

**Portable 12 V DC ICAO Low-intensity, Type A Obstacle Light (red only)**

Obelux 10-12-P-R is a portable, battery-operated red obstacle light. The light has been designed for outdoor use and has an enclosure made of shockproof polycarbonate. It does not require any maintenance apart from cleaning the enclosure and changing the batteries when needed. The operating time of the batteries depends on the operating mode selected, typical from 4 to 14 weeks.

**SPECIFICATIONS**

**Key features**

- Extremely reliable
- Very low power consumption
- 10 cd red steady burning light
- Very long battery lifetime
- Stabilised light output
- Photocell control
- Lightweight and small
- External power supply and chaining connectors as option
- 90° / 200° / 360° operating modes
- Microprocessor control

**Benefits**

- Very long maintenance intervals
- Low battery costs
- Easy to handle

**RED light: Specifications met**

- ICAO Annex 14 Volume 1, 5th edition July 2009 Table 6-3, Low-intensity, Type A (fixed obstacle) obstacle light
- ICAO Annex 14 Volume 1, 5th edition July 2009 chapter 7, unserviceability lights.

**RED light: Photometric characteristics**

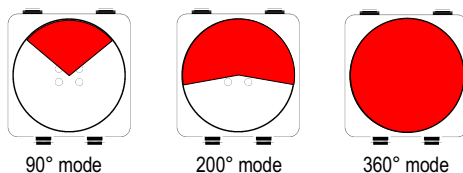
- Intensity >10 cd, 14 cd typical
- Colour: aviation red
- Horizontal radiation pattern 90°, 200° or 360°
- Vertical radiation pattern +37°, -7°, aiming angle +14°
- Current for the LEDs is stabilised by constant current generator
- Expected lifetime without light output falling below 10 cd >100 000 h

**Photocell characteristics**

- High Accuracy
- User selectable switching threshold 150 lux / 400 lux / always on
- Turn on delay 5 s
- Turn off delay 180 s
- Power consumption <0.05 W

**Electrical characteristics**

- Optimised for Air-Alkaline battery (non-rechargeable)
- Nominal operating voltage 12 V DC
- Power consumption < 0.4 W / < 0.7W / < 1.1W (90° / 200° / 360° mode)
- Operating voltage range 8 - 18 V DC
- Continuous operating time 2700 / 1200 / 790 h (90° / 200° / 360° mode)



**Obelux 10-12-P-R Obstacle Light**

**Other**

- Corrosion and oxidation free materials
- Uncoloured polycarbonate cover
- Yellow shockproof polycarbonate enclosure
- Yellow reflective tapes on each side
- Degree of protection: IP 45 (IP 67 with sealed batteries)
- Operating temperature range: -40...+55 °C
- Dimensions (LxWxH): 210 mm x 175 mm x 135 mm
- Weight with 4 pcs Air-Alkaline battery: 4 kg
- 5 year warranty

**Standard Batteries**

- Air-Alkaline batteries (non-rechargeable)
- Environmentally friendly, no toxic materials
- Dimensions 67 x 67 x 98/108 (L x W x H)
- Nominal voltage 6 V
- Capacity 50 Ah
- Half capacity configuration: 2 batteries (total 12 V 50 Ah)
- Full capacity configuration: 4 batteries (total 12 V 100 Ah)

**Order codes**

- Obstacle Light: **Obelux 10-12-P-R-CST**
- Air-Alkaline Battery: **EL-IP-5-6V**

**Options:**

- External power supply / charging and chaining connectors
- FAA L-810 -type (32.5 cd) Obstacle Light
- 5 Ah rechargeable Lead Acid batteries
- Radio remote control
- Blue taxiway edge light
- Other colours: E.g. blue, green, yellow, white or orange light

**OPERATING VOLTAGE**

**12 VDC**

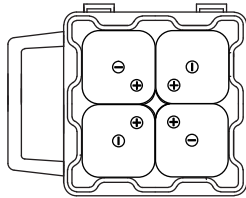
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**CAUTION ! LED RADIATION**

DO NOT STARE INTO LED BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS.  
CLASS 2A LED PRODUCT

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Battery configuration

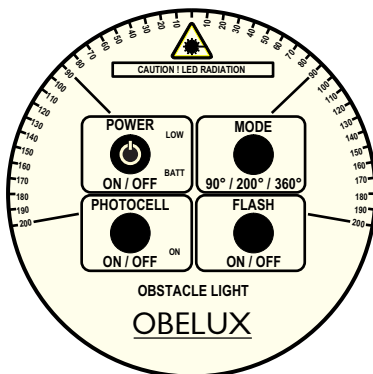
**INSTALLING BATTERIES**

10-12-P-R has been optimised for use of Air-Alkaline batteries with a nominal operating voltage of 6 V, 50 Ah. The batteries are installed as shown in the above figures. The operating time needed defines whether you need two or four batteries.

After the batteries have been inserted and the cover closed, the following default settings are active:

- POWER: **ON**
- MODE: **360°**
- PHOTOCELL: **ON**
- FLASH: **OFF**

The settings can be easily changed from the control panel on the cover of the light. When the light is switched off, the latest settings are stored into the memory of the light. When the cover is opened again, the default settings are restored.



Obelux 10-12-P-R Obstacle Light Control Panel

**CONTROL PANEL SWITCHES**

**POWER ON / OFF**

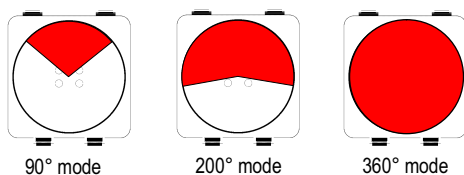
When switched OFF, the current consumption of the light is about 0.4 mA (3.4 Ah / year), which enables the lights to be stored with the batteries installed. The red LOW BATT indicator light starts flashing when the battery voltage has decreased below 7.8 V. A voltage level that low means that also the light output level starts decreasing.

**MODE 90° / 200° / 360°**

For selecting horizontal radiation pattern. For example, when marking runway ends at airports, narrow radiation patterns can be selected and consequently, the light's operating time extended.

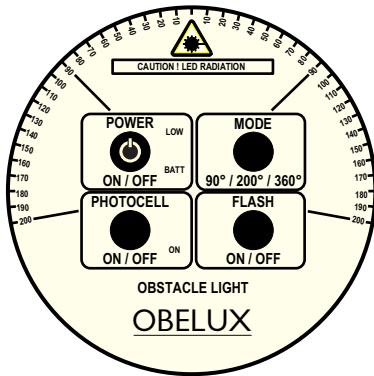
Current consumption and continuous operating times when using 4 x 50 Ah batteries in different modes (70% battery capacity):

90°	26 mA	2700 h (110 days)
200°	57 mA	1200 h (50 days)
360°	88 mA	790 h (32 days)



NOTE: Usable battery lifetime may be shorter.

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**3. PHOTOCELL ON / OFF**

For selecting the use of day-and-night switch. A yellow flashing indicator light shows when the photocell is active. The default threshold value of the photocell is 150 lux. The settings of the photocell can be changed using the dip switches on the inside of the cover, see figure below. At the dusk, the light turns on after 5 seconds delay and at the dawn, turns off after 3 minutes delay. The current consumption with photocell activated and light turned off is 4 mA (average).

The operating time at 12 h ON / 12 h OFF intervals, 360° mode and when using 4 x 50 Ah batteries (70% battery capacity) is as follows:

90°	220 days
200°	100 days
360°	64 days

NOTE: Usable battery lifetime may be shorter.

Selecting 'Test on' changes the turn off delay from default value (180 seconds) to 5 seconds.

**4. FLASH ON / OFF**

When switched on, the light flashes 40 times / minute, duration of each flash being 100 ms. This selection extends the operating time remarkably.

Note, however, that this option has not been specified by ICAO.

The theoretical operating time for different modes when using 4 x 50 Ah batteries (70% battery capacity) is as follows, with and without a photocell (12 h ON / 12 h OFF):

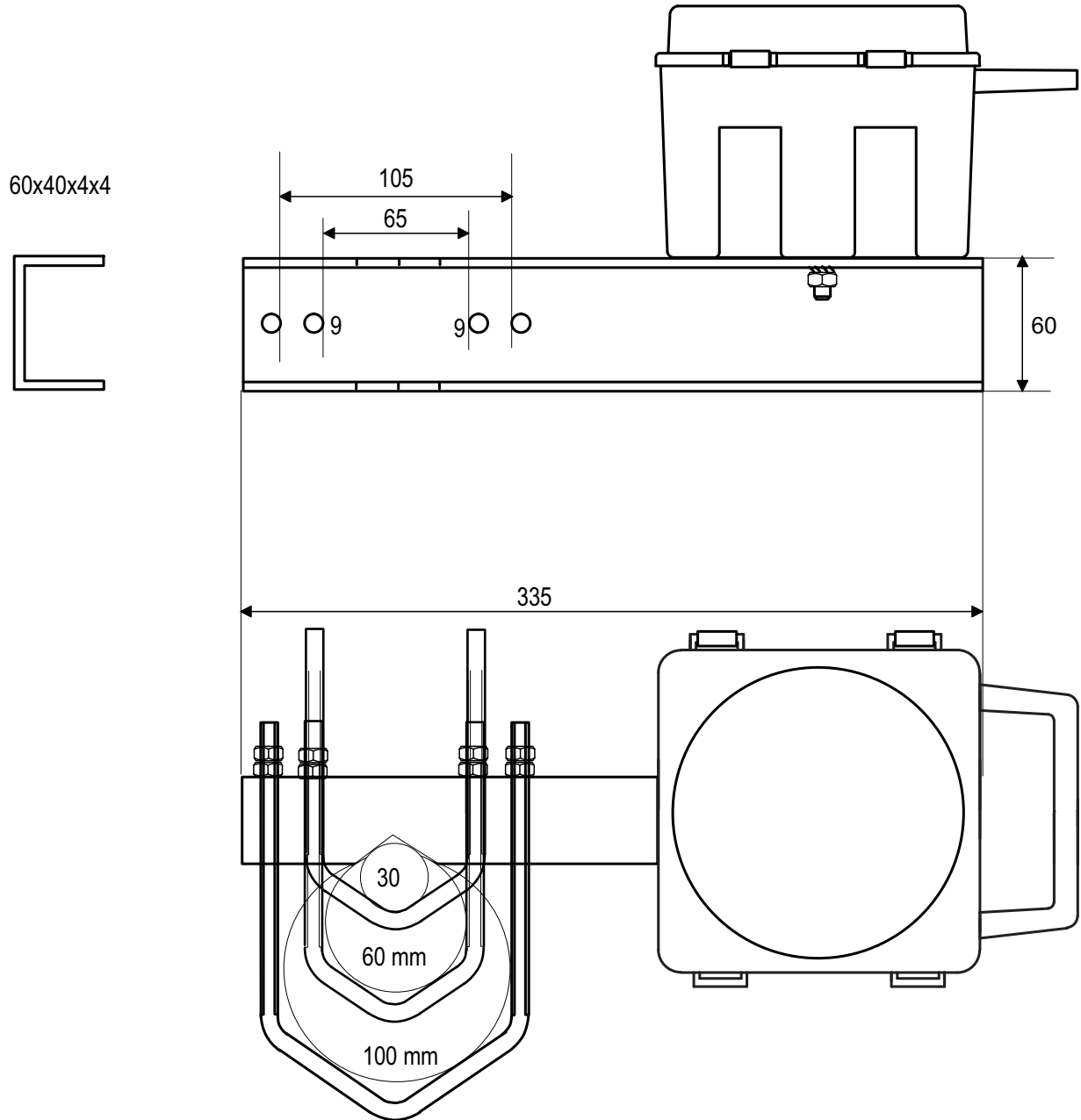
Mode	Photocell ON	Photocell OFF
90°	3360 days	1680 days
200°	1500 days	750 days
360°	960 days	480 days

NOTE: Usable battery lifetime may be shorter.

**DEFAULT SETTINGS**

150 LUX	<input type="checkbox"/>	400 Lux
NOT USED	<input type="checkbox"/>	
TEST ON	<input type="checkbox"/>	TEST OFF
90° + NO PC	<input type="checkbox"/>	360° + PC

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