



Portable 12VDC ICAO Low-intensity, Type A Obstacle Light and FAA Type L-461T Taxiway Edge Light

CEL-10-12-P-RB

Key features

- Extremely reliable
- Very low power consumption
- 10cd red and 2cd blue steady burning lights
- Very long battery life time
- 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 Specifications met

- ICAO Annex 14 Volume 1. 4rd edition July 2004 Table 6-3, Low-intensity, Type A (fixed obstacle) obstacle light
- ICAO Annex 14 Volume 1. second edition July 1995 chapter 7, lighting for unserviceable areas.

RED-Photometric characteristics

- Intensity >10cd (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 LED lifetime 100,000hrs of operation

Photocell characteristics

- High Accuracy
- User selectable switching threshold 150 lux / 400 lux / always on
- Turn on delay 3s
- Turn off delay 300s
- Power consumption <0,05W

RED-Electrical characteristics

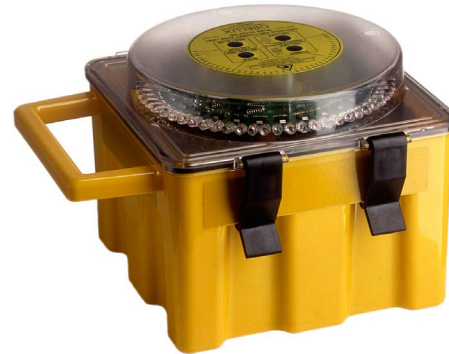
- Optimised for Air-Alkaline battery
- Nominal operating voltage 12 VDC
- Power consumption <1W / <2W / <3W (100°/200°/360° mode)
- Operating voltage range 7.5 ... 18VDC
- Continuous operating time max. 1000 / 500 / 250hrs (100° / 1200° / 360° mode)

BLUE Specifications met

- ICAO Annex 14 Volume 1. second edition July 1995 chapter 5.3.17, taxiway edge lights.
- FAA AC 150/5345-46B, L-461T taxiway edge.

BLUE-Optical characteristics

- Two intensity steps: Full >2cd (3cd typical) and half 1.5cd typical
- Colour aviation blue
- 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 LED lifetime 100,000hrs of operation



CEL-10-12-P-RB Portable Obstacle Light

BLUE-Electrical characteristics

- Optimised for Air-Alkaline battery
- Nominal operating voltage 12VDC
- Power consumption <0.3 / <0.6 / <0.9W (100° / 200° / 360° mode)
- Operating voltage range 7.5.. 18VDC
- Operating time max 2000 / 1000 / 500h (100° 1200° / 360° mode). Half intensity doubles operating times.

Other

- Corrosion and oxidation free materials
- Uncoloured PC cover
- Yellow shock resistant PC enclosure
- Yellow reflective tapes on each side
- Degree of protection: IP45
- Operating temperature range: -55 .. +55 °C
- Dimensions (LxWxH):185mm x 175mm x 135mm
- Weight with 4 pcs Air alkaline battery: 4kg
- 5 year warranty

Standard Batteries

- Self-regenerating AIR-ALKALINE batteries (non rechargeable)
- Environmental friendly, non toxic material
- Spring Connector type.
- Dimensions 67mm x 67mm x 98/108mm (L x W x H)
- Nominal voltage 6V
- Capacity 50Ah
- Battery configuration: 4 batteries (total 12V 100Ah)

Order codes

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

Options:

- External Power Supply / Charging and Chaining Connectors
- FAA L-810 -type (32cd) Obstacle Light
- Other light Colors: Eg. Green, Yellow, White, Orange



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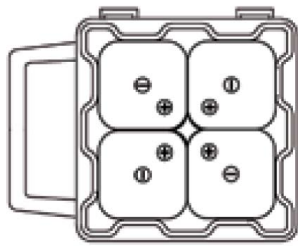


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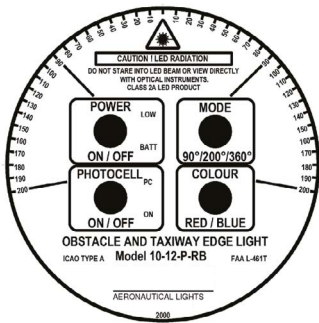
CEL-10-12-P-RB



CEL-10-12-P-RB



Four-battery configuration



CEL 10-12-P-RB Light Control Panel



OVERVIEW

CEL-10-12-P-RB is a portable, battery-operated red/blue light. The light has been designed for outdoor use and has an enclosure made of shockproof polycarbonate. It does not require any maintenance other than cleaning the enclosure and changing the batteries when needed. The operating time of the batteries depends on the operating mode selected and varies between 4 to 8 weeks.

INSTALLING BATTERIES

CEL-10-12-P-RB has been optimized for the use of Air-Alkaline batteries with a nominal operating voltage of 6V, 50Ah. The batteries are installed as shown below.

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

POWER	ON
MODE	90°
PHOTOCELL	OFF
COLOUR	RED

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

CONTROL PANEL SWITCHES

1. POWER ON / OFF

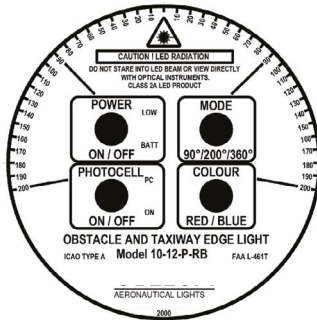
When switched OFF, the current consumption of the light is only 0.4mA (3.4Ah / year), which enables the lights to be stored with the batteries installed. The red LOW BATT indicator light starts flashing when the battery voltage decreases below 7.8V. A voltage level that low also means that the light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

2. MODE 90° / 200° / 360°

For selecting the 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.

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CEL 10-12-P-RB Light Control Panel

Default settings	
150 Lux	<input type="checkbox"/> 400 Lux
Red steady	<input type="checkbox"/> Red flash
Test on	<input type="checkbox"/> Test off
Blue 3.0 cd	<input type="checkbox"/> Blue 1.5 cd

3. COLOUR RED / BLUE

For selecting the colour of the light.

Red light. Obstacle or unserviceable area

By default the red light is set to steady burning mode, but if you want the light to flash, use the dil switch on the inside of the cover to change the mode. When the flash mode is selected, the light flashes 40 times / minute, duration of each flash being 100 ms. The selection extends the operating time remarkably. Note, however, the flash option has not been specified by ICAO.

Blue light. Taxiway edge

By default the intensity of the blue light is set to 3.0cd. If you want to extend the operating time of the light or weather conditions require lower intensity, you can decrease it to 1.5cd. This is done with the dil switch on the inside of the cover.

4. PHOTOCELL ON / OFF

For selecting the use of day-and-night switch. A yellow flashing indicator light shows when the photocell is in use. 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 the 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.

DIL SWITCHES

For changing the default parameters of photocell and red/blue light. Selecting 'Test on' changes the turn off delay from default value (3 minutes) to 5 seconds.

OPERATING TIMES

Continuous operating times when using 4 x 50Ah batteries in different modes

Light	Mode 90°	200°	360°
Red steady	58 days	26 days	16 days
Red flash	580 days	260 days	160 days
Blue light 3.0cd	67 days	38 days	19 days
Blue light 1.5cd	160 days	80 days	40 days

Operating times with a photocell (12 h ON / 12 h OFF) and using 4 x 50 Ah batteries.

Light	Mode 90°	200°	360°
Red steady	116 days	52 days	32 days
Red flash	1160 days	520 days	320 days
Blue light 3.0cd	134 days	76 days	38 days
Blue light 1.5cd	320 days	160 days	80 days