

# Low-intensity solar powered light

ICAO Low-intensity Type A 10cd, Type B 32cd and Type E 32cd flashing  
 FAA L-810  
 Infrared 850nm

**OBELUX**  
 AVIATION LIGHTS

Obelux Oy, Kutomotie 6 B, 00380 Helsinki FINLAND | The information in this document is subject to change without notice. © Obelux Oy 2022

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## Optical characteristics

- ▶ 10cd / 32cd red and IR
- ▶ Red or IR only
- ▶ Color aviation RED
- ▶ Horizontal beam 360°
- ▶ Vertical beam >10°
- ▶ Infrared 850nm
- ▶ All models fixed or flashing
- ▶ Photocell for Day / Night detection

## Specifications met

ICAO International Standards and Recommended Practices:  
 Aerodromes Annex 14 Volume 1,  
 8th Edition, July 2018, Chapter 6:  
 Low-intensity Type A  
 Low-intensity Type B  
 Low-intensity Type E

FAA Advisory Circular (9/28/2016)  
 AC 150/5345-43H:  
 L-810  
 L-810F

Finnish Civil Aviation Authority, TraFi  
 (FIN)

Transportstyrelsen TSFS 2020:88  
 (SWE)

Luftfartstilsynet FOR-2014-07-15-980  
 (NOR)

Ministerie van Infrastructuur en Milieu  
 (lage intensiteit), 30.9.2016 (NLD)

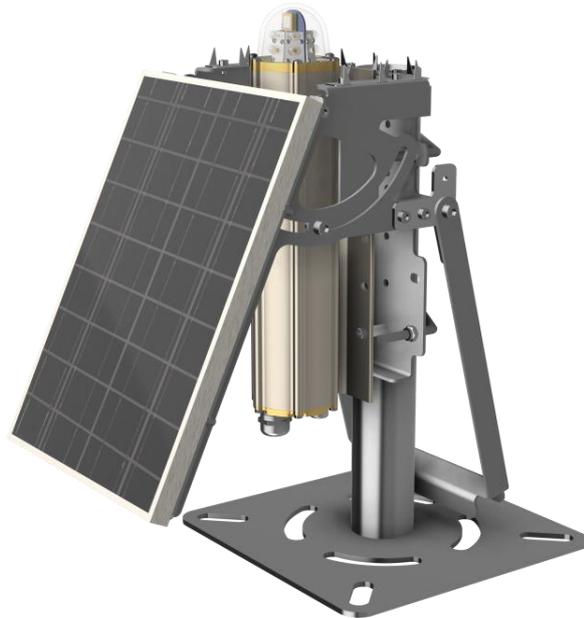


Photo only for illustration

## Low-intensity Obstruction Lights

### LED Aviation Obstruction Lights

Obelux low-intensity obstruction light with fully Night Vision Goggle (NVG) compliant infrared. The light is designed for marking tall structures such as wind turbines, chimneys, masts, and towers. The product offers unique features such as fault monitoring, photocell and switcher incorporated in the light. Optionally the lights can be connected to Obelux aviation light system through Modbus serial lines.

### Key Features

- ▶ Based on LED technology
- ▶ Low-intensity RED fixed and flashing light
- ▶ NVG compliant infrared (IR) light
- ▶ Incorporated photocell for Day/Night switching
- ▶ GPS synchronization
- ▶ Extremely low power consumption
- ▶ Provides long maintenance free operating time
- ▶ 5-year warranty
- ▶ Optional 10-year warranty
- ▶ Standalone charger controller with MPPT
- ▶ Lithium ion batteries with short circuit and overvoltage protection
- ▶ Battery temperature monitoring

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## Installation notes

- ▶ Adjust the solar panel angle according to worst solar conditions (e.g. according Spring and Autumn conditions)
- ▶ 15 degrees recommended solar panel angle

## Electrical Characteristics

- ▶ Li-ion battery capacity 100Wh or 200Wh
- ▶ Isolated RS-485
- ▶ Alarm relay  
Ratings: 250VAC @ 8A; 50VDC @ 1A
- ▶ Option for SMS messaging for alarms

## Mechanical Characteristics

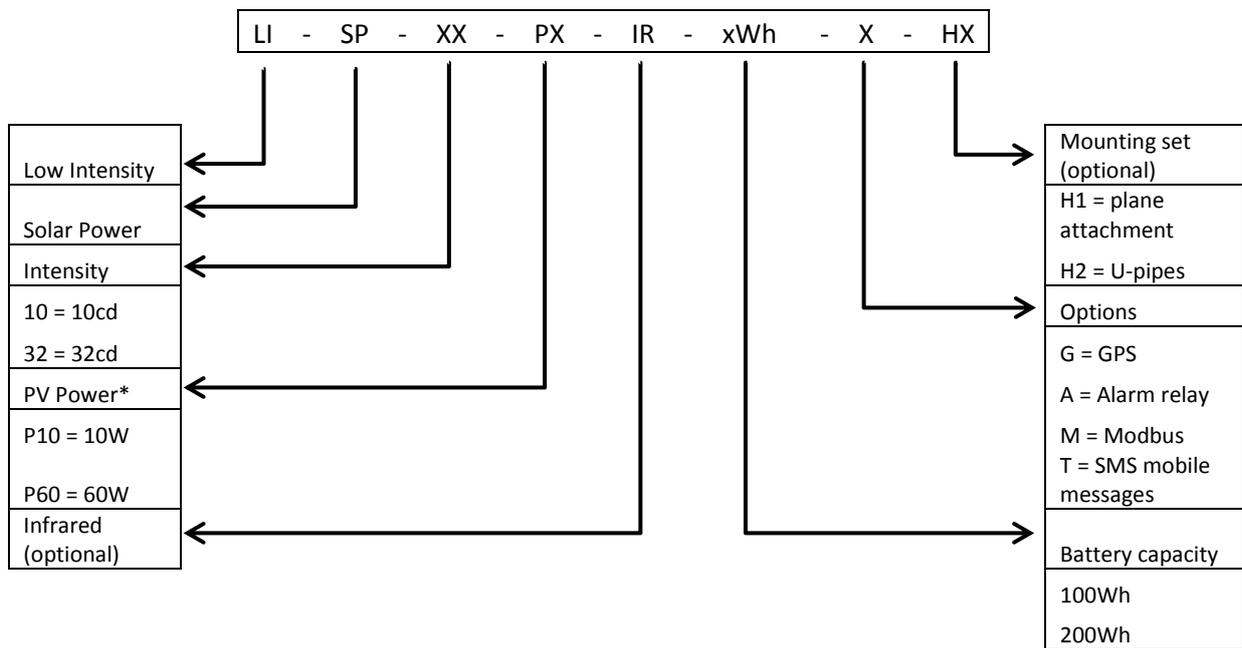
- ▶ Anodized, marine grade aluminum body and mechanical parts
- ▶ AISI316 acid proof stainless steel screws
- ▶ Glass cover, degree of protection IP65
- ▶ Acrylic lenses, UV protected
- ▶ Operating temperature range -40...+55 °C
- ▶ Weight 7,4kg without mounting set

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## Product codes



\* PV = photovoltaic, solar panel

Low intensity 10cd/32cd red / Infrared (IR) Type A

Product code example	ICAO	Output	PV Power	IR	GPS sync	Alarm relay	Modbus	SMS messages
LI-SP-10-P10-IR-100WH-GAMT-H1	Type A	10cd+IR	10W	Yes	Yes	Yes	Yes	Yes

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## Configuring Obelux Low-Intensity series lights

### Stand-alone mode

Configuration DIP switches 1-2 are used to control the photocell mode (enabled/disabled) and the photocell threshold values. The factory default setting is these switches OFF (steady-burning mode without photocell control). With the photocell operation enabled, the obstruction light turns on when the ambient light level has dropped below the selected level. The light turns off when the ambient light level has exceeded the selected value. The turn-on and turn-off times are approximately 3 minutes. Low powered obstruction light has practically no visibility in day. The light causes no light pollution. It is recommended to keep the photocell disabled. The lights power consumption is low.

DIP switch		Photocell threshold
1	2	
off	off	Photocell disabled (light on all the time)
on	off	200 lx (dark)
off	on	400 lx (twilight)
on	on	1600 lx (between twilight and midday), recommended if photocell is used

DIP switch 6 is ON/OFF switch. Turn on the switch to turn on the light.

DIP switch	Light on/off
6	
off	OFF
on	ON

### Modbus mode (models with -M option)

Turn on DIP8 to configure the light into Modbus operation. Configuration DIP switches 1-5 are used to set the light a Modbus address. Duplicate addresses on the same bus are not allowed. Give each device a unique address. The addresses need to be set from lowest to highest in order. E.g. if 3 devices are used, they need to be in addresses 1, 2 and 3.

Note: No address is set to a Master light (DIP7: Master – Slave functionality).

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DIP switch					Modbus Address
1	2	3	4	5	
on	off	off	off	off	Address 01
off	on	off	off	off	Address 02
on	on	off	off	off	Address 03
off	off	on	off	off	Address 04
on	off	on	off	off	Address 05
off	on	on	off	off	Address 06
on	on	on	off	off	Address 07
off	off	off	on	off	Address 08
on	off	off	on	off	Address 09
off	on	off	on	off	Address 10
on	on	off	on	off	Address 11
off	off	on	on	off	Address 12
on	off	on	on	off	Address 13
off	on	on	on	off	Address 14
on	on	on	on	off	Address 15
off	off	off	off	on	Address 16
on	off	off	off	on	Address 17
off	on	off	off	on	Address 18
on	on	off	off	on	Address 19
off	off	on	off	on	Address 20
on	off	on	off	on	Address 21
off	on	on	off	on	Address 22
on	on	on	off	on	Address 23
off	off	off	on	on	Address 24
on	off	off	on	on	Address 25
off	on	off	on	on	Address 26
on	on	off	on	on	Address 27
off	off	on	on	on	Address 28
on	off	on	on	on	Address 29
off	on	on	on	on	Address 30
on	on	on	on	on	Address 31

DIP switch	Operating mode
8	
off	Standalone
on	Modbus

DIP switch		Reserved
6	7	

The RS-485 bus should be terminated with the on-board 120 ohm resistors on both ends of the communications bus. To terminate the RS-485 bus, switch the RS-485 termination DIP switch to the ON position in these devices.

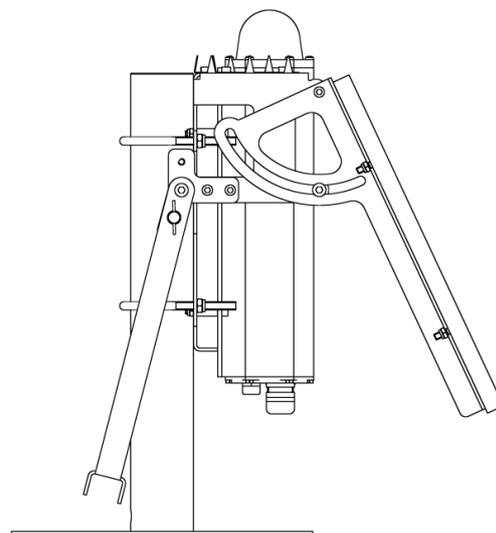
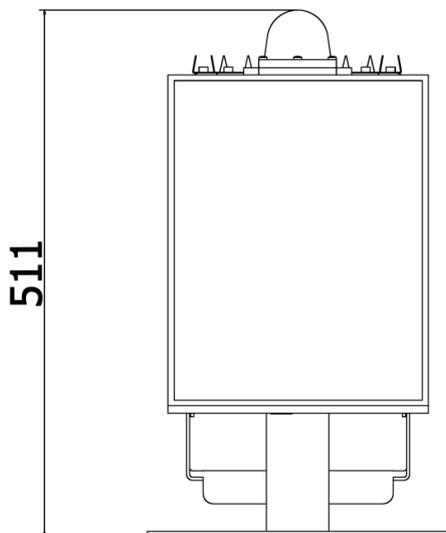
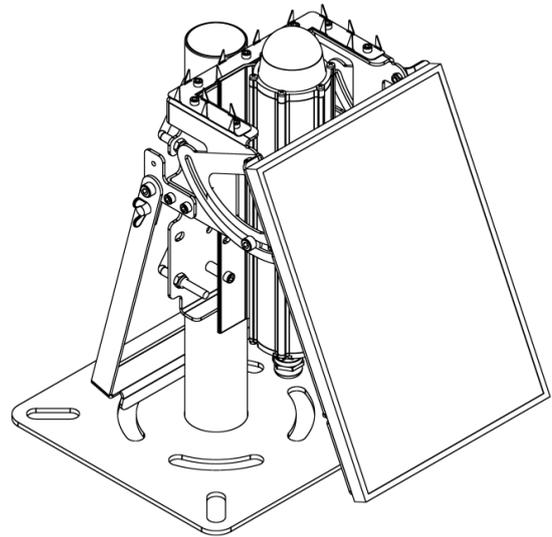
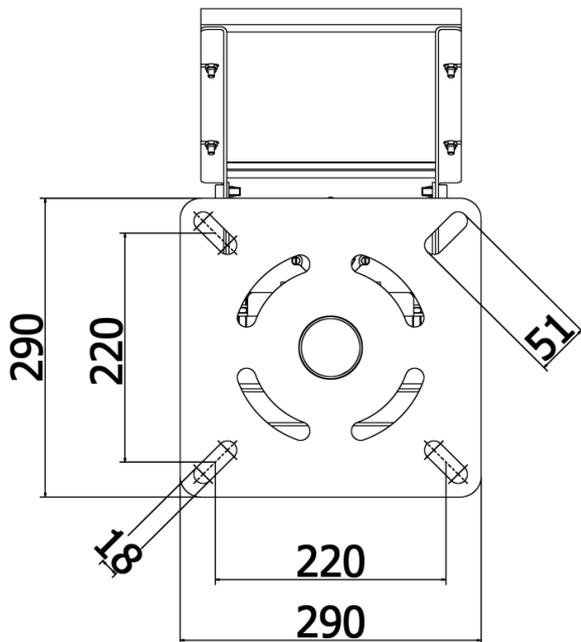
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## Mounting sets

### H1



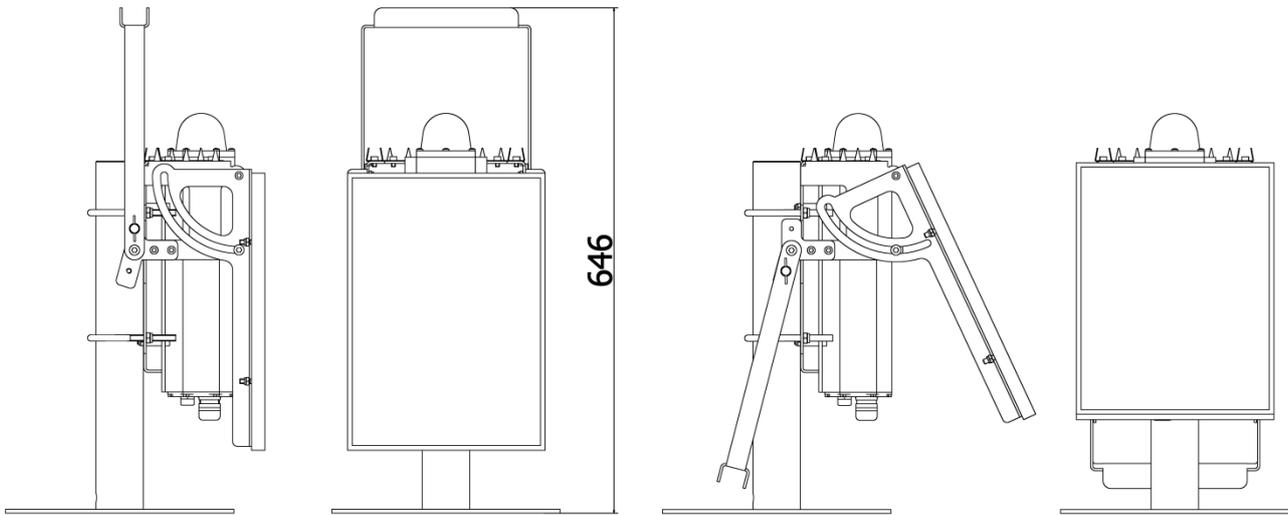
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Dimensions (mm)

**H2 - coming soon**