WIND TURBINE LIGHTS

MEDIUM INTENSITY OBSTRUCTION LIGHT
for Wind Turbine Generators

According to Annex 14 of ICAO regulation, "A wind turbine shall be marked and/or lighted if it is determined to be an obstacle" [6.2.4].

The height of the wind turbine generators (WTGs) determine the light configuration needed:
- WTGs less than 150m require medium intensity light on the top of nacelle;
- WTGs between 150m and 315m require two medium intensity lights on the top of nacelle and intermediate low-intensity lights.

Medium Intensity Obstruction Lights include three type of beacons, with different charactertistics and uses:

- MIOL, **Type A (intensity 20.000cd, day-mode white flashing; 2.000cd, night-mode white flashing)** should be used alone;
- MIOL, **Type B (intensity 2.000cd, night-mode red flashing)** should be used either alone or in combination with Low Intensity Obstacle Lights, Type B or Type E;
- MIOL, **Type C (intensity 2.000cd, night-mode red steady burning)** should be used either alone or in combination with Medium Intensity Obstacle Lights, Type AC.

LUXSOLAR offers to its customers also **DUAL type beacons in the same light fixture, suitable to be used during the day (with white LEDs) and during the night (with red LEDs);** these beacons are:

- DUAL MIOL, **Type AB (intensity 20.000cd, day-mode white flashing; 2.000cd, night-mode red flashing)** should be used in combination with Low Intensity Obstacle Lights, Type B or Type E;
- DUAL MIOL, **Type AC (intensity 20.000cd, day-mode white flashing; 2.000cd, night-mode red steady burning)** should be used in combination with Medium Intensity Obstacle Lights, Type C.

LXS® LUXSOLAR®

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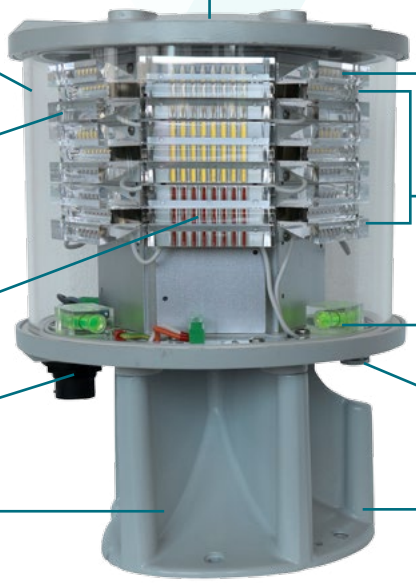
WIND TURBINE LIGHTS

MIOL-AB/MIOL-AC

10% - 30% - 100% ADJUSTABLE INTENSITY



NOTE: electronic beacon driver in a separate enclosure

***as option**

IP66

PATENTED

LUXSOLAR L864/L865-LXS-WTG Medium Intensity Obstruction Light has light intensity and vertical angle **compliant to ICAO and EASA** (Medium Intensity - Type AB and AC), **furthermore its intensity can be adjusted 10%-30%-100%** through a free voltage contact in order to comply with most of Europe Northern Regions regulations on Wind Turbine Aircraft Warning Lighting.

With a **compact body,** high quality and **ultra-bright LEDs, customized lenses and patented shape for optimum light emission and beacon cooling** LUXSOLAR MIOL-AB/AC-LXS-WTG product is the most **up-to-dated and technologically advanced Aircraft Warning Light specifically designed for WTGs applications.**

This LED device is designed to **not contain any electronic component** (that is available in a separate control local panel): a huge **advantage in terms of increased life-time and suitability to all environments** (beacons can stand extreme weather conditions) and in terms of an **easy maintenance** (in case of maintenance or periodic checks on electronic components, these can be done at ground or easily accessible levels).

CERTIFICATION

CE

COMPLIANCE

ICAO

WTGs NORTH EUROPE RULES

FEATURES

BASE alu AL

COVER BOROSILICATE

-30°C +50°C

IP66

ON

SELF extinguishing

LED SMD

DAY CD 20000

NIGHT CD 2000

10%-30% ADJUSTABLE INTENSITY

DAY 45W

NIGHT 10W

@20 FPM

LED LIGHT DO NOT STARE INTO THE BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS CLASS 3R LED PRODUCT

GORE-TEX

tested at 240km/h (150mph)

up to 80m/s²

EASY INSTALL

TYPICAL APPLICATION

WIND TURBINE LIGHTS

MIOL-AB and MIOL-AC TECHNICAL SPECIFICATIONS

OPTICAL FEATURES

- Based on LED technology
- 20.000cd day mode, WHITE light
- 2.000cd night mode, RED light
- 10% - 30% -100% adjustable intensity
- Horizontal beam radiation: 360°
- Vertical beam spread: 4°
- PMMA lens
- Light output alignment device

MECHANICAL FEATURES

- Anodised aluminium body, painted RAL7035
- Borosilicate glass cover protection
- Silicon rubber, VMQ
- Base wind collector and internal heat sink for optimum cooling
- Degree of protection: IP66
- Anti-condensation Gore-Tex valve
- Operating temperature: -30°C to +50°C
- Lamp unit weight: 7kg
- SS304 beacon support bracket
- Equipped with separate control box for beacon power supply

ELECTRICAL FEATURES

- Power supply by LUXSOLAR remote control panel (see dedicated datasheet for panel):
  - 24 VDC;
  - 115/230VDC;
- Average power consumption:
  - @20fpm day mode: 45W (MIOL-AB/MIOL-AC)
  - @20fpm night mode: 10W (MIOL-AB)
  - @40fpm day mode: 110W (MIOL-AB/MIOL-AC)
  - @40fpm night mode: 12W (MIOL-AB)
  - @60fpm day mode: 160W (MIOL-AB/MIOL-AC)
  - @60fpm night mode: 16W (MIOL-AB)
  - night mode (steady burning) MIOL-AC: 50W
- LED feeded at constant current
- No RF-radiations
- Range section of connectable conductors: 0,5mm2 to 2,5mm2
- Cable outer diameter range: 7mm to 14mm

OPTIONS

- LUXSOLAR Cloud Monitoring System
- IR Wavelenght - 850nM

APPLY TO

- Wind turbine
- Wind mast measurement

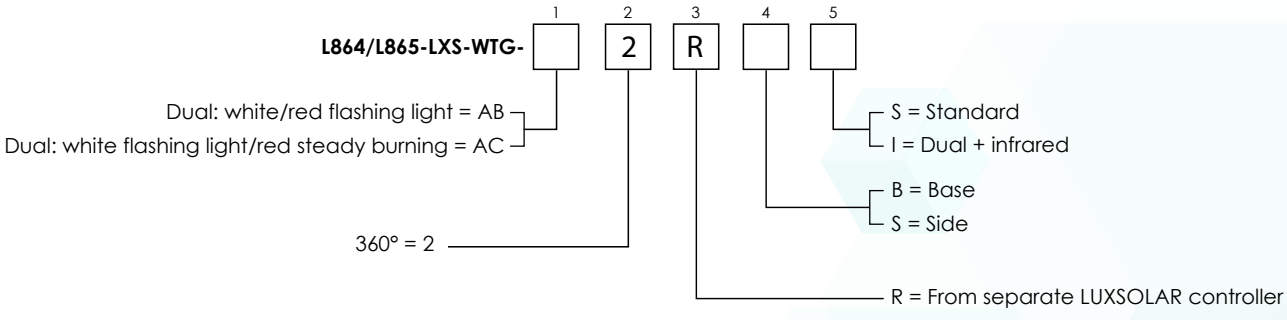
CERTIFICATIONS

- CE marking

COMPLIANCE

- ICAO Aerodromes - Annex 14 Vol.1, Ch. 6: Medium intensity, Type AB/AC
- EASA Aerodromes Design - CS-ADR-DSN, Ch.Q: Medium intensity, Type AB/AC flashing obstacle light MIOL-AB/AC type
- Germany: BAnz AT 30.04.2020 B4
- Denmark: Vejledning til BL 3-11

ORDER CODE



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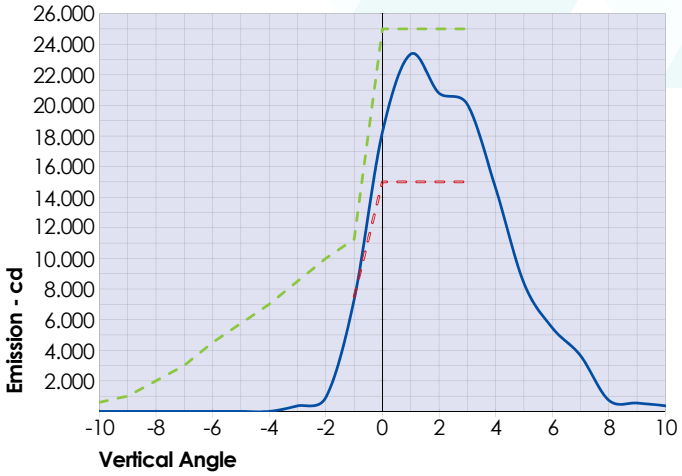
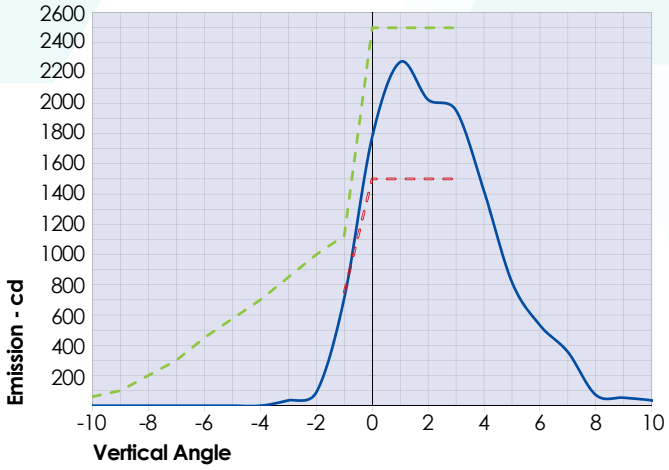
MIOL-AB and MIOL-AC TECHNICAL SPECIFICATIONS

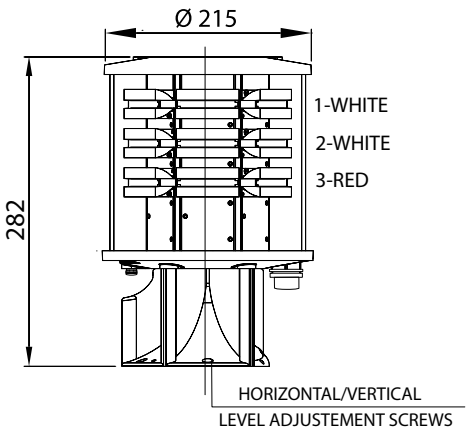


- L865-LXS-A average emission level at 90°C ambient temperature
- ICAO ANNEX 14 medium intensity type A Min. Required Intensity
- ICAO ANNEX 14 medium intensity A Max. Required Intensity

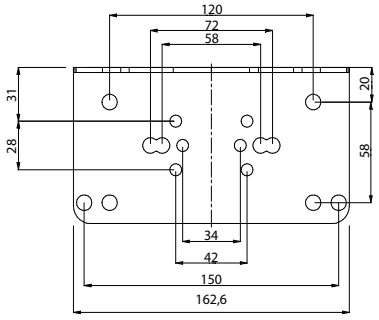


- L864-LXS-B/C average emission level at 90°C ambient temperature
- ICAO ANNEX 14 medium intensity type B/C Min. Required Intensity
- ICAO ANNEX 14 medium intensity type B/C Max. Required Intensity

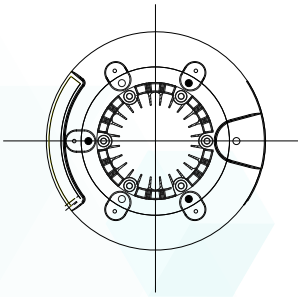
SIDE VIEW
SINGLE VERSION



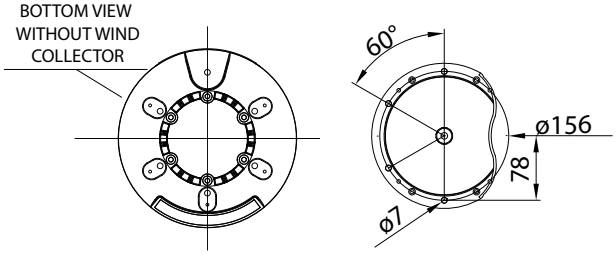
FIXING DETAILS SIDE
(not scale)



TOP VIEW



BOTTOM VIEW



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