

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

CEL-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 7 weeks.

SPECIFICATIONS
Key features

- Extremely reliable
- Very low power consumption
- 10 cd red steady burning light
- Very long battery lifetime
- Stabilised light output
- Photo-cell 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, third edition July 1999 Table 6-3, Low-intensity, Type A (fixed obstacle) obstacle light
- ICAO Annex 14 Volume 1, second edition July 1995 chapter 7, unserviceability lights.

RED light: Photometric characteristics

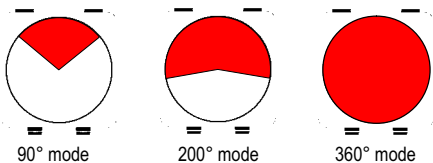
- Intensity >10cd, 14cd typical
- Colour: aviation red
- Horizontal radiation pattern 100°, 200° or 360°
- Vertical radiation pattern +37°, -7°, aiming angle +14°
- Current for the LEDs is stabilised by constant current generator
- Expected lifetime without light output falling below 10cd >100 000 h

Photo-cell characteristics

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

Electrical characteristics

- Optimised for Air-Alkaline battery (non-rechargeable)
- Nominal operating voltage 12VDC
- Power consumption <1W / <2W / <3W (90°/200°/360° mode)
- Operating voltage range 8 - 18 V DC
- Continuous operating time 1400 / 625 / 400 h (90° / 200° / 360° mode)


CEL-10-12-P-R Obstacle Light
Other

- Corrosion and oxidation free materials
- Uncoloured polycarbonate cover
- Yellow shockproof polycarbonate enclosure
- Red reflective tapes on each side
- Degree of protection: IP45 (IP67 with sealed batteries)
- Operating temperature range: -40...+55 °C
- Dimensions (LxWxH): 210mm x 175mm x 135mm
- Weight with 4 pcs Air-Alkaline battery: 4kg
- 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 6V
- Capacity 50Ah
- Half capacity configuration: 2 batteries (total 12 V 50Ah)
- Full capacity configuration: 4 batteries (total 12 V 100Ah)

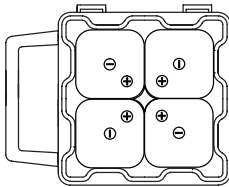
Order codes

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

Options:

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





Battery configuration

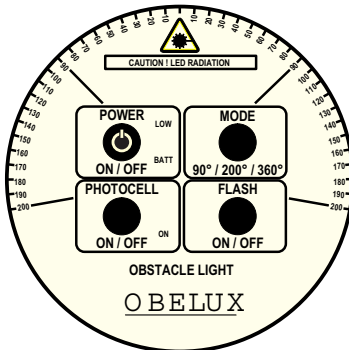
INSTALLING BATTERIES

CEL-10-12-P-R has been optimised for use of Air-Alkaline batteries with a nominal operating voltage of 6V, 50Ah. The batteries are installed as shown in the above figures. The operating time 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: **90°**
- PHOTOCELL: **OFF**
- 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

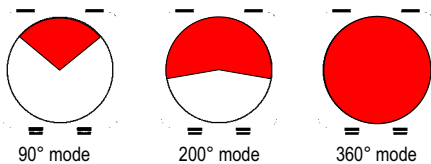
CONTROL PANEL SWITCHES

POWER ON / OFF

When switched OFF, the current consumption of the light is about 0.4 mA (3.4Ah / 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 7.8V. A voltage level that low means that also the light output level starts decreasing.

MODE 90° / 200° / 360°

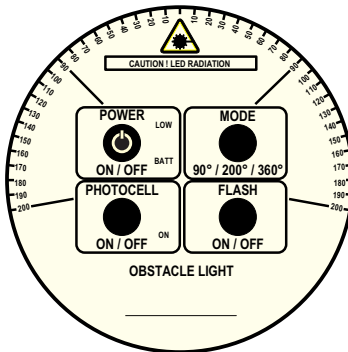
For selecting horizontal radiation pattern. For example, when marking runway ends at airports, narrow radiation patterns can be selected and consequently, the light's operating time extended.



Current consumption and continuous operating times when using 4 x 50 Ah batteries in different modes:

90°	70 mA	1400 h	(58 days)
200°	160 mA	625 h	(26 days)
360°	250 mA	400 h	(10 days)

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



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

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 DIL 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.

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

90°	116 days
200°	52 days
360°	25 days

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 flash rate is 40 fpm, duration of each flash being 100ms. This selection extends the operating time remarkably.

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

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

Mode	Photocell ON	Photocell OFF
90°	1160 days	580 days
200°	520 days	260 days
360°	320 days	160 days

DEFAULT SETTINGS

150 LUX	<input type="checkbox"/>	400 Lux
NOT USED	<input type="checkbox"/>	
TEST ON	<input type="checkbox"/>	TEST OFF
NOT USED	<input type="checkbox"/>	