seven clicks** to **100%**.

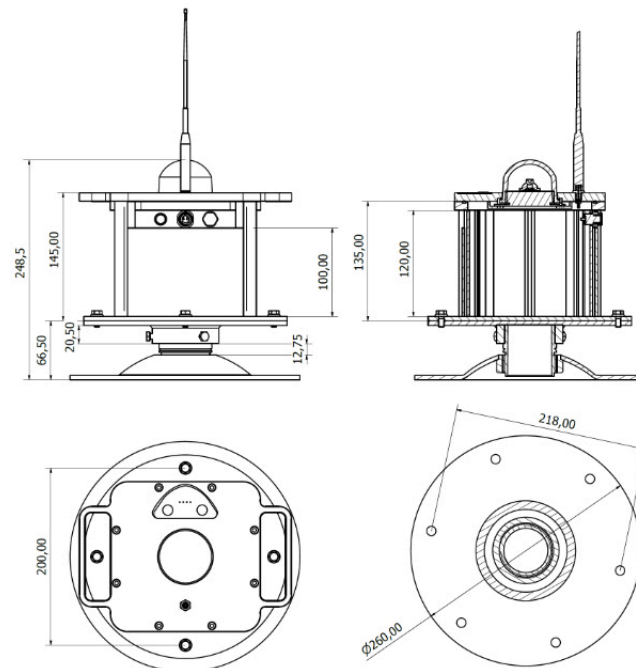
**Mechanical Characteristics**

**Weight: 4 kg**

**Dimensions without base plate and frangilbe coupling:**



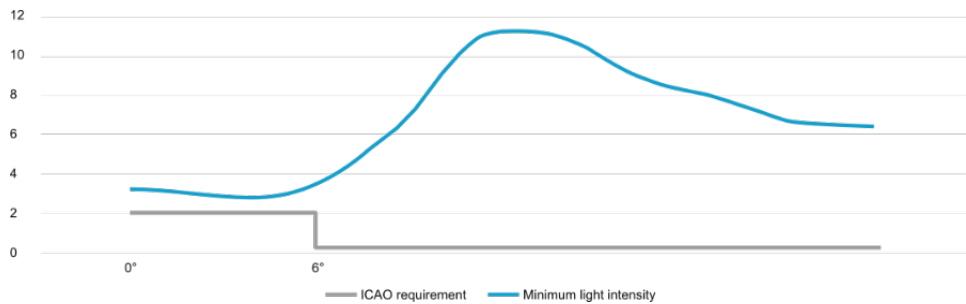
**Dimensions with base plate and frangilbe coupling:**



Photometric Characteristics

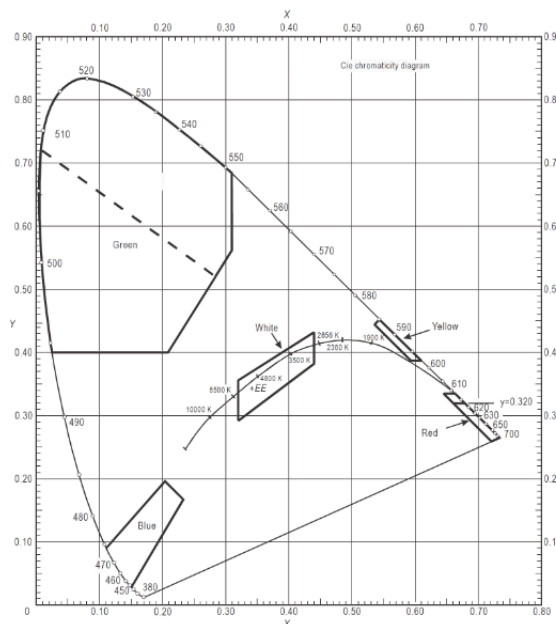
Intensity level: 1%, 3%, 10%, 30%, 100%  
 Horizontal output: 360°  
 Light color: Blue

Vertical elevation angle	0° - 6°	>6°
Required minimum intensity [cd]	2	0.2
Measured minimum intensity [cd]	3.4	11.4



The brightness intensity values comply with:  
**ICAO requirements Annex 14 Vol.1 cap.5.3.18.8**

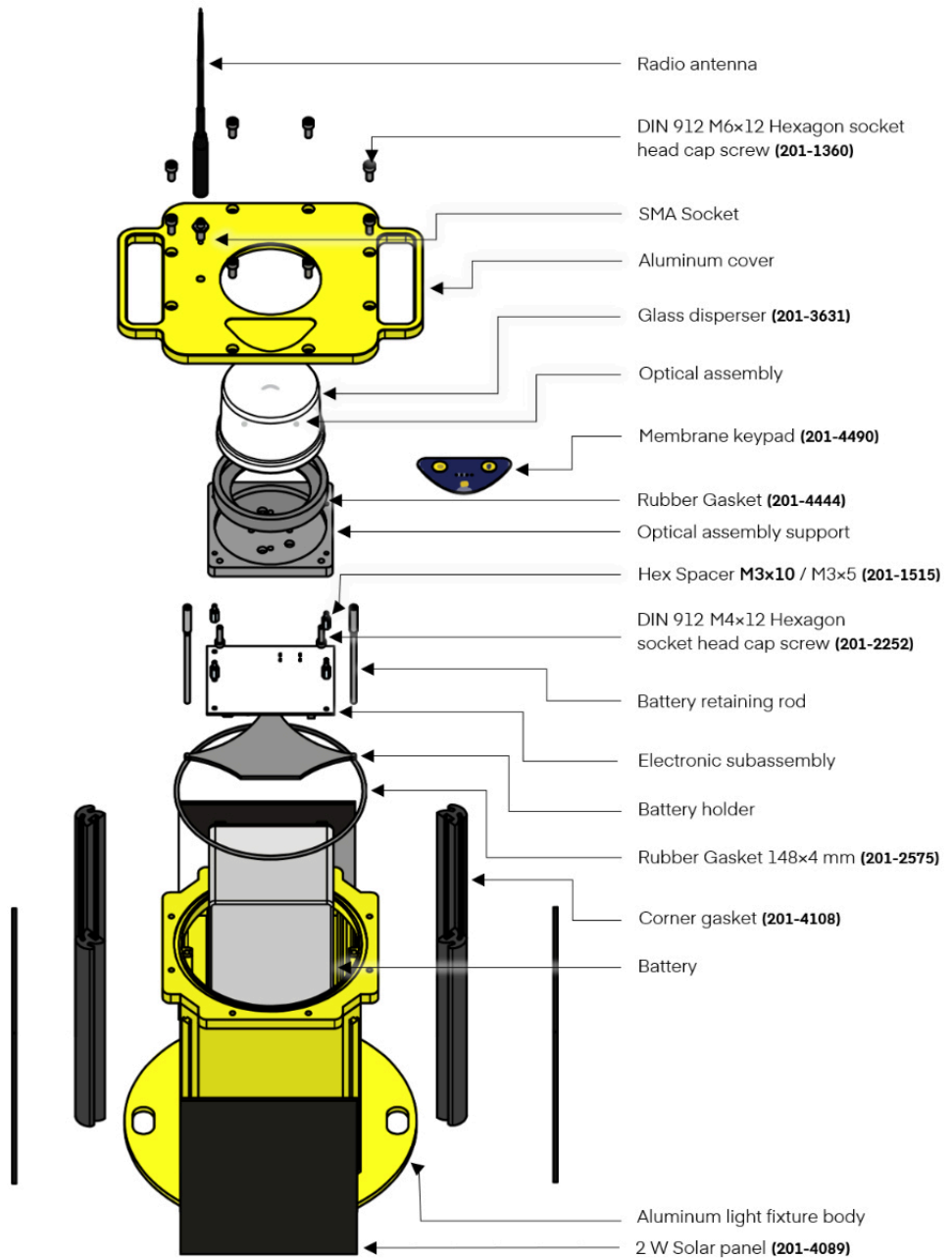
The light color emitted by the light fixture is blue, with the following trichromatic coordinates:



The measured trichromatic coordinates correspond to color range requirements in:

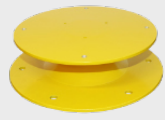

**ICAO Annex 14 - Aerodromes Vol.1, fig, A1-1b.**  
**Colors for aeronautical ground lights (solid state lighting)**

**Spare Parts**



**Accessory**

To order accessories please call our customer support. For contact details please refer to our website - [www.signalight.com](http://www.signalight.com)

#	NAME - SERIES	PRODUCT CODE	IMAGE
1	Fixing System for Polaris V3	AL-232-AX	
2	Ground mounting screw	AL-229-AX	



**Signalight**

**+40 254 515 465**  
**office@signalight.com**

36 Lunca Street, Petrosani,  
Hunedoara County, Romania

**[www.signalight.com](http://www.signalight.com)**