



LUXSOLAR® CATALOGUE

Hazardous Area LED Aircraft Warning Light

rev_251015_A



www.luxsolar.com

Luxsolar® is a department
of CE2K S.r.l.



Luxsolar and LXS - registered trademarks of CEZK S.r.l. - identify a series of special lighting suitable both for potentially explosive atmospheres and safe areas.

Today, after a decade marked by a growing global market presence, Luxsolar has become the first manufacturer of LED Aircraft Warning Lights offering a complete range from low to high intensity.

All LUXSOLAR products, designed and manufactured in Italy, are the result of a constant R&D activity performed in-house.

Luxsolar mission is to create innovative products that combine high-tech and sustainable features. Our aim is to offer tailor-made lighting solutions in compliance to local and international regulations for airports, heliports, marine environments and elevated structures.

A handwritten signature in blue ink, appearing to read 'Roberto'.

LUXSOLAR

#everything is made for passion

INDEX

AIRCRAFT WARNING LIGHTS FOR HAZARDOUS AREAS

Low Intensity Obstruction Light

▶LIOL-A Ex, LIOL-B Ex and LIOL-E Ex	4
---	---

Medium Intensity Obstruction Light

▶MIOL-B Ex eb mb op is and MIOL-C Ex eb mb op is	9
--	---

▶MIOL-A Ex eb mb op is	12
------------------------------	----

▶MIOL-AB Ex eb mb and MIOL-AC Ex eb mb	17
--	----

AWL System Control Panels for classified area (IIB or IIB+H2)	20
---	----

AWL System Control Panels for classified area (IIC)	24
---	----

SYSTEMS CONFIGURATION

Light positioning

▶Elevated structures <45m	28
---------------------------------	----

▶Elevated structures from 45m to 105m	29
---	----

▶Elevated structures from 105m to 150m	30
--	----

▶Elevated structures >150m	31
----------------------------------	----

CONTACTS

CE2K S.r.l.	39
------------------	----



LOW INTENSITY

LOW INTENSITY OBSTRUCTION LIGHT



As specified by Annex 14 of ICAO regulation, Low Intensity Obstruction Lights (LIOL) should be used to warn the presence of obstacles up to 45m height, such as chimneys, cranes, flares and other structures.

Low Intensity Obstruction Lights are the simplest devices according to ICAO standards and they have the following characteristics and uses:

- LIOL Type A (intensity $>10\text{cd}$, red steady burning) can be used alone;
- LIOL Type B (intensity $>32\text{cd}$, red steady burning), can be used either alone or in combination with medium intensity obstacle lights Type B or Type AB;
- LIOL Type E (intensity $>32\text{cd}$, red flashing), can be used either alone or in combination with medium intensity obstacle lights, Type B. Flashing rate will be set at the same rate of other flashing beacons installed on the structure.



LOW INTENSITY

LIOL-A Ex/LIOL-B Ex/LIOL-E Ex LOW INTENSITY OBSTRUCTION LIGHT

Twilight sensor*

Stabilised light output:
LIOL-A: >10cd
LIOL-B: >32cd
LIOL-E: >32cd

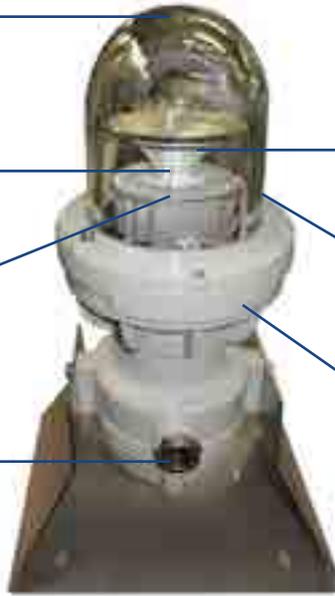
Based on LED technology
Red flashing light
Red steady burning light

- Standard circuits or TWIN*
- Infrared version*

Borosilicate glass dome

Cable gland M25x1,5

Painted RAL 7035 aluminium body



*as option

IP66



LUXSOLAR L810-LXS-Ex Low Intensity Obstruction Light is fully compliant to ICAO/EASA (Low Intensity-Type A, B or E), FAA (Type L-810), and ATEX - IECEx - TRCU certified.

The light fixture is designed for hazardous areas Zone 1/21, 2/22 with Ex db IIC and Ex tb IIC protection, compliant to EN/IEC60079-0, EN/IEC60079-1 and EN/IEC60079-31 standards.

With a compact body, high quality and ultra-bright LEDs, optical reflector for an optimum beam spread, LUXSOLAR L810-LXS-Ex product is your best choice for an efficient, long life and reliable Aircraft Warning Obstacle Light.

CERTIFICATION



COMPLIANCE



FEATURES



TYPICAL APPLICATION



LOW INTENSITY

LIOL-A Ex/LIOL-B Ex/LIOL-E Ex TECHNICAL SPECIFICATIONS

OPTICAL FEATURES

- Based on LED technology
- RED light - Steady Burning
- RED light - Flashing (LIOL-E)
- LIOL-A Ex: >10 cd
- LIOL-B/E Ex: >32 cd
- Cd emission: +6° and +10°
- Horizontal beam radiation: 360°
- Vertical beam spread: >10°
- Optical reflector

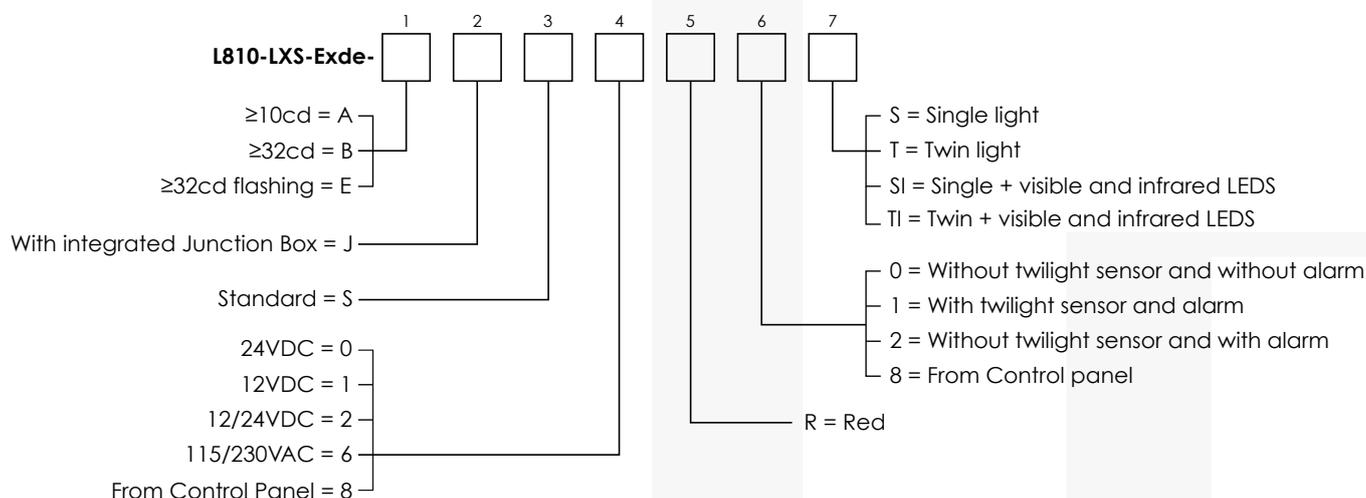
MECHANICAL FEATURES

- Painted RAL 7035 aluminium body
- Borosilicate glass dome
- Degree of protection: IP66
- Operating temperature: -52°C to +60°C
- Lamp unit weight: 7kg
- **ATEX marking:**
II 2GD Ex de IIC T4 Gb, Ex tb IIIC T135°C Db
- **IECEX marking:**
Ex de IIC T4 Gb, Ex tb IIIC T135°C Db
- **TRCU marking:**
I Ex de IIC T4 Gb, Ex tb IIIC T135°C Db

ELECTRICAL FEATURES

- Power supply AC or DC or from Luxsolar Control Panel
- Power consumption LIOL-A: 2W @12/24Vdc
- Power consumption LIOL-B: 2,8W @12/24Vdc
- Power consumption LIOL-E: 2W @12/24Vdc
- LED fedded at costant current

ORDER CODE



OPTIONS

- TWIN version: two separate LED circuits in the same fixture (normal + stand-by)
- Automatic changeover from normal to backup light
- Fault contact
- IR Wavelength - 850nm, compatible with pilot's NVG

APPLY TO

- Stack
- Chimney
- Tower crane
- Offshore Platform
- Chemical and petrochemical plant

CERTIFICATIONS

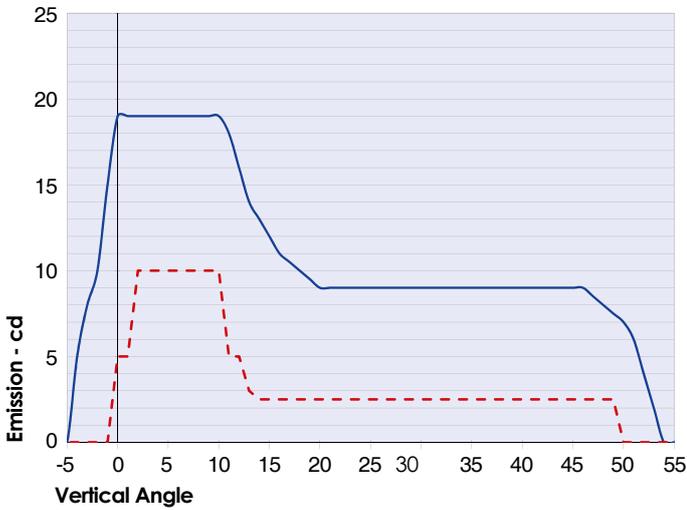
- ATEX certificate
- IECEX certificate
- TRCU certificate
- ICAO/EASA test report (EN 17025 marking laboratory) nr. 326-QL20-R05/R06
- CE marking

COMPLIANCE

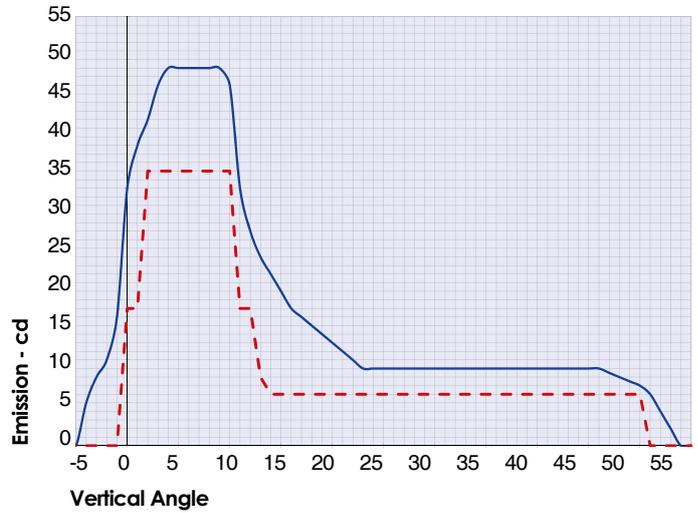
- ICAO Aerodromes -Annex 14 Volume 1, Chapter 6: Low intensity, Type A-B steady burning obstacle light, Type E flashing obstacle light
- FAA AC150/5345-43; E.B. #67 type L-810
- EASA CS-ADR-DSN, Chapter Q

LOW INTENSITY

LIOL-A Ex/LIOL-B Ex/LIOL-E Ex TECHNICAL SPECIFICATIONS

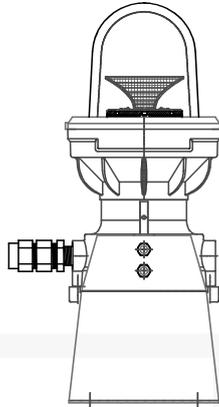


— L810-LXS-A Exde average emission level
- - - ICAO ANNEX 14 low intensity type A Minimum Required Intensity

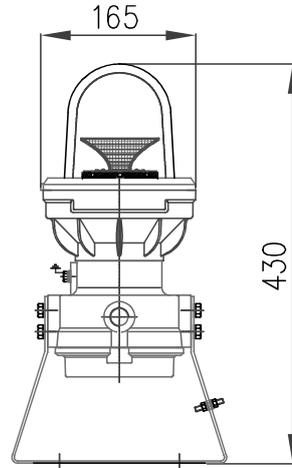


— L810-LXS-B Exde average emission level
- - - ICAO ANNEX 14 low intensity type B Minimum Required Intensity

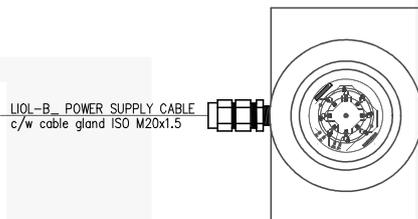
BEACON FRONT VIEW



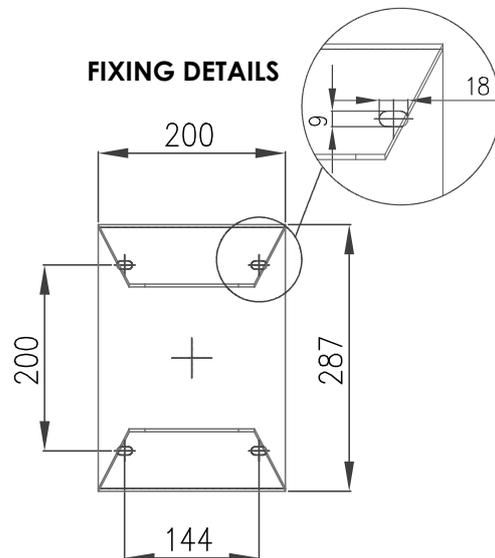
BEACON SIDE VIEW



BEACON TOP VIEW



FIXING DETAILS



MEDIUM INTENSITY

MEDIUM INTENSITY OBSTRUCTION LIGHT



According to Annex 14 of ICAO regulation, Medium Intensity Obstruction Lights (MIOL) should be used to warn the presence of obstacles with an height between 45m and 150m, such as telecommunication towers, wind turbines, chimneys, cranes, buildings and other structures.

Medium Intensity Obstruction Lights include three type of beacons, with different characteristics 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.

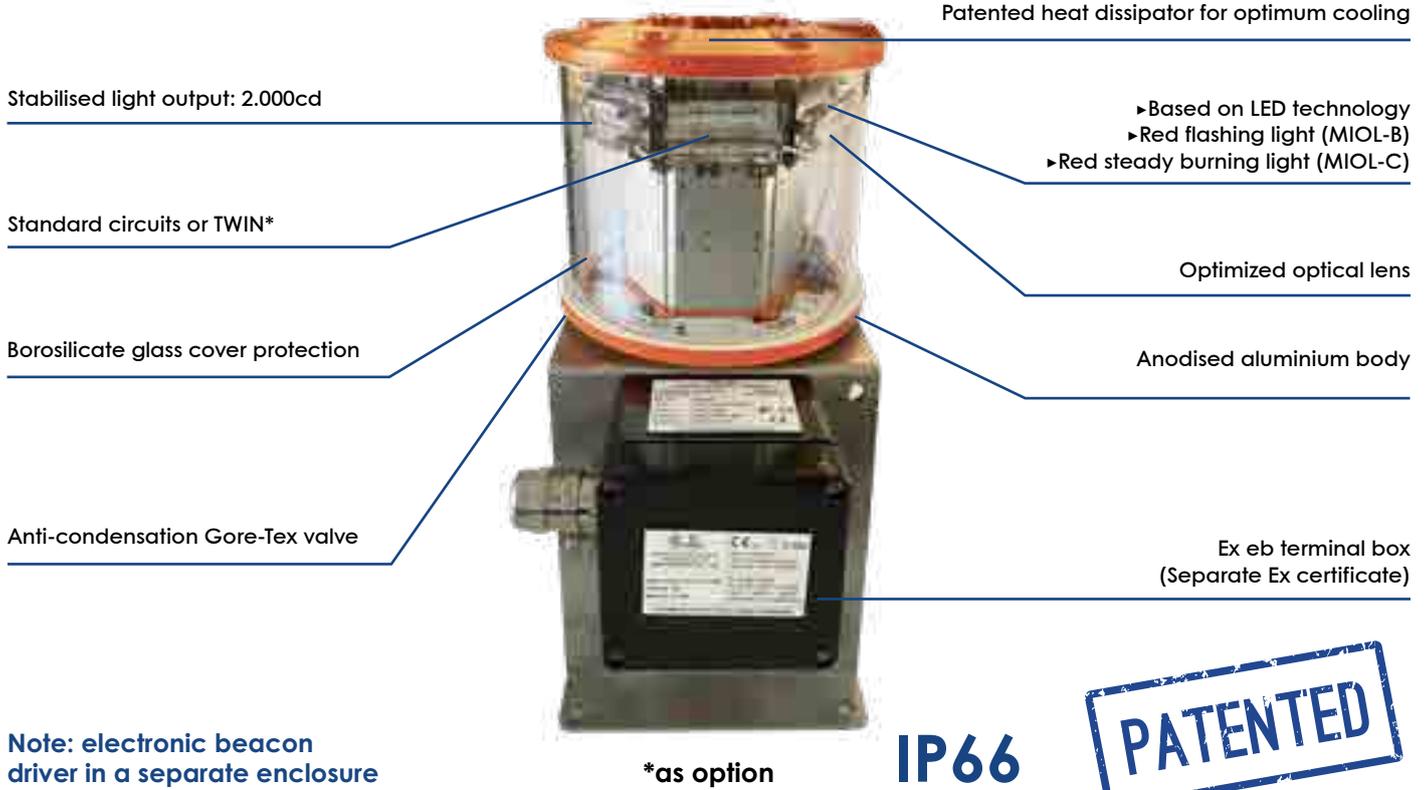
LUXSOLAR® offers to its customers also DUAL type beacons in the same light fixture, suitable to be used during the day (with white LEDs) and during the night (with red LEDs); these beacons are:

- 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.



MEDIUM INTENSITY

MIOL-B/C Ex mb or Ex eb mc



Note: electronic beacon driver in a separate enclosure

*as option

IP66

PATENTED

LUXSOLAR® L864-LXS Medium Intensity Obstruction Light is compliant to ICAO (Medium Intensity - Type B or C), FAA (Type L-864), ENAC and EASA compliant.

With a compact body, high quality and ultra-bright LEDs, customised lenses for an optimum beam spread, LUXSOLAR MIOL-B/C Ex product is your best choice for an efficient, long life and reliable Aircraft Warning Obstacle Light.

This beacon has been designed for hazardous areas with Ex eb mb IIC and Ex tb IIIC protection. AATEX, IECEx, INMETRO and ECASEx certified, compliant to EN/IEC 60079-0, EN/IEC 60079-7, EN/IEC 60079-18, EN/IEC 60079-31 regulations. It is suitable for hazardous areas Zone 1, Zone 21, Zone 2, Zone 22 where potentially explosive atmosphere due to the presence of flammable and explosive vapours, gas or dust may be present.

CERTIFICATION



COMPLIANCE



FEATURES



TYPICAL APPLICATION



MEDIUM INTENSITY

MIOL-B/C Ex mb or Ex eb mc TECHNICAL SPECIFICATIONS

OPTICAL FEATURES

- Based on LED technology
- RED light 2.000cd
- Horizontal beam radiation: 360°
- Vertical beam spread: 4°
- PMMA lens

Ex EXECUTION

ATEX marking:

II 2GD

Ex eb mb IIC T6 Gb;

Ex tb IIC T80°C Db

T. Amb:

▶ -40°C/+55°C (MIOL-C)

▶ -40°C/+60°C (MIOL-B)

IECEx marking:

Ex eb mb IIC T6 Gb;

Ex tb IIC T80°C Db

T. Amb:

▶ -40°C/+55°C (MIOL-C)

▶ -40°C/+60°C (MIOL-B)

II 3GD

Ex eb mc IIC T6 Gc;

Ex tb IIC T80°C Dc

T. Amb:

▶ -40°C/+65°C (MIOL-C)

▶ -40°C/+70°C (MIOL-B)

Ex eb mc IIC T6 Gc;

Ex tb IIC T80°C Dc

T. Amb:

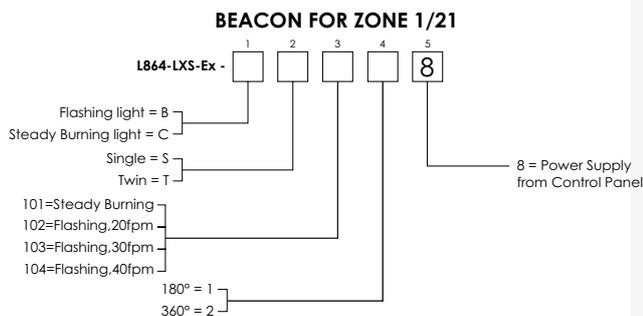
▶ -40°C/+65°C (MIOL-C)

▶ -40°C/+70°C (MIOL-B)

MECHANICAL FEATURES

- RAL 2004 painted aluminium body
- Borosilicate glass cover protection
- Internal heat sink for optimum cooling
- Degree of protection: IP66
- Anti-Condensation Valve
- Lamp unit weight: 12kg

ORDER CODE



ELECTRICAL FEATURES

- Power supply by Luxsolar Control Panel:
 - 12/24 Vdc
 - 115/230 Vac
- Average power consumption for MIOL-B Ex:
 - @20fpm: 1,5W
 - @40fpm: 3W
 - @30fpm: 2,75W
- Average power consumption for MIOL-C Ex (Steady Burning): 21W
- LED fedded at constant current
- No RF-radiations

OPTIONS

- TWIN version: two separate LED circuits in the same fixture (normal + stand-by)

APPLY TO

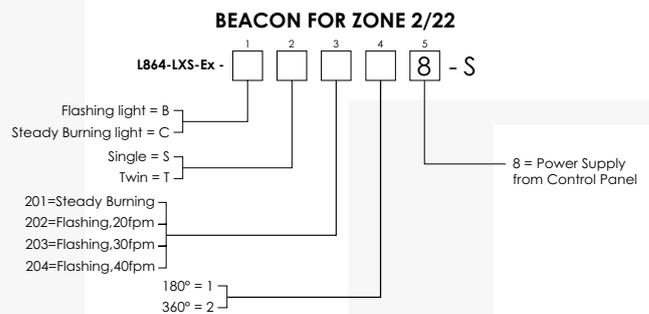
- Stack
- Chimney
- Tower crane
- Offshore Platform
- Chemical and petrochemical plant

CERTIFICATIONS

- ATEX certificate
- IECEx certificate
- INMETRO certificate
- EASA test report (EN 17025 laboratory) nr. 326-QL20-R09/R10
- CE marking

COMPLIANCE

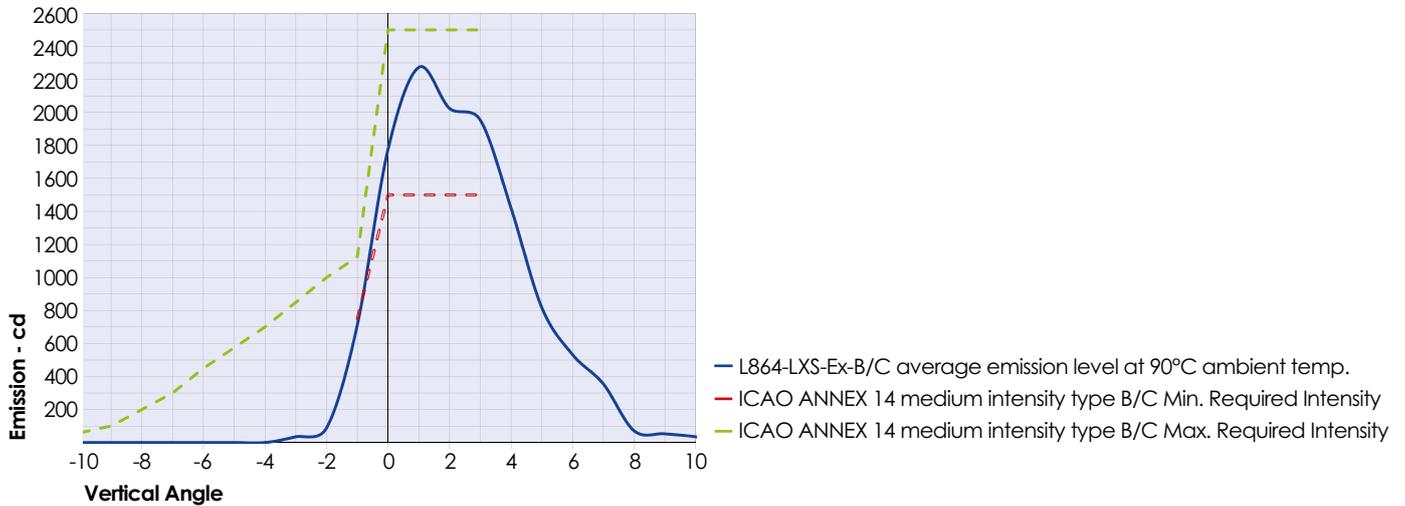
- ICAO Aerodromes -Annex 14 Vol. 1, Chapter 6: Medium intensity, Type B flashing obstacle light MIOL-B type or Type C steady burning obstacle light MIOL-C type
- FAA AC150/5345-43 E.B. #67 type L-864
- EASA CS-ADR-DSN, Chapter Q



Note: ambient temperatures and light fixture's versions are selected by CE2K according to project specs.

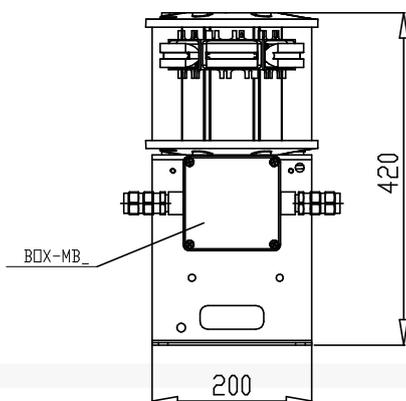
MEDIUM INTENSITY

MIOL-B/C Ex mb or Ex eb mc TECHNICAL SPECIFICATIONS

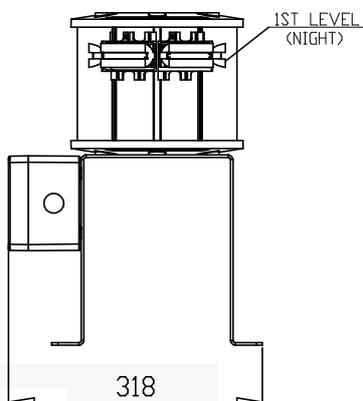


SINGLE VERSION

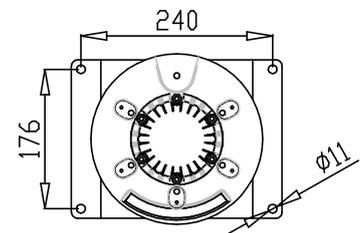
BEACON FRONT VIEW



BEACON SIDE VIEW

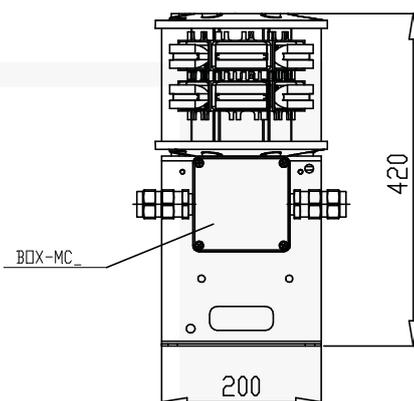


FIXING DETAILS

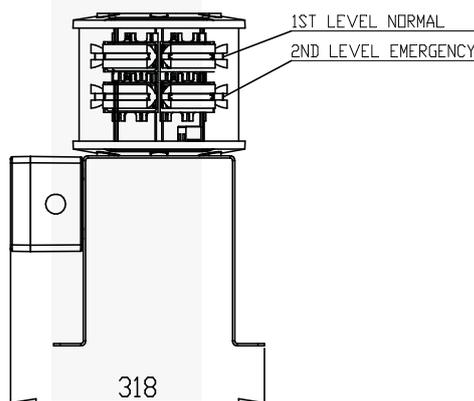


TWIN VERSION

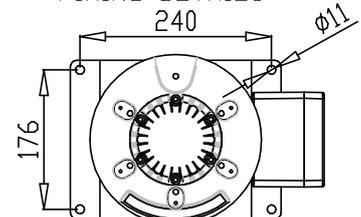
BEACON FRONT VIEW



BEACON SIDE VIEW



FIXING DETAILS



MEDIUM INTENSITY

MEDIUM INTENSITY OBSTRUCTION LIGHT



According to Annex 14 of ICAO regulation, Medium Intensity Obstruction Lights (MIOL) should be used to warn the presence of obstacles with an height between 45m and 150m, such as telecommunication towers, wind turbines, chimneys, cranes, buildings and other structures.

Medium Intensity Obstruction Lights include three type of beacons, with different characteristics 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.

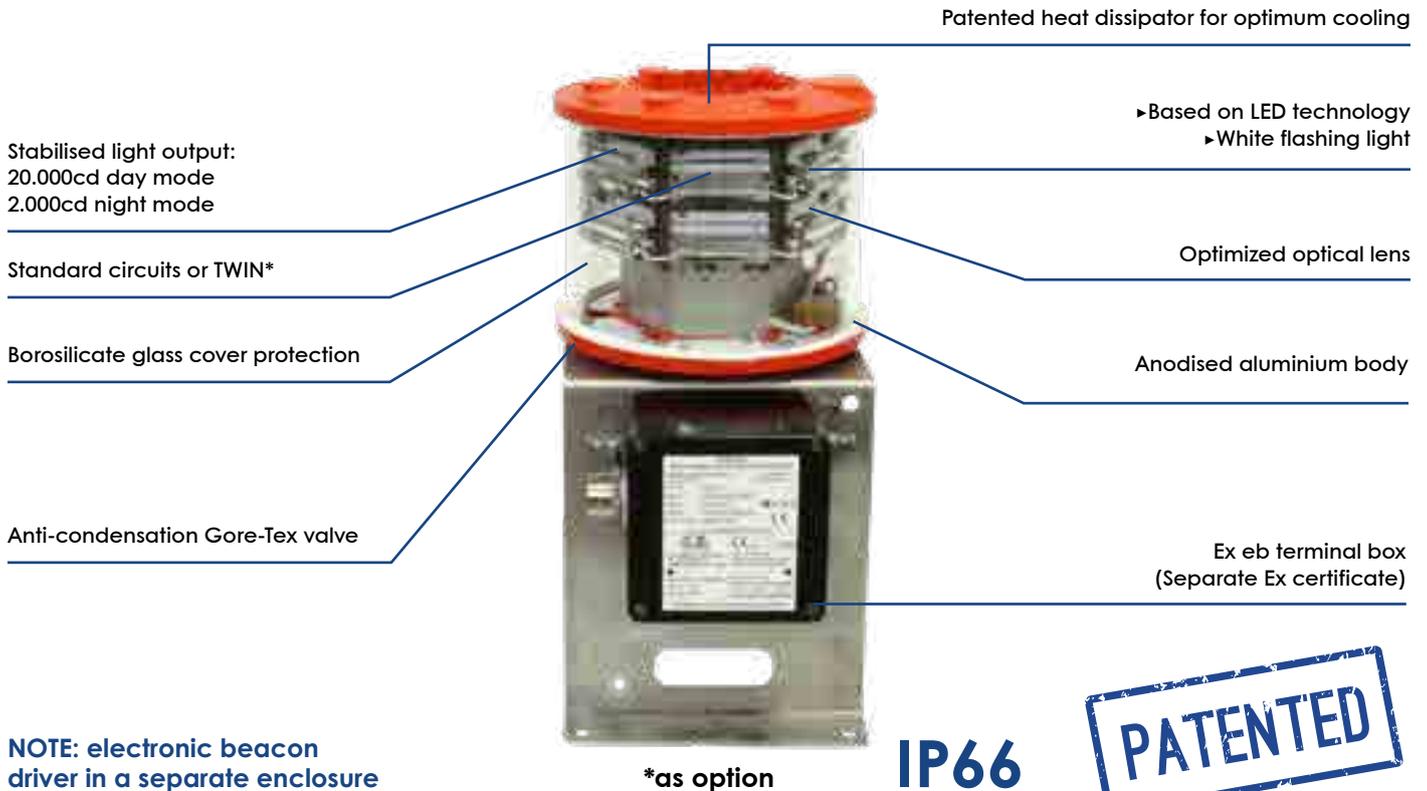
LUXSOLAR® offers to its customers also DUAL type beacons in the same light fixture, suitable to be used during the day (with white LEDs) and during the night (with red LEDs); these beacons are:

- 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.



MEDIUM INTENSITY

MIOL-A Ex mb or Ex mb mc



NOTE: electronic beacon driver in a separate enclosure

LUXSOLAR® L865-LXS Medium Intensity Obstruction Light is compliant to ICAO (Medium Intensity - Type A), FAA (Type L-865), ENAC and EASA compliant.

With a compact body, high quality and ultra-bright LEDs, customised lenses for an optimum beam spread, LUXSOLAR MIOL-A Ex product is your best choice for an efficient, long life and reliable Aircraft Warning Obstacle Light.

This beacon has been designed for hazardous areas with Ex eb mb IIC and Ex tb IIIC protection. ATEX, IECEx, INMETRO and ECASEx certified, compliant to EN/IEC 60079-0, EN/IEC 60079-7, EN/IEC 60079-18, EN/IEC 60079-31 regulations. It is suitable for hazardous areas Zone 1, Zone 21, Zone 2, Zone 22 where potentially explosive atmosphere due to the presence of flammable and explosive vapours, gas or dust may be present.

CERTIFICATION



COMPLIANCE



FEATURES



TYPICAL APPLICATION



MEDIUM INTENSITY

MIOL-A Ex mb or Ex eb mc TECHNICAL SPECIFICATIONS

OPTICAL FEATURES

- Based on LED technology
- 20.000cd day mode, WHITE flashing (20fpm)
- 2.000cd night mode, WHITE flashing (20fpm)
- Horizontal beam radiation: 360°
- Vertical beam spread: 4°
- PMMA lens

Ex EXECUTION

ATEX marking:

II 2GD
Ex eb mb IIC T6 Gb;
Ex tb IIIC T80°C Db
T. Amb:
▶ -40°C/+48°C (Version 113)

IECEx marking:

Ex eb IIC T6 Gb;
Ex tb IIIC T80°C Db
T. Amb:
▶ -40°C/+48°C (Version 113)

II 3GD
Ex eb mc IIC T6 Gc;
Ex tb IIIC T80°C Dc
T. Amb:
▶ -40°C/+58°C (Version 215)

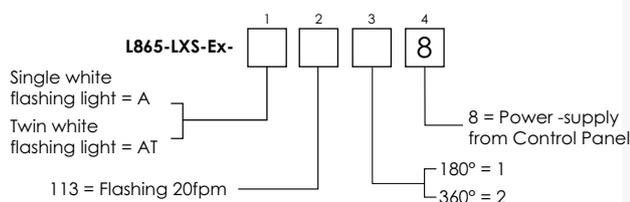
Ex eb mc IIC T6 Gc;
Ex tb IIIC T80°C Dc
T. Amb:
▶ -40°C/+58°C (Version 215)

MECHANICAL FEATURES

- RAL 2004 painted aluminium body
- Borosilicate glass cover protection
- Degree of protection: IP66
- Internal heat sink for optimum cooling
- Anti-Condensation Valve
- Lamp unit weight: 12kg

ORDER CODE

BEACON FOR ZONE 1/21



ELECTRICAL FEATURES

- Power supply by Luxsolar Control Panel:
- 12/24 Vdc
- 115/230 Vac
- Average power consumption (@20fpm):
▪ day mode: 45W
▪ night mode: 10W
- LED feeded at constant current
- No RF-radiations

OPTIONS

- TWIN version: two separate LED circuits in the same fixture (normal + stand-by)

APPLY TO

- Stack
- Chimney
- Tower crane
- Offshore Platform
- Chemical and petrochemical plant

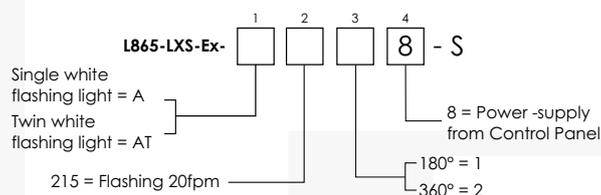
CERTIFICATIONS

- ATEX certificate
- IECEx certificate
- INMETRO certificate
- ECASEx certificate
- CE marking

COMPLIANCE

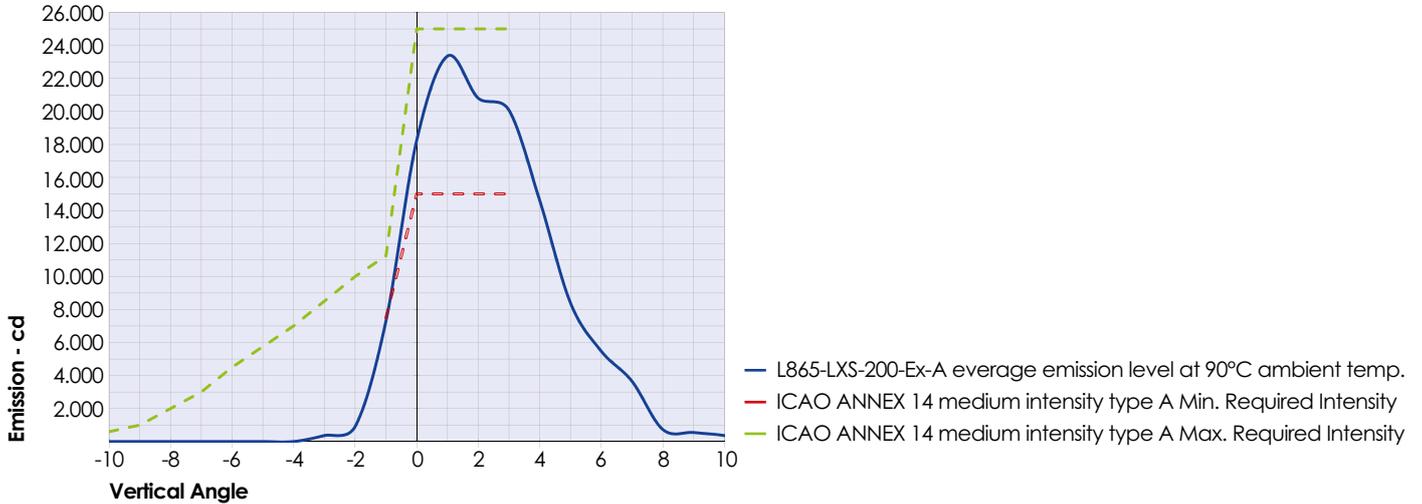
- ICAO Aerodromes -Annex 14 Vol. 1, Chapter 6: Medium intensity, Type A flashing obstacle light MIOL-A type
- FAA AC150/5345-43F E.B. #67 Lamp type L-865
- EASA CS-ADR-DSN, Chapter Q

BEACON FOR ZONE 2/22

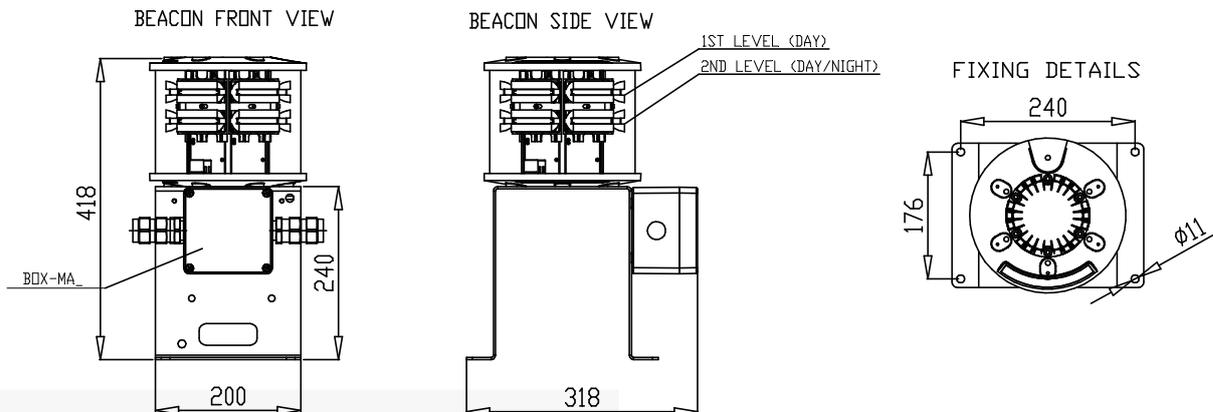


MEDIUM INTENSITY

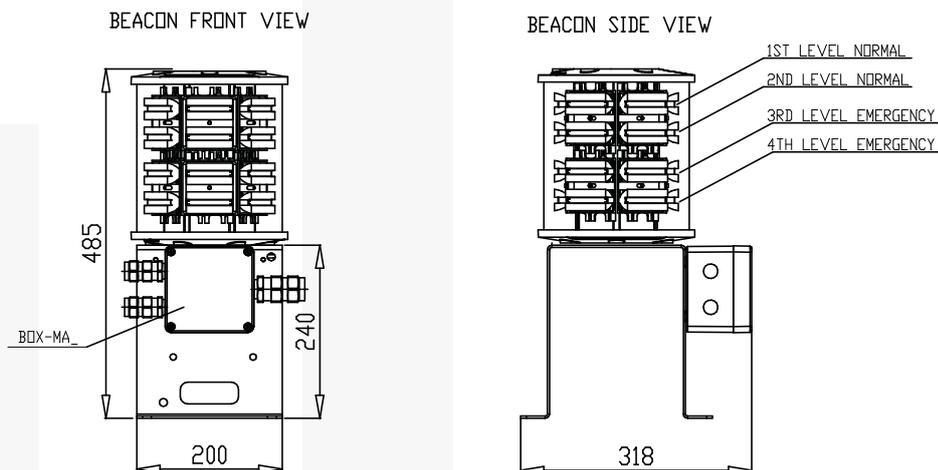
MIOL-A Ex mb or Ex eb mc TECHNICAL SPECIFICATIONS



SINGLE VERSION



TWIN VERSION



MEDIUM INTENSITY

MEDIUM INTENSITY OBSTRUCTION LIGHT



According to Annex 14 of ICAO regulation, Medium Intensity Obstruction Lights (MIOL) should be used to warn the presence of obstacles with an height between 45m and 150m, such as telecommunication towers, wind turbines, chimneys, cranes, buildings and other structures.

Medium Intensity Obstruction Lights include three type of beacons, with different characteristics 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.

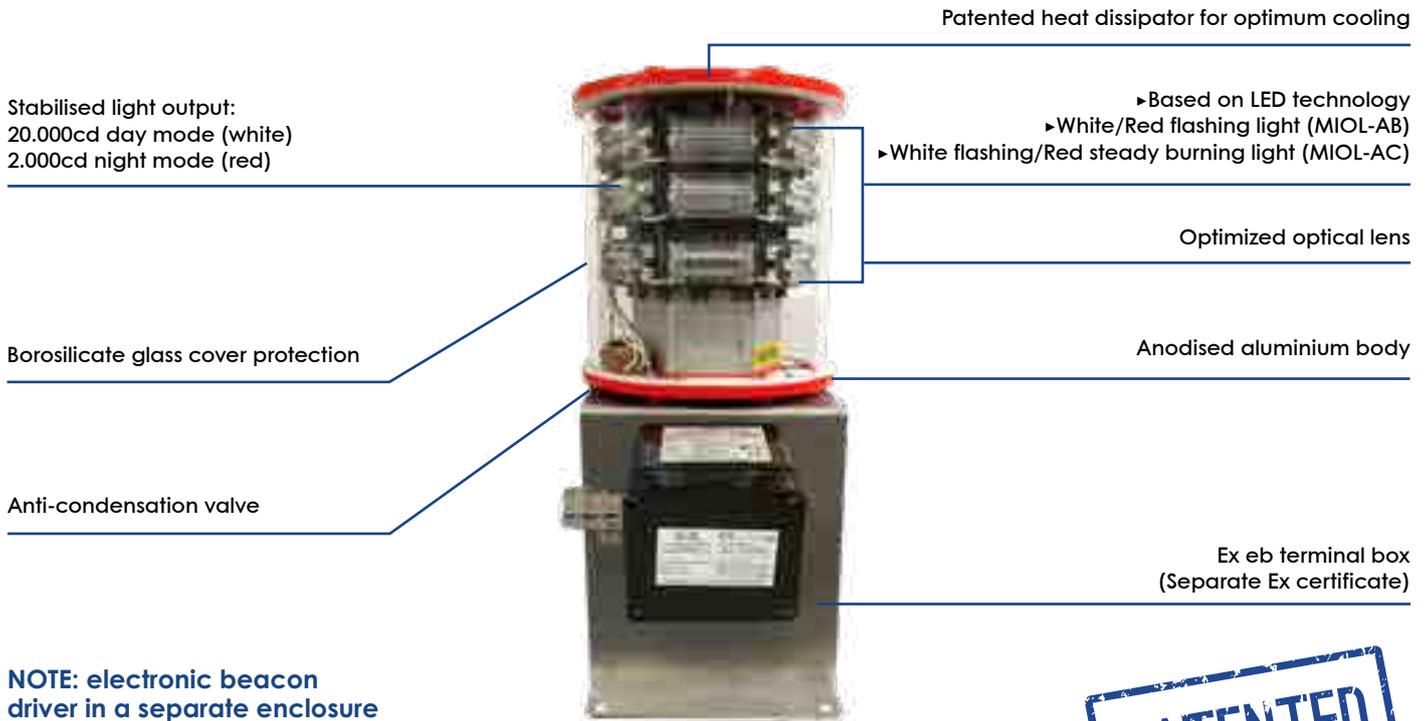
LUXSOLAR® offers to its customers also DUAL type beacons in the same light fixture, suitable to be used during the day (with white LEDs) and during the night (with red LEDs); these beacons are:

- 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.



MEDIUM INTENSITY

MIOL-AB/AC Ex mb or Ex eb mc



NOTE: electronic beacon driver in a separate enclosure

*as option

IP66



LUXSOLAR® L864/L865-LXS Medium Intensity Obstruction Light is compliant to ICAO (Medium Intensity - Type AB or AC), FAA (Type L-864/L-865), ENAC and EASA compliant.

With a compact body, high quality and ultra-bright LEDs, customised lenses for an optimum beam spread, LUXSOLAR MIOL-AB/AC Ex product is your best choice for an efficient, long life and reliable Aircraft Warning Obstacle Light.

This beacon has been designed for hazardous areas with Ex eb mb IIC and Ex tb IIIC protection. ATEX, IECEx, INMETRO and ECASEx certified, compliant to EN/IEC 60079-0, EN/IEC 60079-7, EN/IEC 60079-18, EN/IEC 60079-31 regulations. It is suitable for hazardous areas Zone 1, Zone 21, Zone 2, Zone 22 where potentially explosive atmosphere due to the presence of flammable and explosive vapours, gas or dust may be present.

CERTIFICATION



COMPLIANCE



FEATURES



TYPICAL APPLICATION



MEDIUM INTENSITY

MIOL-AB/AC Ex eb mb or Ex eb mc TECHNICAL SPECIFICATIONS

OPTICAL FEATURES

- Based on LED technology
- 20.000cd day mode, WHITE light (20fpm)
- 2.000cd night mode, RED light
- Horizontal beam radiation 360°
- Vertical beam spread 4°
- PMMA lens

Ex EXECUTION

ATEX marking:

II 2GD

Ex eb mb IIC T6 Gb;

Ex tb IIIC T80°C Db

T. Amb:

▶ -40°C/+48°C (version 113)

▶ -40°C/+52°C (version 110)

II 3GD

Ex eb mb IIC T6 Gc;

Ex tb IIIC T80°C Dc

T. Amb:

▶ -40°C/+58°C (version 215)

▶ -40°C/+64°C (version 210)

IECEx marking:

Ex eb mb IIC T6 Gb;

Ex tb IIIC T80°C Db

T. Amb:

▶ -40°C/+48°C (version 113)

▶ -40°C/+52°C (version 110)

Ex eb mc IIC T6 Gc;

Ex tb IIIC T80°C Dc

T. Amb:

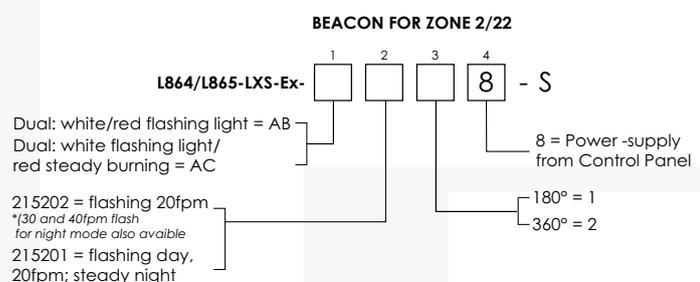
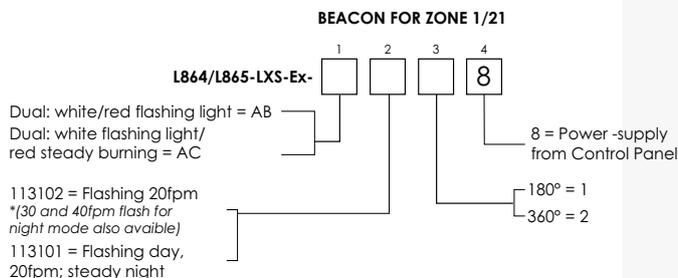
▶ -40°C/+58°C (version 215)

▶ -40°C/+64°C (version 210)

MECHANICAL FEATURES

- RAL 2004 painted aluminium body
- Borosilicate glass cover protection
- Degree of protection: IP66
- Internal heat sink for optimum cooling
- Anti-Condensation Valve
- Lamp unit weight: 12kg

ORDER CODE



Note: ambient temperatures and light fixture's versions are selected by CE2K according to project specs.

ELECTRICAL FEATURES

- Power supply by Luxsolar Control Panel:
 - 12/24 Vdc
 - 115/230 Vac
- Average power consumption:
 - @20fpm day mode: 45W (MIOL-AB/MIOL-AC)
 - @20fpm night mode: 10W (MIOL-AB)
 - @30fpm night mode: 11W (MIOL-AB)
 - @40fpm night mode: 12W (MIOL-AB)
 - night mode (steady) Miol-AC: 54W
- LED feeded at constant current
- No RF-radiations

APPLY TO

- Stack
- Chimney
- Tower crane
- Offshore Platform
- Chemical and petrochemical plant

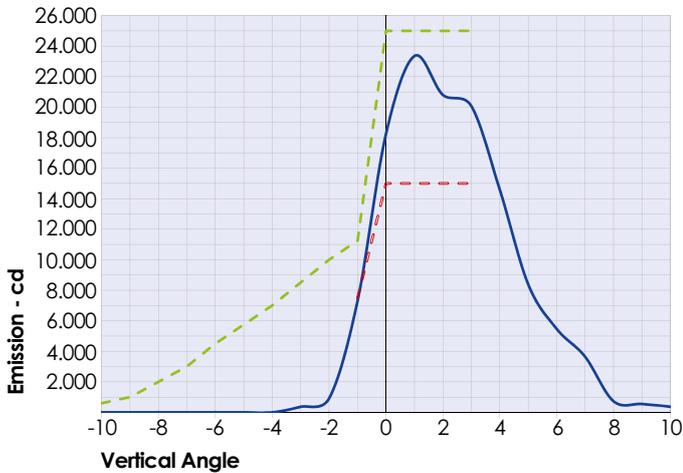
- ATEX certificate
- IECEx certificate
- INMETRO certificate
- ECASEx certificate
- CE marking

COMPLIANCE

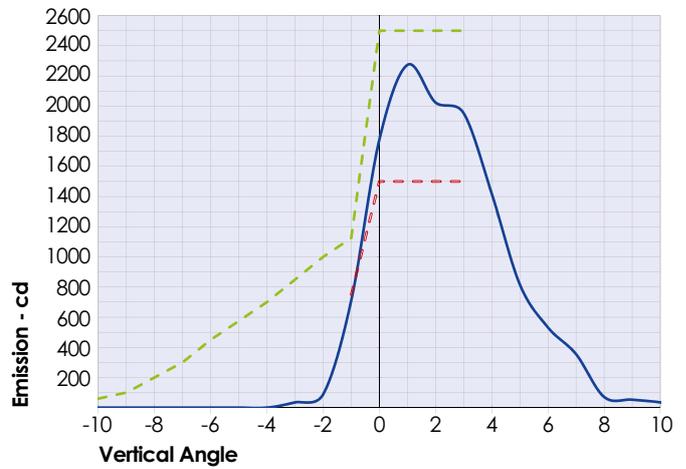
- ICAO Aerodromes - Annex 14 Vol.1, Ch. 6: Medium intensity, Type AB flashing obstacle light MIOL-AB type, Type AC flashing/steady burning obstacle light MIOL-AC Type
- FAA AC 150/5345-43 E.B. #67 Lamp type Dual L-864/L-865
- EASA CS-ADR-DSN, Chapter Q

MEDIUM INTENSITY

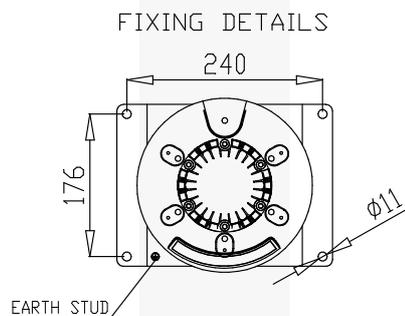
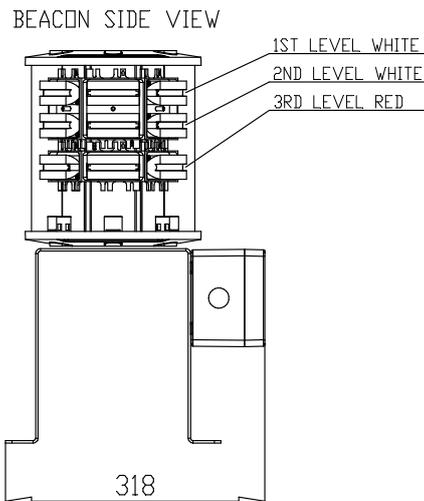
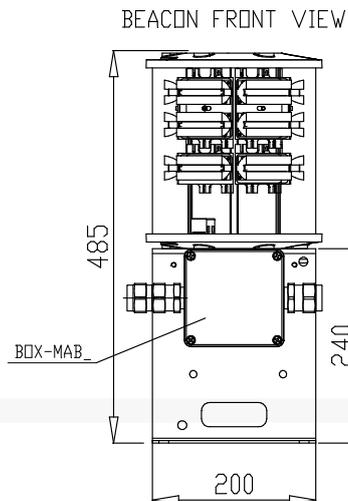
MIOL-AB/AC Ex eb mb Ex eb mc TECHNICAL SPECIFICATIONS



- L865-LXS-200-Ex-A average emission level at 90°C ambient temp.
- ICAO ANNEX 14 medium intensity type A Min. Required Intensity
- ICAO ANNEX 14 medium intensity type A Max. Required Intensity



- L864-LXS-200-Ex-B average emission level at 90°C ambient temp.
- ICAO ANNEX 14 medium intensity type B/C Min. Required Intensity
- ICAO ANNEX 14 medium intensity type B/C Max. Required Intensity



CONTROL PANEL

AWL SYSTEM CONTROL PANEL FOR CLASSIFIED AREAS (IIB OR IIB+H2)



An **Aircraft Warning Light (AWL)** system is a set of beacon(s) and electronic components wired and installed inside dedicated enclosures.

At **LUXSOLAR** we believe that every installation and maintenance activity has to be as **simple**, as **quick** and as **safe** as possible. This is the philosophy at the base of our AWL Systems and this is the reason why **all our electronic components (specifically designed to properly drive our beacons)** are not inside the lamp body but inside a control panel/controller box.

Advantages:

- **Easy maintenance:** periodic check activity is done in easy accessible areas.
- **Longer life:** beacons are often installed in areas subject to heat, smoke, harsh conditions that may affect electronic components life. Install cards and drivers in a protected case has positive results on the whole AWL system's life.



CONTROL PANEL

CONTROL PANEL FOR AWL SYSTEM FOR CLASSIFIED AREAS (IIB OR IIB+H2)

Aluminium or SS316L material

IP66 protection degree

Customizable according client specification



The installation of multiple devices on the same obstacle is defined “**System**” and a control panel that contains all the necessary elements for a proper operation is necessary.

The **control panel helps to simplify both core management tasks** (start up, check anomalies, etc.) and **maintenance**. Beacons can be managed by one or several panels, according to installation requirements or project specifications.

Luxsolar control panels manufactured and branded CE2K S.r.l., for classified areas are available with: **ATEX**, **IECEX**, **Tr Cu**, **INMETRO** and **PESO** certificates.

CERTIFICATION



FEATURES



TYPICAL APPLICATION



CONTROL PANEL

CONTROL PANEL FOR AWL SYSTEM TECHNICAL SPECIFICATIONS

STANDARD FEATURES

- Copper free aluminium or SS316L material
- Suitable for wall mounting (standard)
- Degree of protection: IP66
- Operating temperature:
-20C° to +60C° with window;
-50C° to +60C° without window

ELECTRICAL FEATURES

- Main isolating switch for power supply
110/230VAC 50/60Hz (other power supplies
suitable);
- AUTO/MAN switch to override photocell (if any);
- Module for simultaneous flashing (if any);
- Beacon fault contacts available on terminals;
- Local LED indicator for Power On (If any);
- Power electronics to feed the beacons;
- Overvoltage protection (lightning protection);
- Twilight sensor

OPTIONAL FEATURES

- GPS module for wireless synchronization
among two or more AWL Systems;
- Beacon(s) fault contact available on front
door;
- Thermostatic heater and hygostat;
- Internal winterization (for extreme cold
climate);
- Astronomic clock

DESIGN



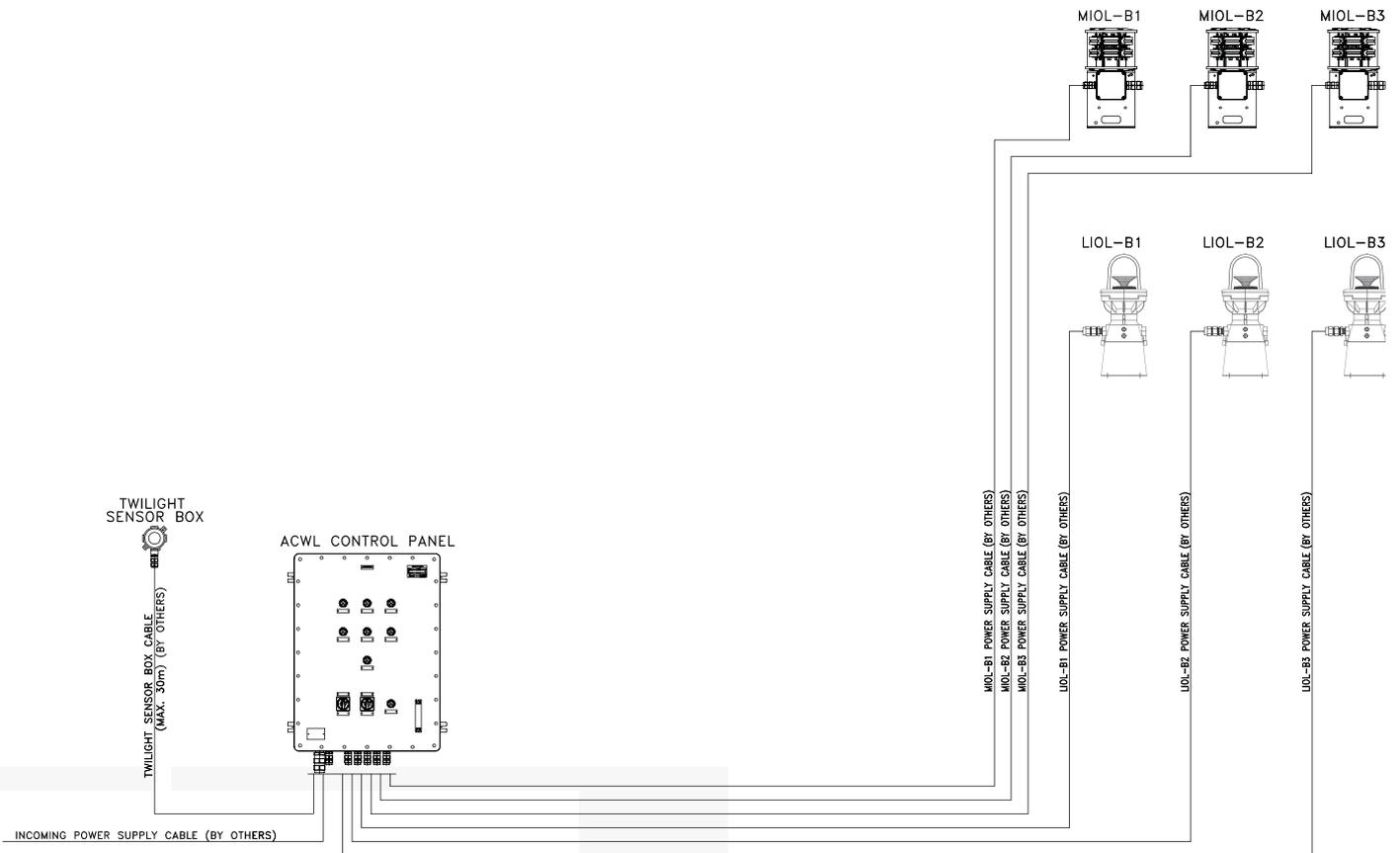
Our technical Team can assist you in the design, as per aviation rules, of your AWL System.

For any additional information please contact:
lxs@luxsolar.com

CONTROL PANEL

CONTROL PANEL FOR AWL SYSTEM TECHNICAL SPECIFICATIONS

TIPYCAL DRAWING:



CONTROL PANEL

AWL SYSTEM CONTROL PANEL FOR CLASSIFIED AREAS (IIC)



An **Aircraft Warning Light (AWL)** system is a set of beacon(s) and electronic components wired and installed inside dedicated enclosures.

At **LUXSOLAR** we believe that every installation and maintenance activity has to be as **simple**, as **quick** and as **safe** as possible. This is the philosophy at the base of our AWL Systems and this is the reason why **all our electronic components (specifically designed to properly drive our beacons) are not inside the lamp body but inside a control panel/controller box.**

Advantages:

- **Easy maintenance:** periodic check activity is done in easy accessible areas.
- **Longer life:** beacons are often installed in areas subject to heat, smoke, harsh conditions that may affect electronic components life. Install cards and drivers in a protected case has positive results on the whole AWL system's life.



CONTROL PANEL

CONTROL PANEL FOR AWL SYSTEM FOR CLASSIFIED AREAS (IIC)

Aluminium or SS316L material

Customizable according client specification



The installation of multiple devices on the same obstacle is defined "System" and a control panel that contains all the necessary elements for a proper operation is necessary.

The control panel helps to simplify both core management tasks (start up, check anomalies, etc.) and the maintenance. Beacons can be managed by one or several panels, according to installation requirements or project specifications.

Luxsolar control panels manufactured and branded CE2K S.r.l., for classified areas are available with: **ATEX**, **IECEX**, **Tr Cu**, **INMETRO** and **PESO** certificates.

CERTIFICATION



FEATURES



TYPICAL APPLICATION



CONTROL PANEL

CONTROL PANEL FOR AWL SYSTEM TECHNICAL SPECIFICATIONS

STANDARD FEATURES

- Copper free aluminium or SS316L material
- Suitable for wall mounting (standard)
- Operating temperature:
 - 20C° to +60C°;
 - 50C° to +60C°

OPTIONAL FEATURES

- GPS module for wireless synchronization among two or more AWL Systems;
- Thermostatic heater and hygostat;
- Internal winterization (for extreme cold climate);
- Astronomic clock or twilight sensor.

ELECTRICAL FEATURES

- **Main Ex-d Box:**
 - Module for simultaneous flashing (if any);
 - Beacon fault contacts available on terminals;
 - Power electronics to feed the beacons;
 - Overvoltage protection (lightning protection);
- **Operator Ex-e Box:**
 - Main isolating switch for power supply 110/230VAC 50/60Hz (other power supplies suitable);
 - AUTO/MAN switch to override photocell (if any);
- Local LED indicator for Power On (If any);



Ex-d Gub enclosure with its Ex-e operator box

Note: Ex-e operator box covered by separate certificate.

DESIGN



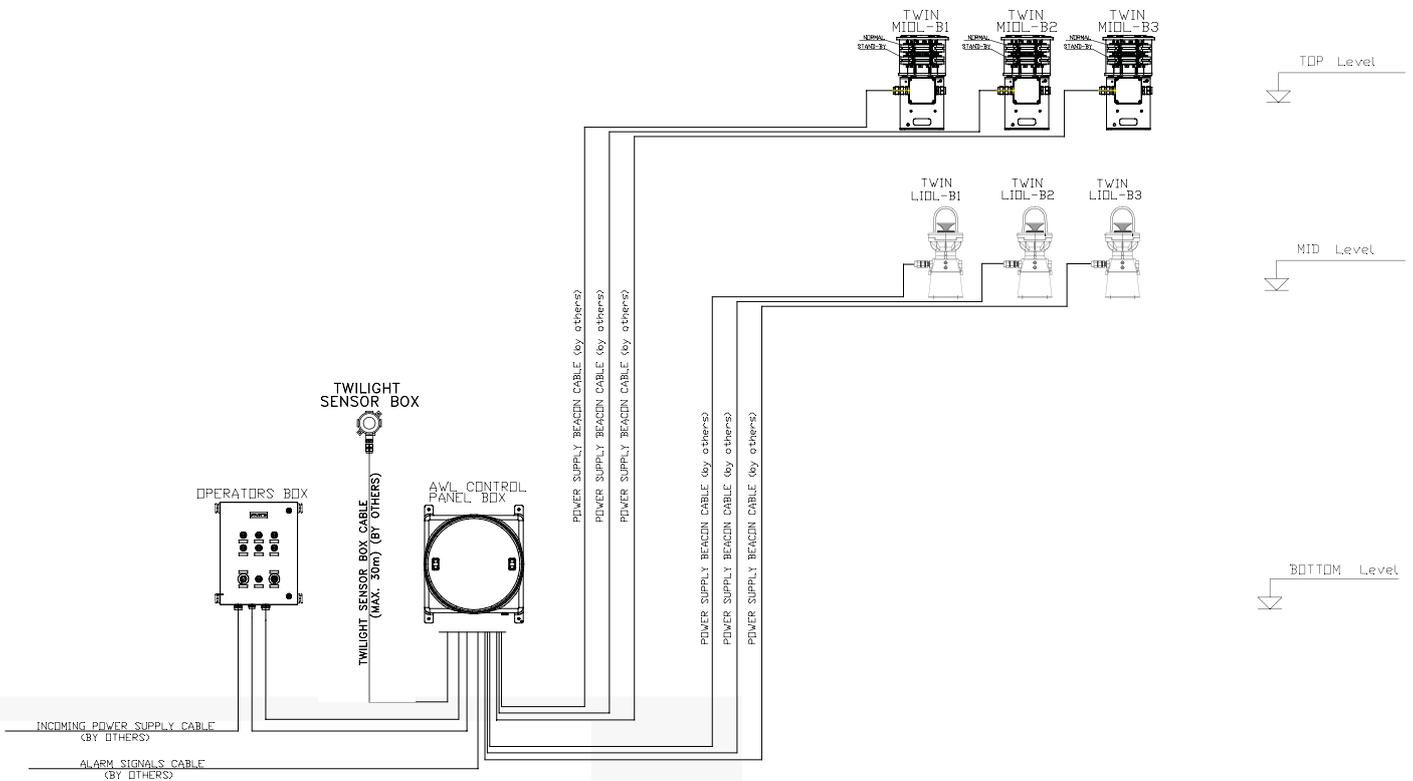
Our technical Team can assist you in the design, as per aviation rules, of your AWL System.

For any additional information please contact:
lxs@luxsolar.com

CONTROL PANEL

CONTROL PANEL FOR AWL SYSTEM TECHNICAL SPECIFICATIONS

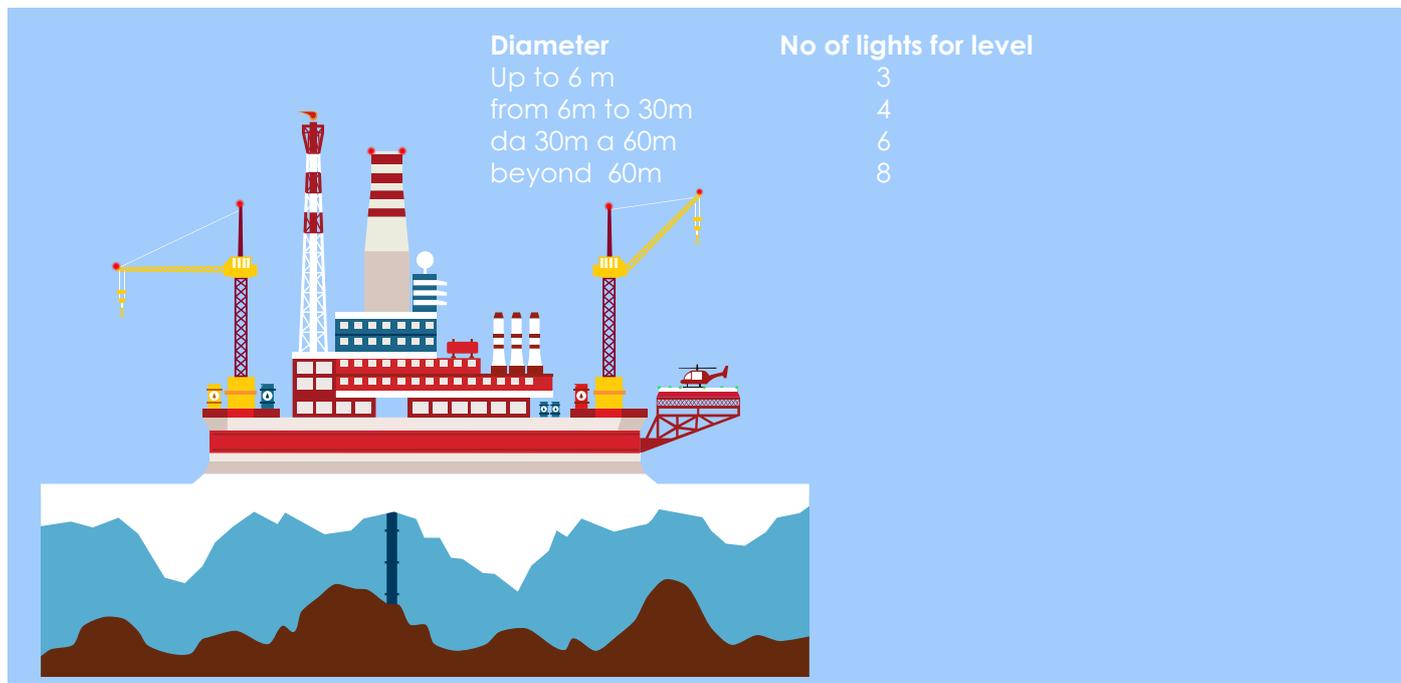
TYPICAL DRAWING:



SYSTEMS CONFIGURATION

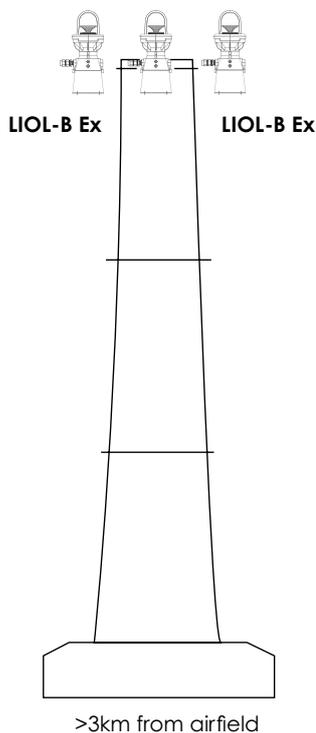
LIGHT POSITIONING

ICAO regulation Annex 14, Vol. 1 and Annex 6, specifies that – on the basis of their height and kind of marking, obstacles may require beacons installed on several levels (top, middle, etc.). The number of beacons required for each level depends on the external diameter of the structure and is suggested in the following chart:

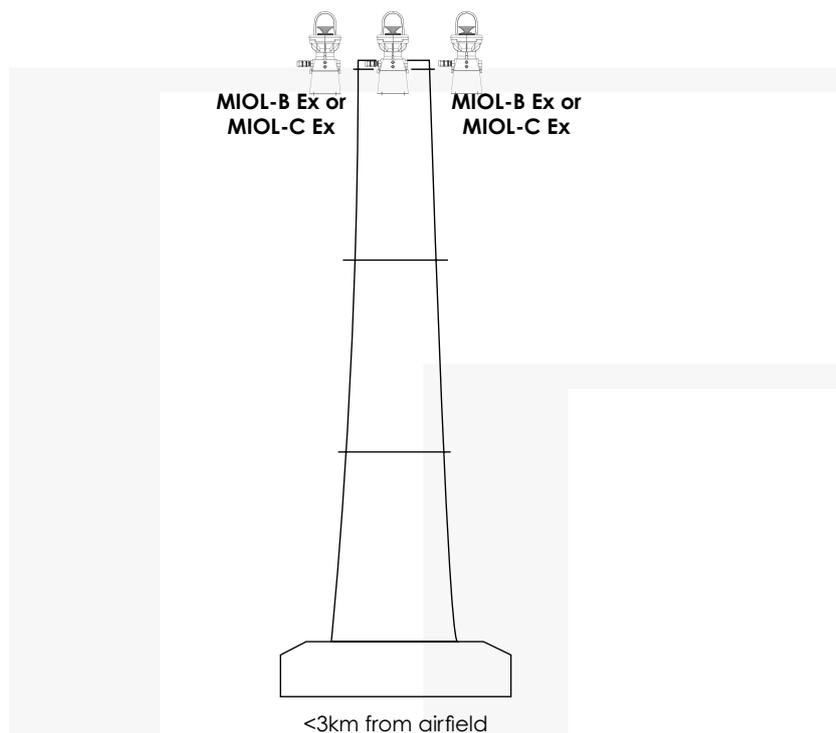


ELEVATED STRUCTURES <45m

LOW INTENSITY
Red steady burning (Night)



MEDIUM INTENSITY
Red flashing or steady burning (Night)



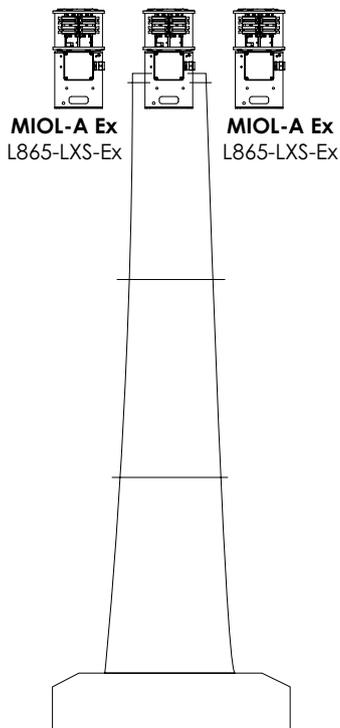
NOT MARKED

SYSTEMS CONFIGURATION

ELEVATED STRUCTURES FROM 45M TO 105M

MEDIUM INTENSITY

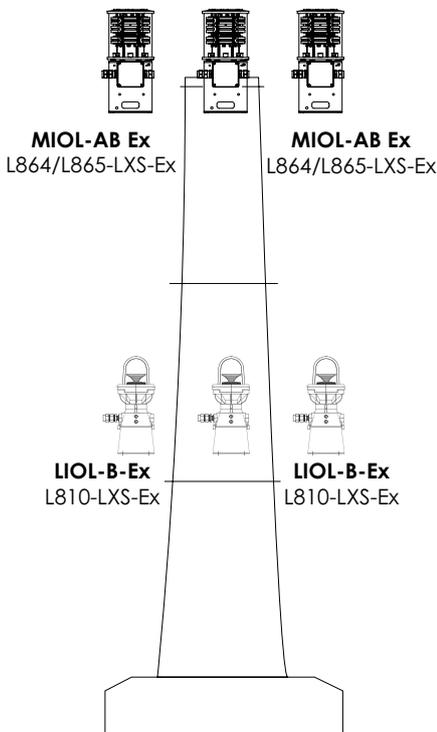
White flashing
(Day and Night)



>10km from airfield

DUAL MEDIUM INTENSITY

White flashing (Day)
Red flashing (Night)

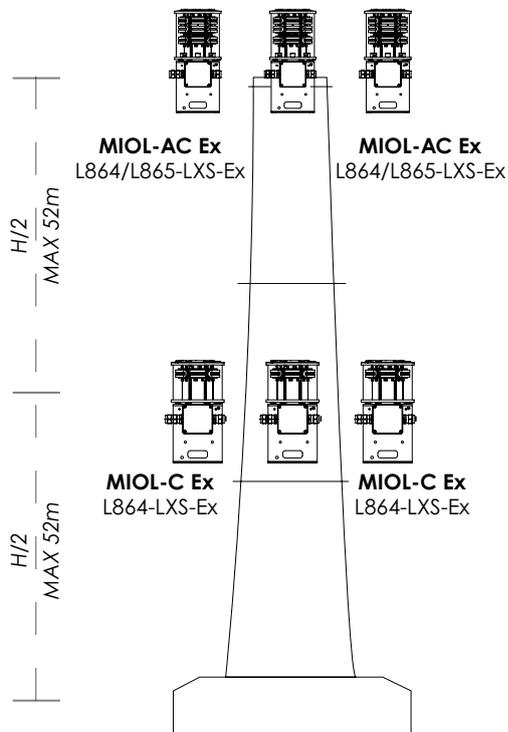


H/2
MAX 52m

H/2
MAX 52m

DUAL MEDIUM INTENSITY

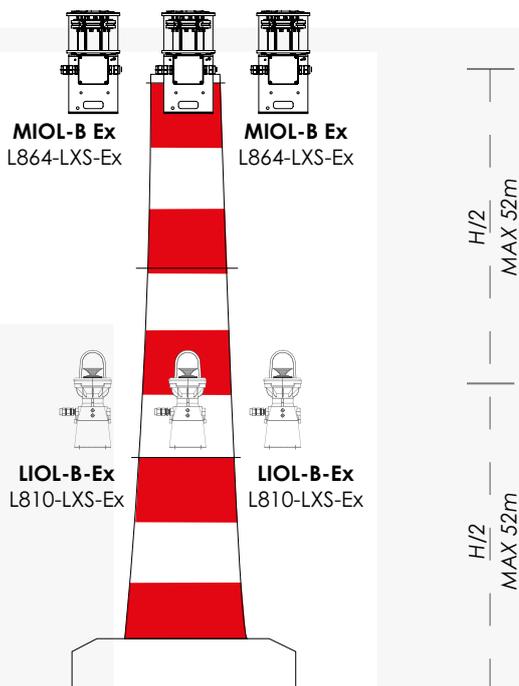
White flashing (Day)
Red steady burning (Night)



NOT MARKED

MEDIUM INTENSITY

Red flashing (Night)
Rosso steady burning (Night)

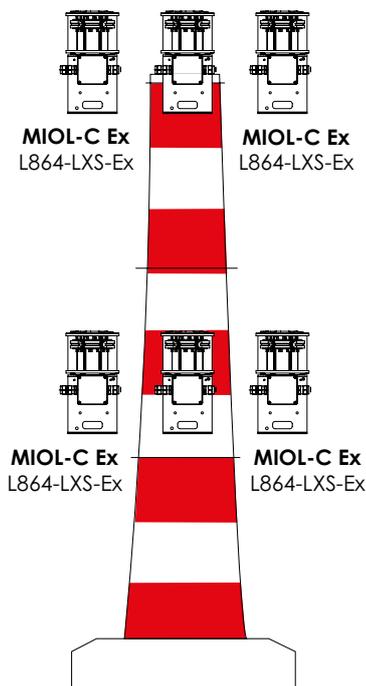


H/2
MAX 52m

H/2
MAX 52m

MEDIUM INTENSITY

Red steady burning (Night)



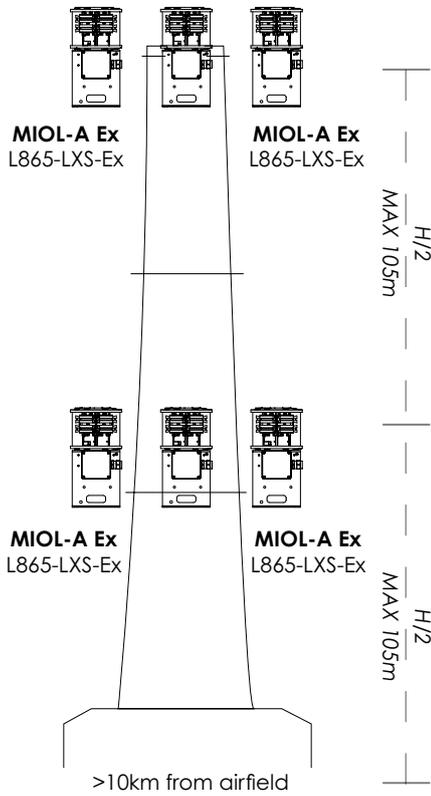
MARKED

SYSTEMS CONFIGURATION

ELEVATED STRUCTURES FROM 105M TO 150M

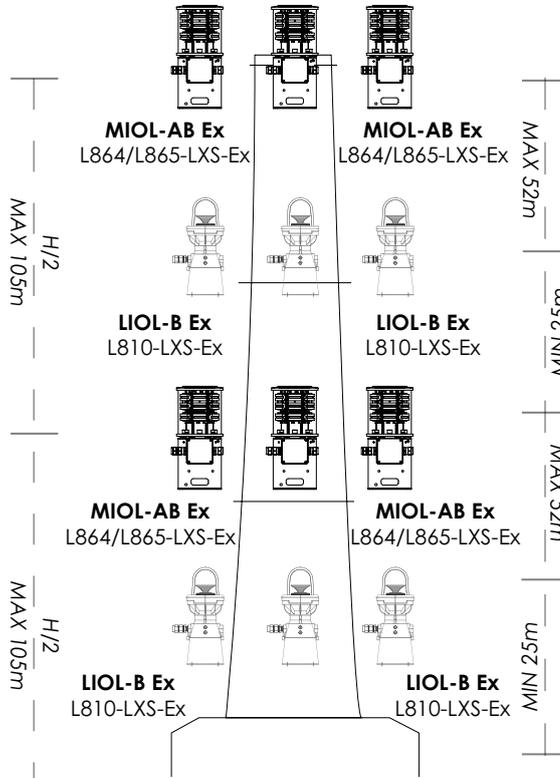
NOT MARKED

MEDIUM INTENSITY
White flashing
(Day and Night)



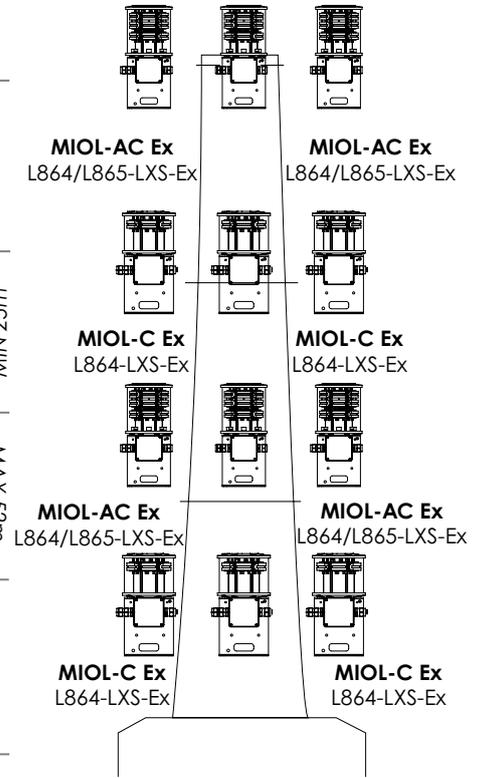
DUAL

White flashing (Day)
Red steady burning (Night)



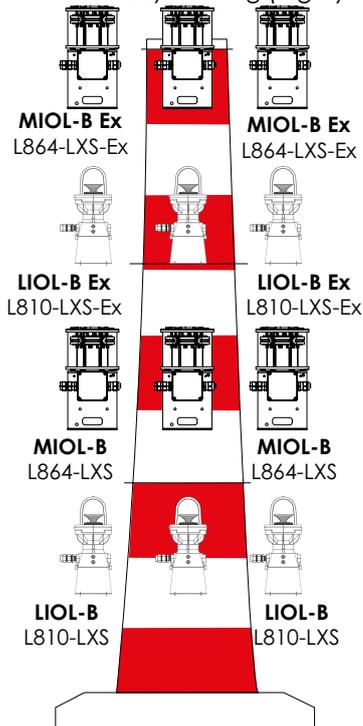
DUAL MEDIUM INTENSITY

White flashing (Day)
Red steady burning (Night)

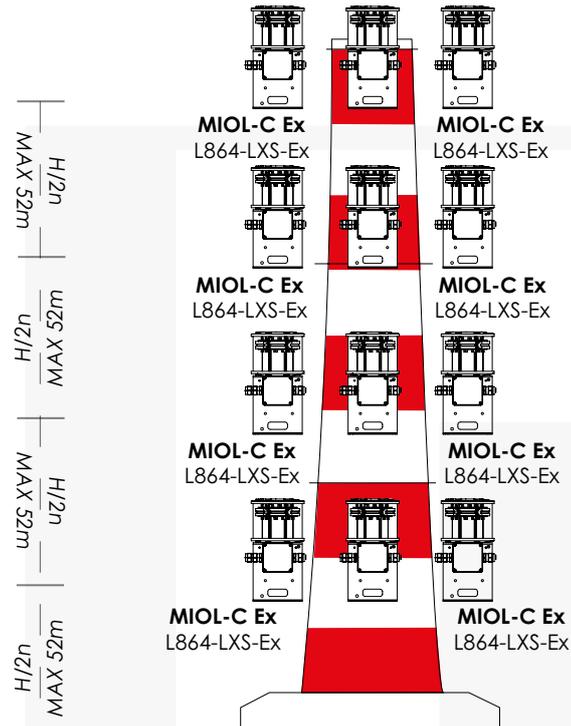


MARKED

MEDIUM INTENSITY
Red flashing (Night)
Red steady burning (night)

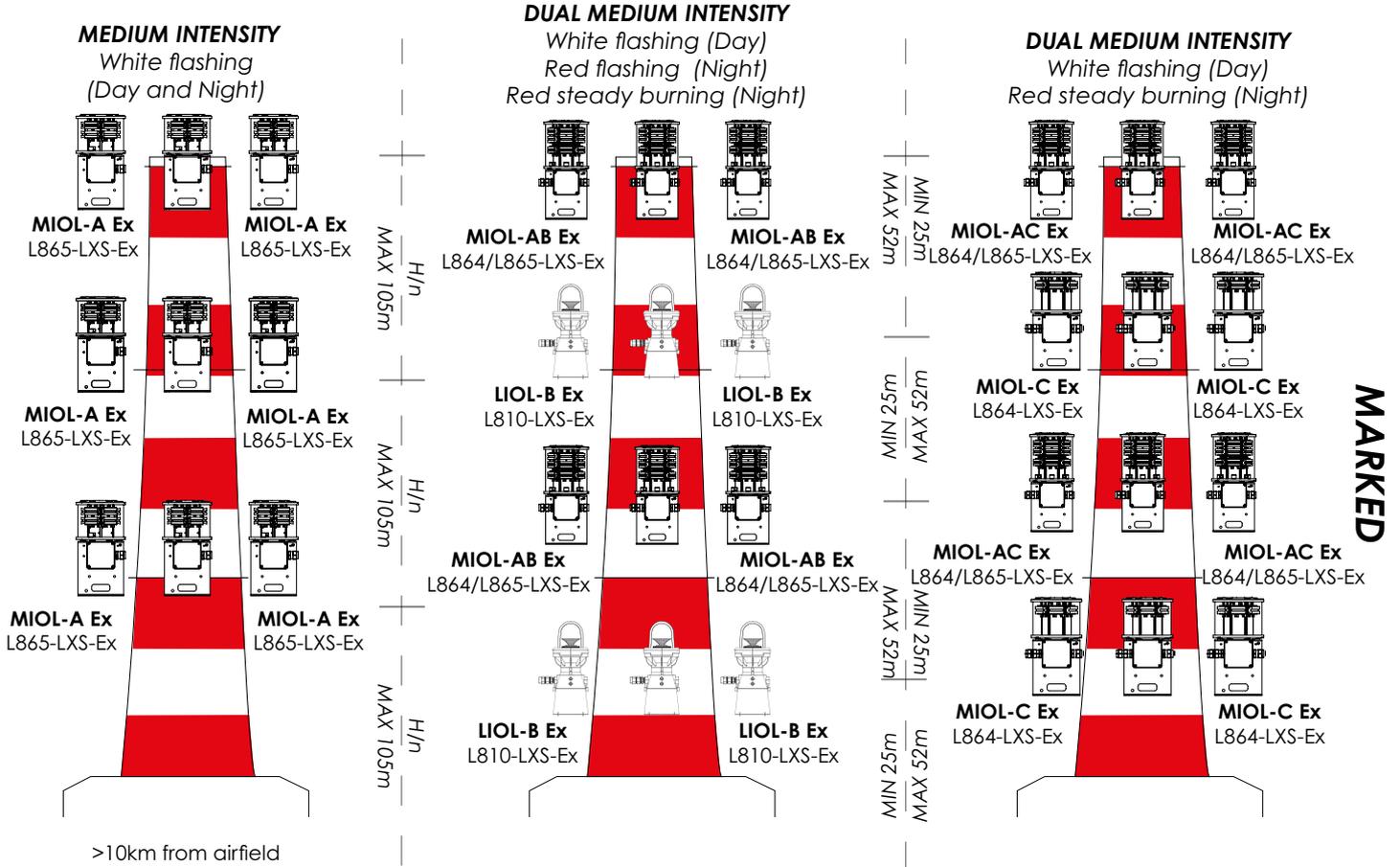


MEDIUM INTENSITY
Red steady burning (Night)



SYSTEMS CONFIGURATION

ELEVATED STRUCTURES >150M



NOTE: For structures above 150m, if not possible use HIOL beacons, structure must be marked.

OFFSHORE PLATFORM



Offshore Platform



Chemical and Petrochemical Plants

CONTACTS

CE2K S.r.l. - Luxsolar®

Phone: +39 0341-260926

E-mail: info@ce2k.com - lxs@luxsolar.com

Web sites: www.ce2k.com - www.luxsolar.com

- **LinkedIn:** Luxsolar Italia



- **YouTube:** Luxsolar





LUXSOLAR® is a department of CE2K S.r.l.
Via Sabatelli 38, 23868 Valmadrera (LC) - Italy



www.luxsolar.com