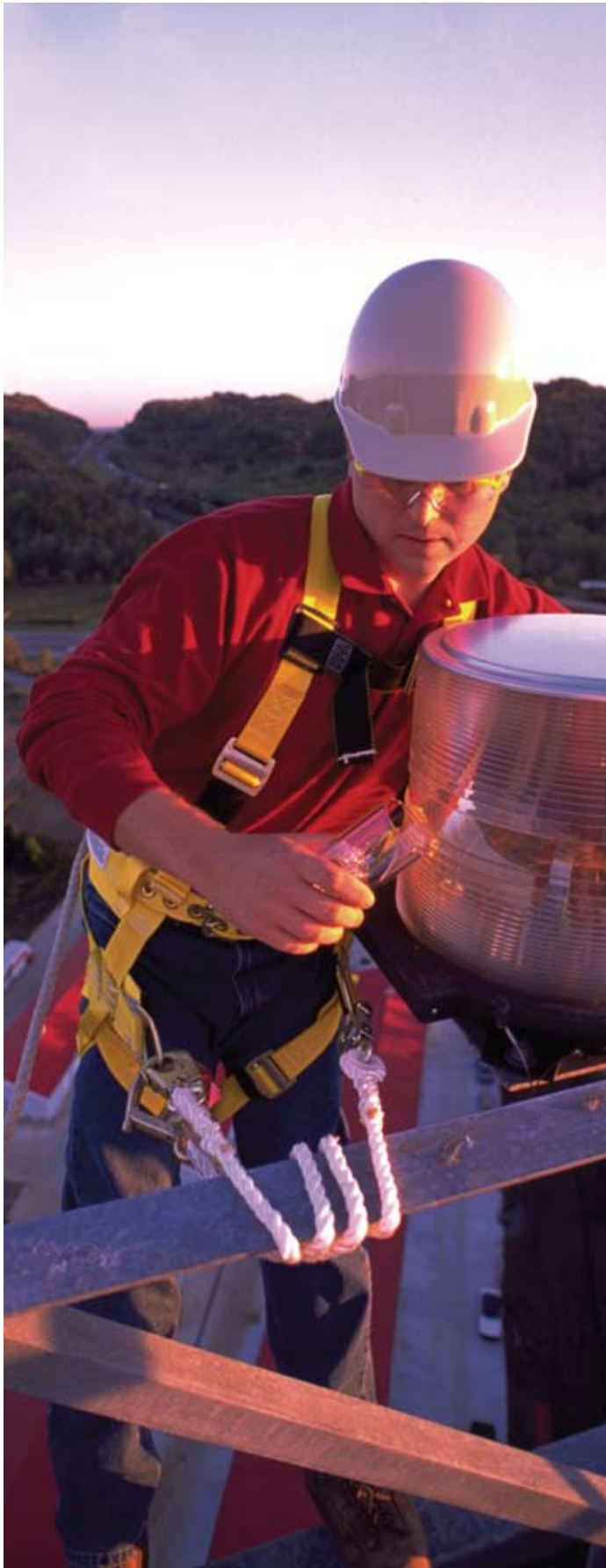




Obstruction Lighting Guide

COOPER Crouse-Hinds





Obstruction Lighting Devices as Tough as Your Environment

For more than a century, companies have come to rely on Cooper Crouse-Hinds for value they can trust to grow their business. By integrating a comprehensive line of electrical products with expert support, industry insights and local availability, we improve safety and productivity in the most demanding industrial and commercial environments worldwide. Every product we develop and every solution we engineer is clearly focused on lowering our customer's total cost of ownership.

Our new line of LED Obstruction Lighting is no exception. Designed for long life, high brightness, and energy efficiency, these products will provide years of cost-effective and maintenance-free operation. Cooper Crouse-Hinds LED obstruction lights, beacons, and visual signals contain the most advanced solid state technology packaged in a corrosive and weather-tight housing, meeting the most rigorous safety standards for the most demanding environments.

Cooper Crouse-Hinds is a global leader across the industrial, commercial and residential markets because of a strategic focus that combines the highest quality and reliability with technical support to minimize downtime, reduce repair incidence, and spur growth. In a worldwide marketplace, Cooper Crouse-Hinds provides solutions and products that are certified to meet local standards. When it comes to quality, engineering and service, however, our commitment to continuous reinvention sets a global standard.

Introduction to Obstruction Lighting Guidelines

Any structure that exceeds 200' above ground level generally needs to be marked (lighted) according to FAA/ICAO Regulations. There are many factors that can affect obstruction marking requirements, such as weather, terrain, proximity to airports, etc. The information presented in the following pages of this catalog is intended to provide basic guidance for structure marking.

The FAA and ICAO guidelines presented herein describe minimum requirements for various structure heights and descriptions of equipment to be used. Note that for Red Lighting Systems, the tower must be painted in alternating levels of aviation orange and white to provide maximum daytime visibility (red lights are for nighttime only). In the case of white or dual lighting systems, the need for painting the tower is eliminated.

Height is only one important consideration when choosing how a structure is to be marked. The products presented in this catalog support the obstruction lighting requirements set forth by the FAA/ FCC and ICAO. For industrial applications, professional assistance will be required, for example in the case of aviation lighting for industrial facilities. Let your sales representative or Cooper Crouse-Hinds Customer Service (866-764-5454) help you determine which is the best lighting solution for your unique application.



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FAA

FAA Lighting System Configuration

TYPE A	Red Lighting System
TYPE B	High Intensity White
TYPE C	High Intensity White/Medium Intensity White Beacon on appurtenance over 40' tall
TYPE D	Medium Intensity White
TYPE E	Dual Lighting System/Red Medium Intensity White
TYPE F	Dual Lighting System Red High Intensity White (Dual Beacon on appurtenance over 40' tall)

FAA Equipment Classification

L-810	Steady-Burning Red Obstruction Light
L-856	High Intensity Flashing White Obstruction Light (40 FPM)
L-857	High Intensity Flashing White Obstruction Light (60 FPM)
L-864	Flashing Red Obstruction Light (20-40 FPM)
L-865	Medium Intensity Flashing White Obstruction Light (40 FPM)
L-864/L-865	Dual: Flashing Red Obstruction Light Medium Intensity Flashing White Obstruction Light (40 FPM)
L-866	Medium Intensity Flashing White Obstruction Light (60 FPM)
L-885	Red Catenary (60 FPM)

FPM = Flashes Per Minute

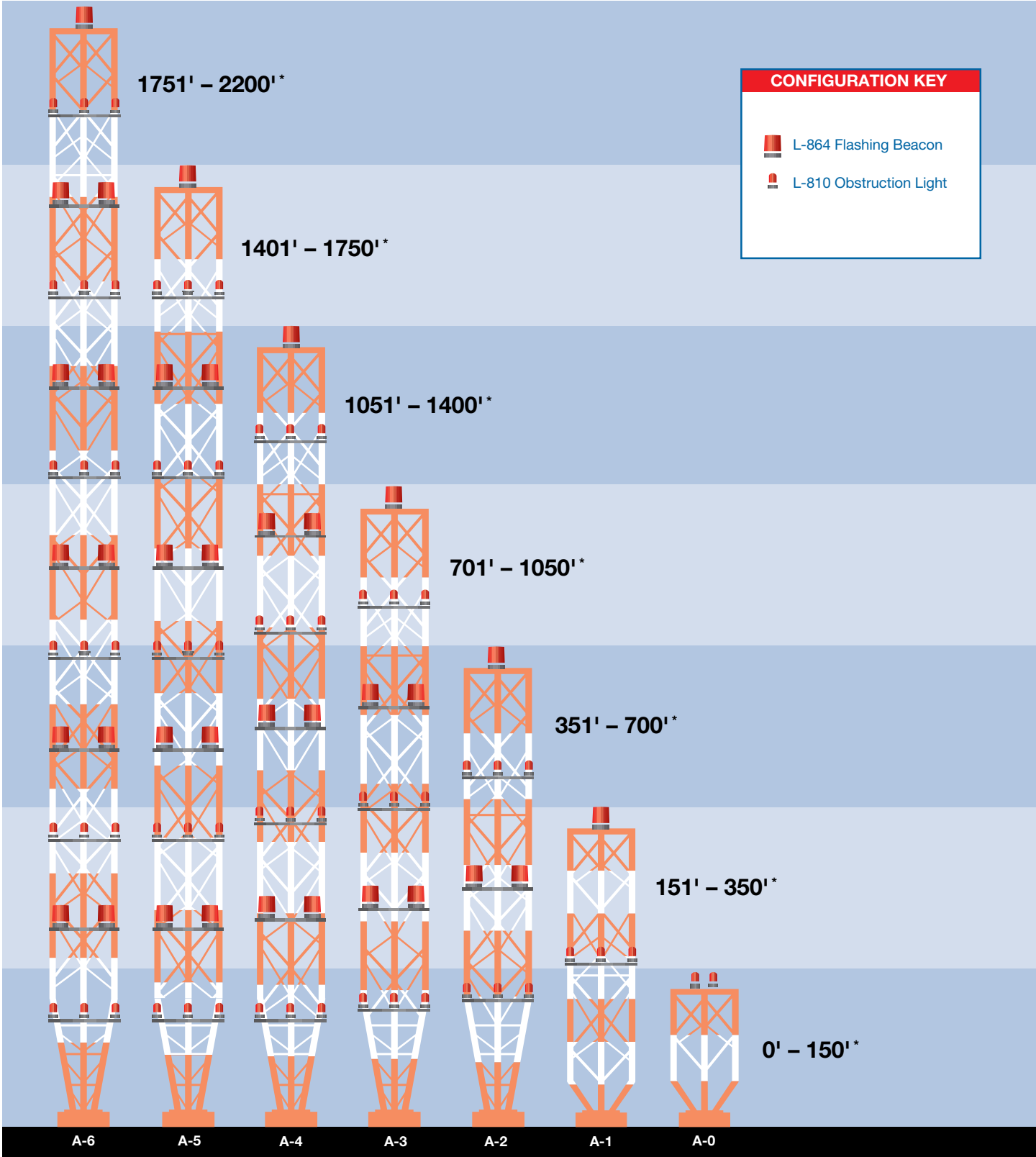
ICAO

ICAO Lighting System Configuration

Type A	Low Intensity, Red Steady Medium Intensity, White Flashing High Intensity, White Flashing
Type B	Low Intensity, Red Steady Medium Intensity, Red Flashing High Intensity, White Flashing
Type C	Low Intensity (Mobile), Yellow/Blue Flashing Medium Intensity, Red Steady



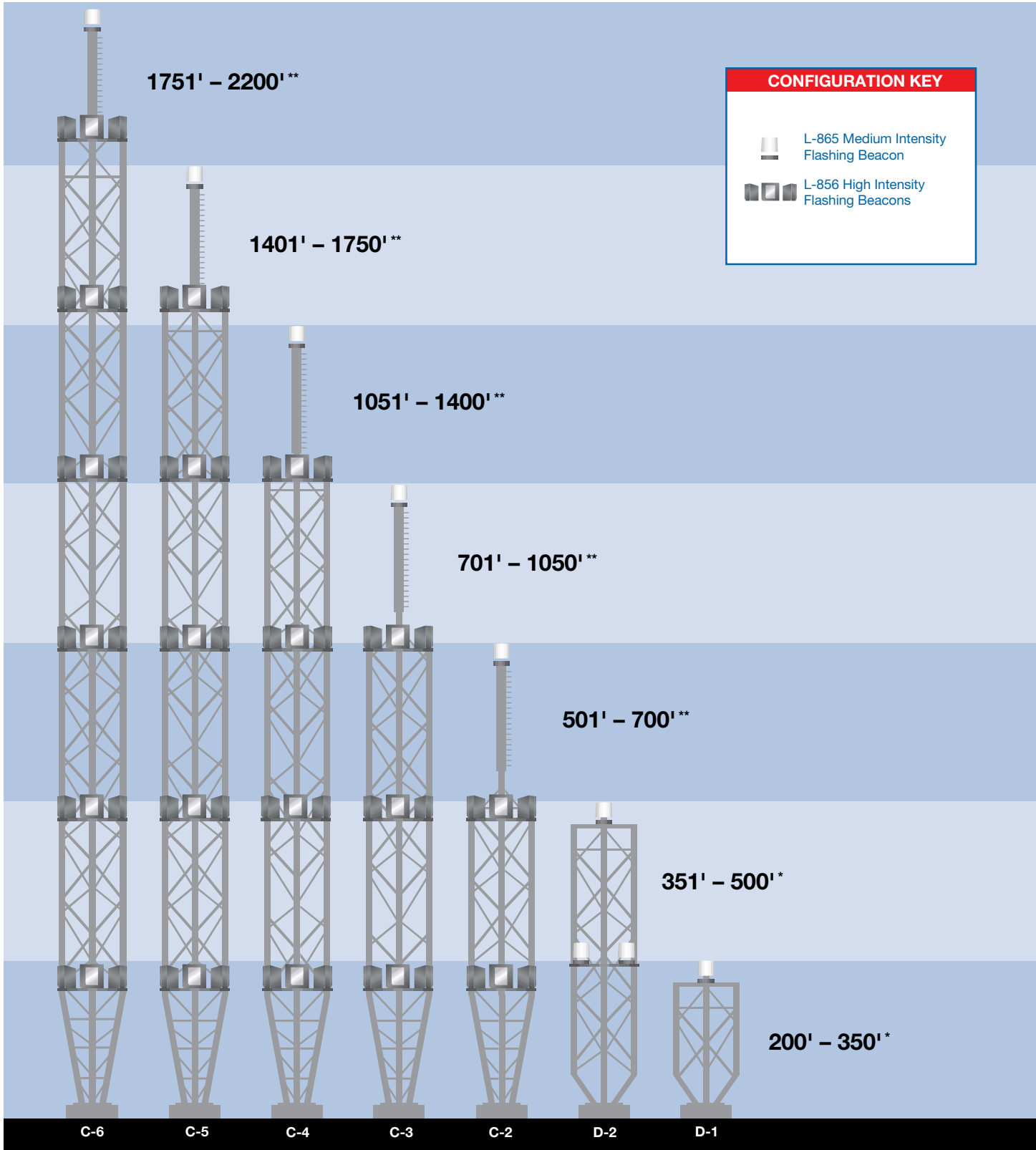
FAA Red Lighting **Type A†**—Painted Tower/Red Lights for Night



† This illustration is meant to be used as a guideline only. Please refer to FAA Advisory Circular 70/7460-1K

* Including any appurtenance

FAA White Lighting **Type C[†]** and **Type D[†]**—White Lights for Day/
White Lights for Night

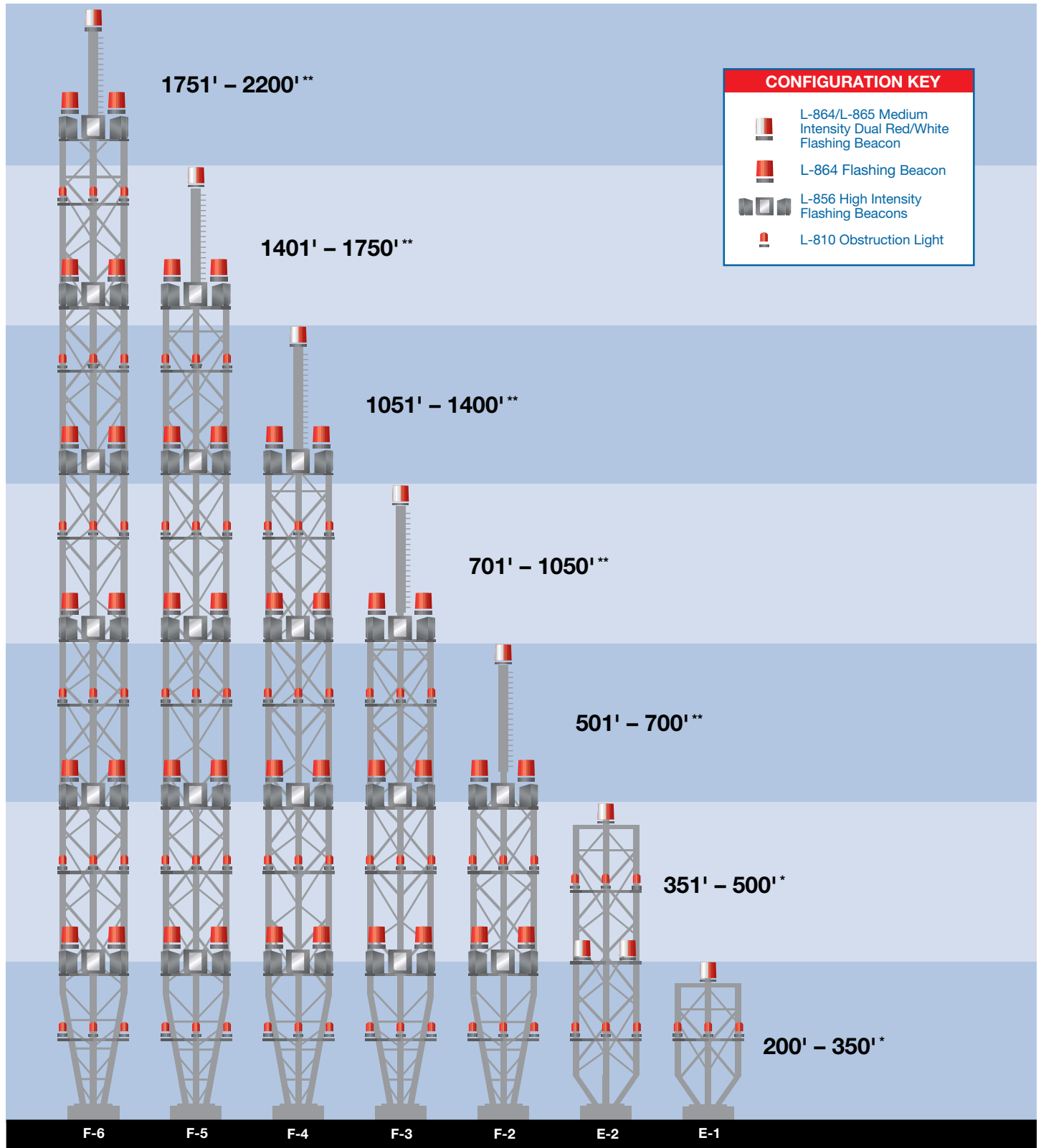


[†] This illustration is meant to be used as a guideline only. Please refer to FAA Advisory Circular 70/7460-1K

* Including any appurtenance

** Excluding appurtenance

FAA Dual Lighting Type E[†] and Type F[†]—White Lights for Day/ Red Lights for Night



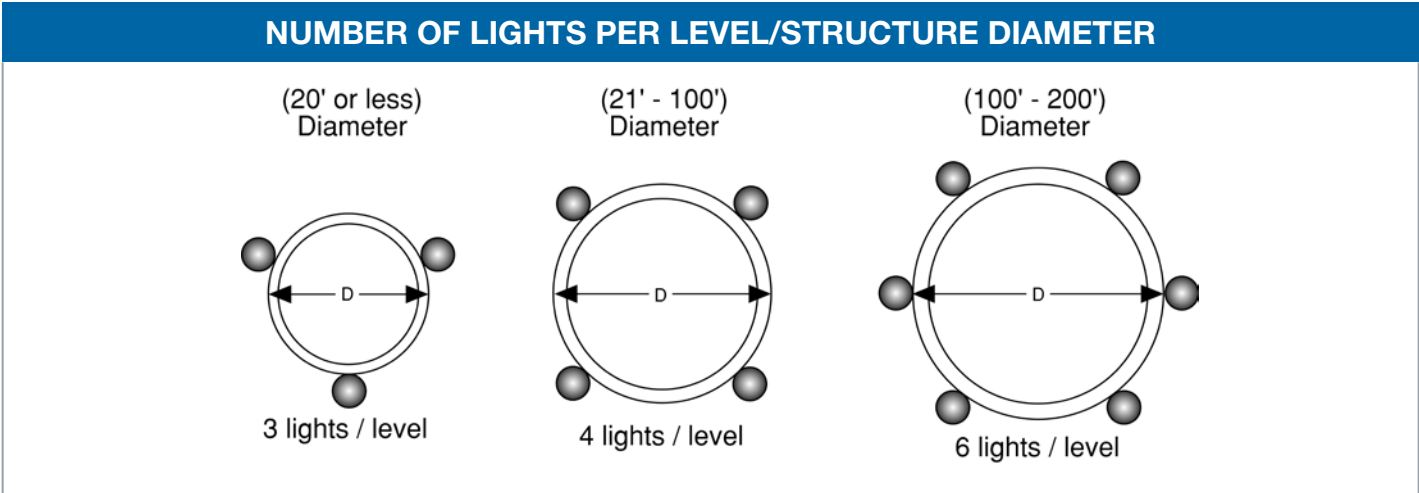
[†] This illustration is meant to be used as a guideline only. Please refer to FAA Advisory Circular 70/7460-1K

* Including any appurtenance

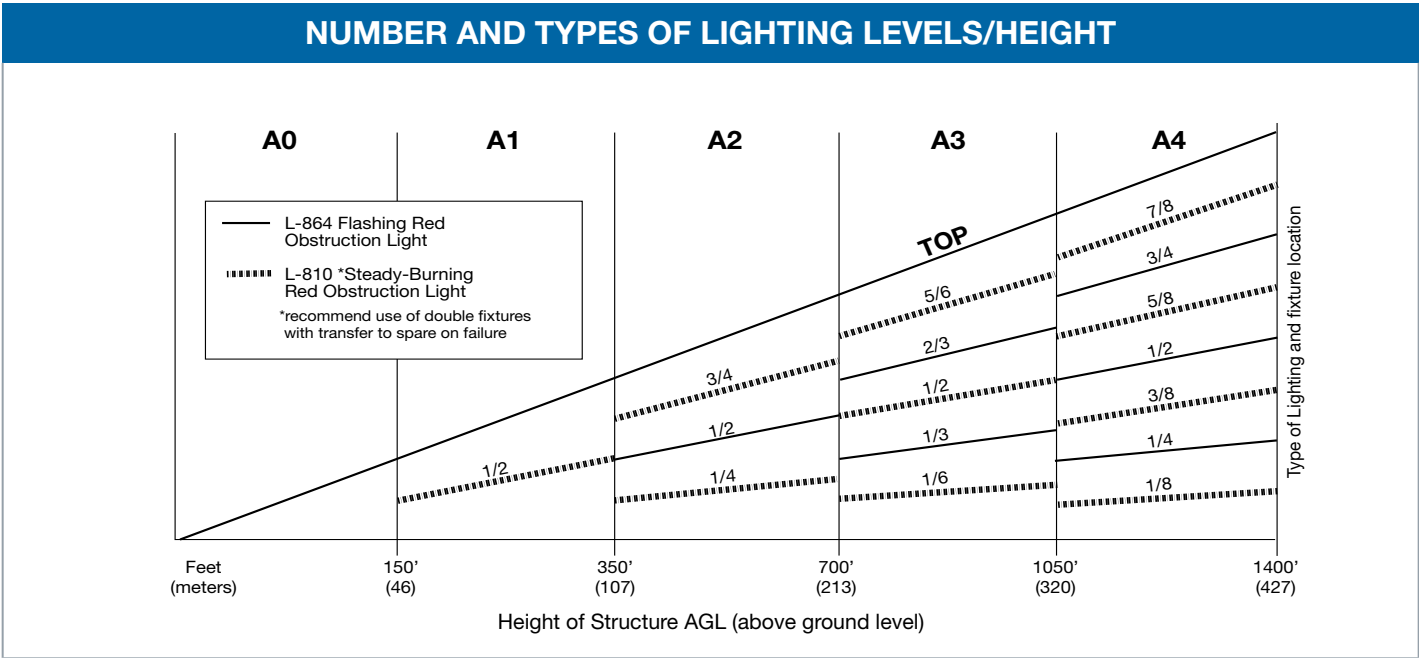
** Excluding appurtenance

FAA/FCC Chimney & Stack Lighting Requirements

NOTE:
Information is provided to assist in your product selection based on AC 70/7460-1K and AC 150/5345-43F Advisory Circular. Your application may demand special lighting requirements. LED Fixtures are ideal for solid structure applications.

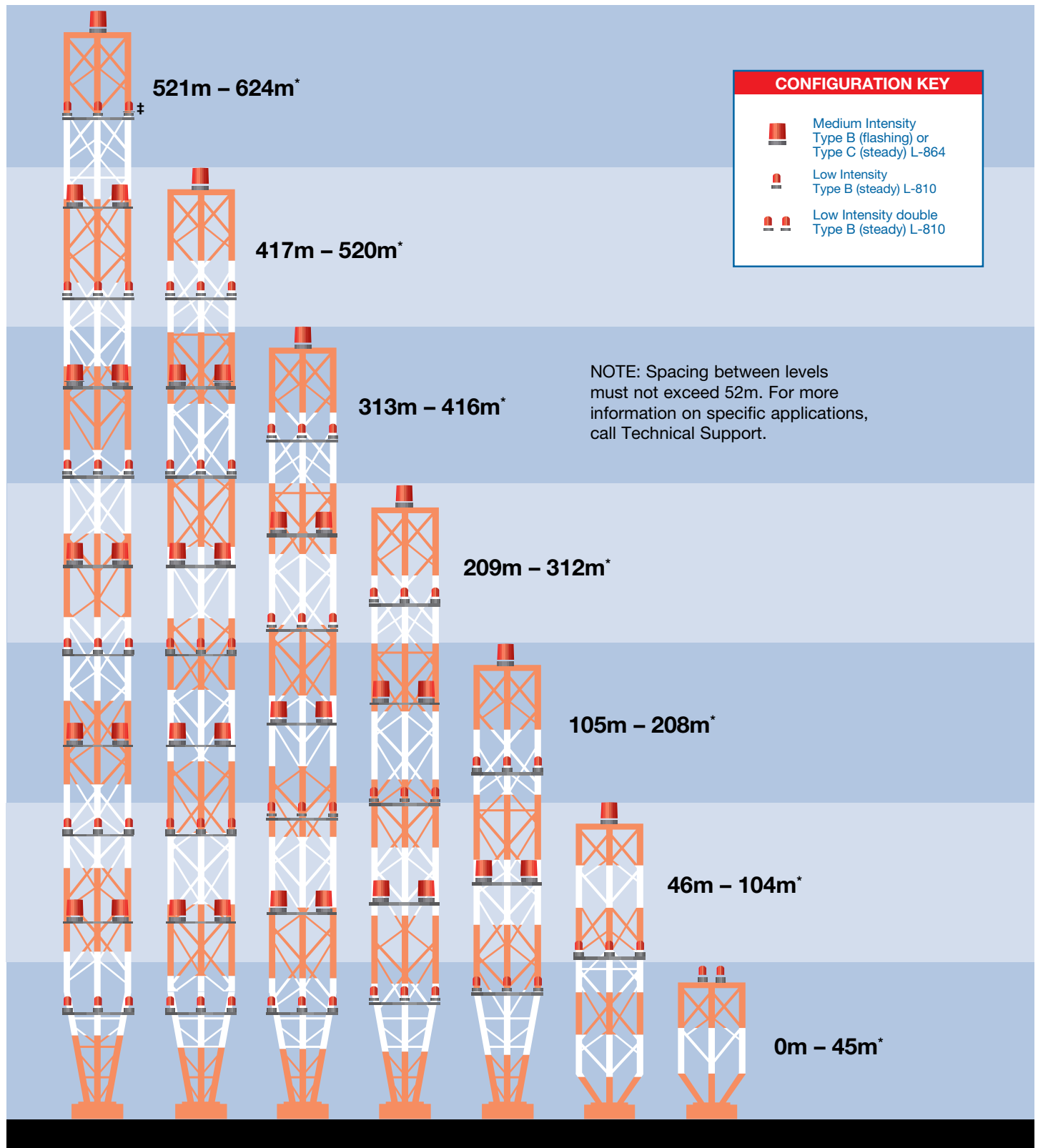


NOTE:
Number of lights per level is the minimum



NOTE:
Lowest level of lights must be raised above the height of adjacent structures. If your structure is not represented, allow us to assist you with selecting the proper products for your specific structure. *Example:* For structure “A1” requires one L-864 beacon at top and at ½ tower height mount L-810 sidelights.

ICAO Red Lighting[†] — Painted Tower/Red Lights for Night

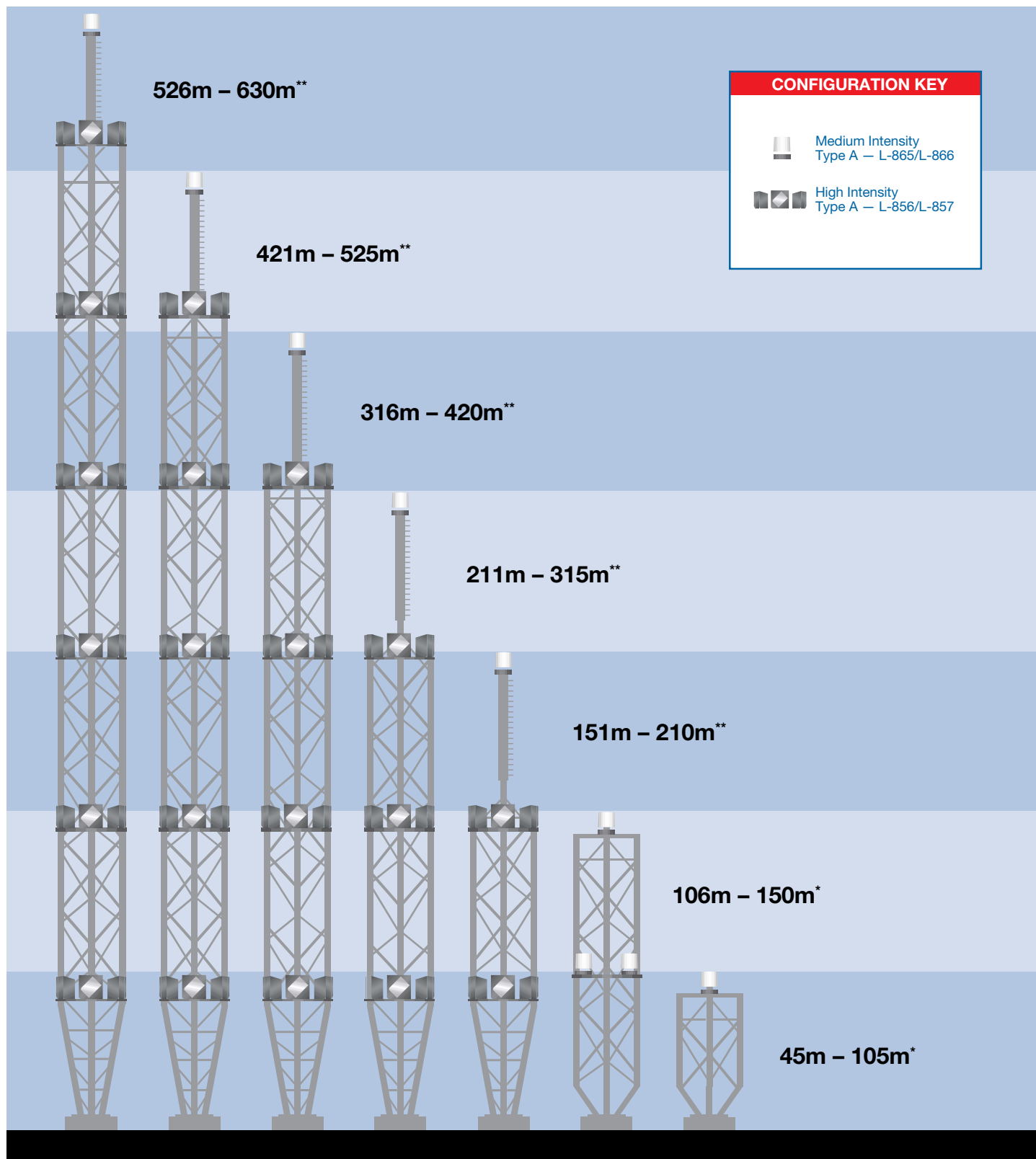


[†] This illustration is meant to be used as a guideline only. Please refer to ICAO (Annex 14)

^{*} May use low intensity Type B or medium intensity Type B at this level

^{*} Including any appurtenance

ICAO White Lighting[†] — White Lights for Day/White Lights for Night

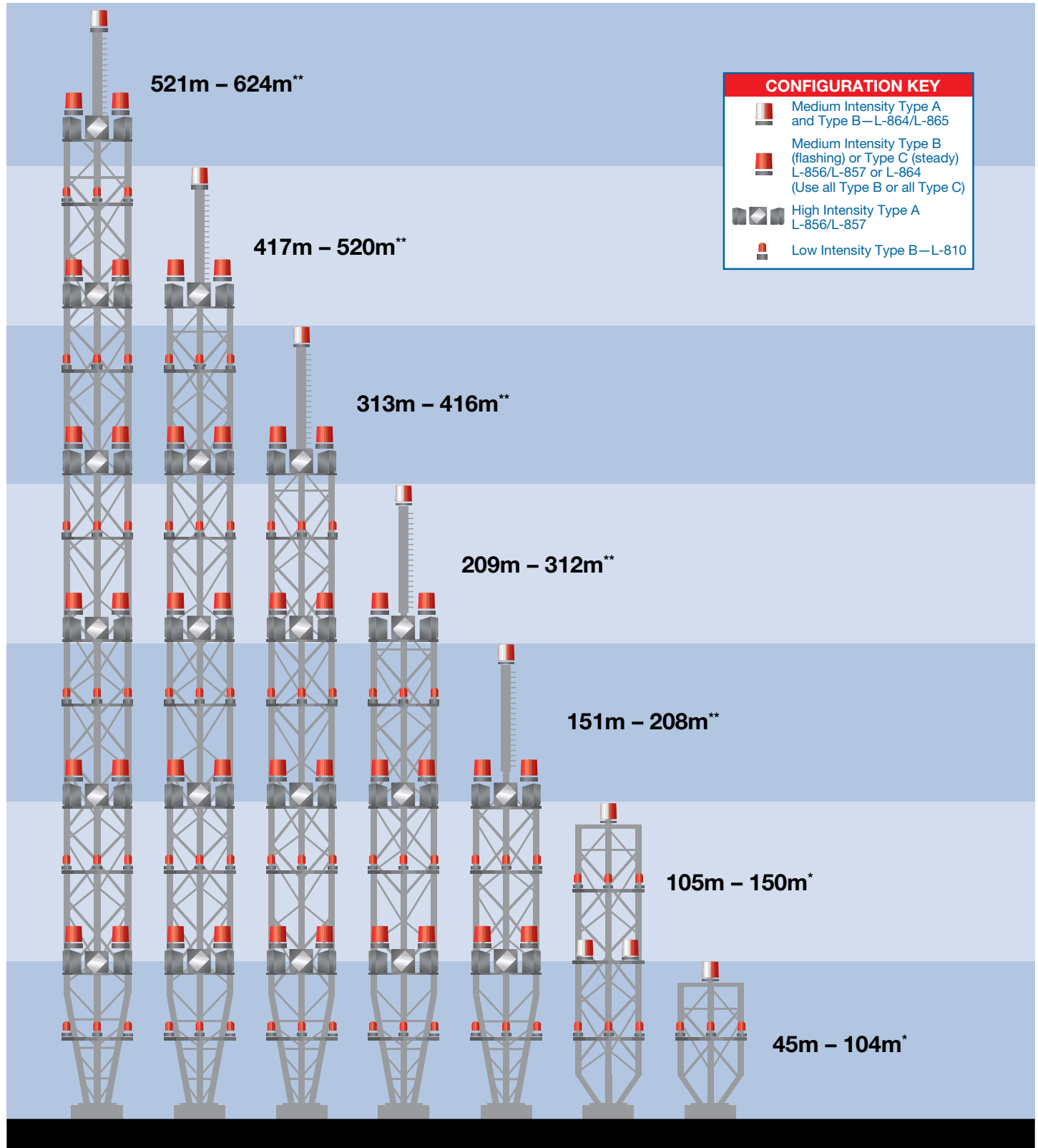


[†] This illustration is meant to be used as a guideline only. Please refer to ICAO (Annex 14)

^{*} Including any appurtenance

^{**} Excluding appurtenance

ICAO Dual Lighting†—White Lights for Day/Red Lights for Night



† This illustration is meant to be used as a guideline only. Please refer to ICAO (Annex 14)

* Including any appurtenance

** Excluding appurtenance

A Guide to the Use of Electrical Equipment In Potentially Explosive Atmospheres

Introduction

Potentially explosive atmospheres exist where there is a risk of explosion due to mixtures of gas/air, vapor/air, dust/air or other flammable combinations. In such areas there is a necessity to eliminate sources of ignition such as sparks, hot surfaces or static electricity which may ignite these mixtures. Where electrical equipment has to be used in these areas it must be so designed and constructed as to not create sources of ignition capable of igniting these mixtures. Before electrical equipment can be used in a potentially explosive atmosphere, a representative sample has to be fully tested and certified by an independent authority such as PTB in Europe or UL in the U.S.A.

This information is intended as a guide only and further expert guidance should be sought before placing into service, maintaining or repairing any item of equipment in a potentially explosive atmosphere.

Where comparisons are shown between, for example, European and North American practice this may be an approximation and individual standards/codes of practice should be consulted for precise details.



Area Classification

Plants are divided into Zones (European and IEC method) or Divisions (North American method) according to the likelihood of a potentially explosive atmosphere being present.

Note: North American legislation now allows Zones to be used to classify areas, where this practice is used it follows the NEC and CEC.

European & IEC Classification	Definition of zone or division	North American Classification
Zone 0 (gases) Zone 20 (dusts)	An area in which an explosive mixture is continuously present or present for long periods	Class I, Division 1 (gases) Class II, Division 1 (dusts)
Zone 1 (gases) Zone 21 (dusts)	An area in which an explosive mixture is likely to occur in normal operation	Class I, Division 1 (gases) Class II, Division 1 (dusts)
Zone 2 (gases) Zone 22 (dusts)	An area in which an explosive mixture is not likely to occur in normal operation and if it occurs it will exist only for a short time	Class I, Division 2 (gases) Class II, Division 2 (dusts) Class III, Division 1 (fibers) Class III, Division 2 (fibers)

Gas Groups (plus dusts and fibers)

There are two main gas groups, Group I—Mining only and Group II—Surface Industries

These categories are used in European and IEC groupings.

Group I is concerned only with underground mining where methane and coal dust are present.

Group II gases occurring in surface industries, are sub-grouped according to their volatility. This enables electrical equipment to be designed to less onerous tolerances if it is to be used with the least volatile gases.

Typical Gas/Material	European/IEC Gas Group	North American Gas Group
Methane	I	—
Acetylene	IIC	A
Hydrogen	IIC	B
Ethylene	IIB	C
Propane	IIA	D
Metal dust	—	E
Coal dust	—	F
Grain dust	—	G

Temperature

Hot surfaces can ignite explosive atmospheres. To guard against this, all electrical equipment intended for use in a potentially explosive atmosphere is classified according to the maximum surface temperature it will reach in service. This temperature is normally based on a surrounding ambient temperature of 40° Centigrade (104° Fahrenheit). This temperature can then be compared to the ignition temperature of the gas(es) which may come into contact with the equipment and a judgment reached as to the suitability of the equipment to be used in that area.

Temperature Classification		Maximum Surface Temperature
European/IEC	North American	
T1	T1	450° C
T2	T2 T2A T2B T2C T2D	300° C 280° C 260° C 230° C 215° C
T3	T3 T3A T3B T3C	200° C 180° C 165° C 160° C
T4	T4 T4A	135° C 120° C
T5	T5	100° C
T6	T6	85° C

e.g. Butane has an ignition temperature of 365° Centigrade, equipment used in the vicinity of this gas would need a T rating of T2 or better.

Types of Electrical Equipment Suitable for use in Potentially Explosive Atmospheres

Different techniques are used to prevent electrical equipment from igniting explosive atmospheres. There are restrictions on where these different types of equipment can be used as follows:	European Area of use Designation Standard	IEC Area of use Designation Standard	NEC Area of use Designation Standard
Flameproof Enclosure —An enclosure used to house electrical equipment, which when subjected to an internal explosion will not ignite a surrounding explosive atmosphere.	Zones 1 & 2 EExd EN60079-1	Zones 1 & 2 Exd IEC60079-1	Class I Divisions 1 & 2 — UL1203
Intrinsic Safety —A technique whereby electrical energy is limited such that any sparks or heat generated by electrical equipment is sufficiently low as to not ignite an explosive atmosphere.	Zones 0, 1 & 2 EExi EN50020	Zones 1 & 2 Exi IEC60079-11	Class I Divisions 1 & 2 — UL913
Increased Safety —This equipment is so designed as to eliminate sparks and hot surfaces capable of igniting an explosive atmosphere.	Zones 1 & 2 EExe EN60079-7	Zones 1 & 2 Exi IEC60079-7	— — —
Purged and Pressurized —Electrical equipment is housed in an enclosure which is initially purged to remove any explosive mixture, then pressurized to prevent ingress of the surrounding atmosphere prior to energization.	Zones 1 & 2 EExp EN50016	Zones 1 & 2 Exp IEC60079-2	Class I Divisions 1 & 2 — NFPA496
Encapsulation —A method of exclusion of the explosive atmosphere by fully encapsulating the electrical components in an approved material.	Zones 1 & 2 EExm EN60079-18	Zones 1 & 2 Exm IEC60079-18	— — —
Oil Immersion —The electrical components are immersed in oil, thus excluding the explosive atmosphere from any sparks or hot surfaces.	Zones 1 & 2 EExo EN50015	Zones 1 & 2 Exo IEC60079-6	Class I Division 2 — UL698
Powder Filling —Equipment is surrounded with a fine powder, such as quartz, which does not allow the surrounding atmosphere to come into contact with any sparks or hot surfaces.	Zones 1 & 2 EExq EN50017	Zones 1 & 2 Exq IEC60079-5	— — —
Non-sparking —Sparkling contacts are sealed against ingress of the surrounding atmosphere, hot surfaces are eliminated.	Zone 2 EExn EN60079-15	Zone 2 Exn IEC60079-15	— — —

Selection, Installation and Maintenance of Electrical Equipment Intended for use in Potentially Explosive Atmospheres

International and national standard requirements for the safe use of electrical equipment in potentially explosive atmospheres as follows:

	International	Europe	U.S.A.	Canada
General Recommendations	IEC60079-14	EN60079-14	NEC Chapter 5	CEC Section 18
Classification of Hazardous Areas	IEC60079-10	EN60079-10	NEC Chapter 5	CEC Section 18
Inspection and Maintenance of Electrical Equipment	IEC60079-17	EN60079-17	–	CEC Section 18
Requirements for Flameproof Enclosures	IEC60079-1	EN60079-1	NEC Chapter 5	CEC Section 18
Requirements for Intrinsically Safe Equipment	IEC60079-11	EN60079-11	NEC Chapter 5	CEC Section 18
Requirements for Increased Safety Equipment	IEC60079-7	EN60079-7	NEC Chapter 5	CEC Section 18
Requirements for Purged and Pressurized Equipment	IEC60079-14	EN60079-14	NEC Chapter 5	CEC Section 18
Requirements for Non-Sparking Equipment	IEC60079-15	EN60079-15	–	CEC Section 18

Cooper Crouse-Hinds advises that all explosionproof electrical equipment is maintained, by suitably trained personnel, in accordance with the manufacturers' recommendations.

Any spare parts used should be purchased from the original manufacturer and repairs should be carried out by the manufacturer or under his supervision, in order that the item remains in conformance with the certification documents.

The Certification Process

All electrical equipment, intended for use in a potentially explosive atmosphere, should be certified as suitable for such use.


The methods of obtaining certification differ in detail, see below, between each certifying body or group of bodies (e.g. CENELEC). Basically this process consists of supplying a representative sample of the equipment along with a set of drawings to a recognized test/certification body e.g. PTB who in turn test the equipment against a recognized standard e.g. EN60079-1 and issues a certificate. The user of the equipment can then refer to this certificate to enable him to safely put the item into service in a zone appropriate to the certification.


European Practice

ALL EQUIPMENT, BOTH ELECTRICAL AND MECHANICAL, INTENDED TO BE PUT INTO SERVICE WITHIN THE EU HAS TO BE CERTIFIED IN ACCORDANCE WITH THE ATEX DIRECTIVE.

It should be noted also that **MECHANICAL** equipment is covered by the ATEX Directive so for the first time items such as gearboxes will have to carry ATEX certification.

The equipment coding signifying compliance with ATEX is as follows:

 II2G i.e.

 – Explosionproof in accordance with ATEX.

II – Group II surface industries.

2 – Category 2 equipment (suitable for use in Zone 1) note: Category 1 is suitable for Zone 0.
Category 3 is suitable for Zone 2.

G – Suitable for atmospheres containing gas (D is suitable for atmospheres containing dusts).

Equipment will be CE marked when certified to ATEX.

North American Practice

Sample equipment and supporting documentation are submitted to the appropriate authority e.g. U.L., F.M., C.S.A.

The equipment is tested in accordance with relevant standards for explosion protection and also for general electrical requirements e.g. light fittings.

After successful testing, a listing is issued allowing the manufacturer to place the product on the market.

The product is marked with the certification details such as the gas groups A,B,C,D and the area of use e.g. Class I, Division 1.

NEC® is a registered trademark of the National Fire Protection Association.

Worldwide Certifications

Most countries outside Europe or North America use the IEC Standards as a basis for their own national standards.

The Russian Federation certifies equipment to GOST 'R' standards, these closely follow CENELEC practice.

In Russia, certain products used in fire alarm systems may be required to carry the Russian fire approval (VNIPO). Note that not all Cooper Crouse-Hinds products that have been certified to GOST 'R' are VNIPO approved. Check specification on technical data sheets before ordering.

Kazakhstan has a certification process (GOST 'K') where approval is normally based on compliance with CENELEC standards.

Certification in China is based on compliance with international standards such as CENELEC or UL, or their own CQST standard.

There is a scheme in place which will, when fully adopted, allow for internationally recognized certification to become a reality, this is the IEC EX SCHEME. This uses the IEC standards and IEC recognized test and certification bodies to issue mutually recognized test reports and certificates. The scheme is in its infancy and its level of success cannot yet be measured.

Ingress Protection

2 digits are used to denote the level of ingress protection that a piece of apparatus provides:

IP

NEMA Standards

North American practice is to use NEMA standards to describe ingress protection, i.e.:

NEMA 3 is similar to IP 54
 NEMA 4 is similar to IP 55
 NEMA 4X is similar to IP 56
 NEMA 6 is similar to IP 67

Solids		Liquids	
0	No protection.	0	No protection.
1	Protected against solid objects up to 50mm, e.g. hands.	1	Protected against vertically falling drops of water.
2	Protected against solid objects up to 12mm, e.g. fingers.	2	Protected against water spray up to 15° from vertical.
3	Protected against solid objects up to 2.5mm, e.g. tools.	3	Protected against water spray up to 60° from vertical.
4	Protected against solid objects over 1mm, e.g. wires.	4	Protected against water sprays from all directions.
5	Protected against dusts. (No harmful deposits).	5	Protected against water jets from all directions.
6	Totally protected against dust.	6	Protected against strong water jets from all directions, e.g. offshore.
		7	Protected against immersion between 15cm and 1m in depth.
		8	Protected against long immersion under pressure.





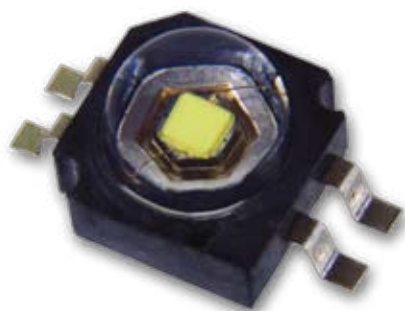
Evolution in Lighting Technology

Advances in light emitting diode (LED) technology, including super-bright white diodes and other performance improvements, are creating new applications and increased acceptability of LEDs in mainstream use. Additionally, challenging customer requirements in industrial or harsh and hazardous locations including long life, high brightness, and reliability can be achieved with currently available LED technology.

Once considered only for indication or decorative purposes, LEDs are now gaining acceptability in signaling, down lights, floodlights, street lights, and other mainstream uses. When compared to other conventional light sources such as incandescent, fluorescent or metal halide, a LED light source can offer longer life, energy savings, and equal or better light characteristics, providing years of maintenance free operation with a quantifiable return on investment.

Cooper Crouse-Hinds is leading the innovation efforts to make LED technology a viable alternative in luminaires for use in industrial and hazardous areas.

The Solid State LED growth initiative is one integral part of a company-wide plan to drive innovation and technology within our business to broaden our solutions to our customers.



LED photo courtesy of Philips Lumileds Lighting Company

LED – Light Emitting Diode

- Semiconductor material converts electricity into light
- Basic structure consists of semiconductor, reflector wire bond and epoxy dome
- Color of the light is dependent on the semiconductor material

Advantages of Cooper Crouse-Hinds LED Technology

Lower Cost of Ownership

Solid State LED lighting has become a leading energy efficient technology with the added benefit of long service life. This equates to energy savings and reduced maintenance, providing a lower cost of ownership when compared to many conventional light sources.

High Intensity and Brightness

High brightness and Ultra High brightness LEDs now offer the ability to produce customized light patterns for illumination. Using customized LED arrays, designers can now focus on unique fixture designs without relying on a pre-determined lamp source.

Low Heat

Conventional lighting technologies waste a significant portion of energy producing visible white light. This translates to excessive heat energy. LED technology is efficient at converting electrical energy into light energy while generating very little heat. In hazardous locations, this relates to a more favorable T-rating.

Environmentally Friendly

Unlike conventional light sources such as fluorescent and HID that use mercury to generate light, LED lighting uses no mercury, thus eliminating the issues surrounding disposal of hazardous substances. Additionally, LEDs save energy, therefore reducing the overall impact of fossil fuels on the environment.

Reliable and Rugged

LEDs contain no fragile filaments or glass. LEDs are solid state devices and are less affected by the demands of harsh and hazardous environments. Additionally the life of the LED is based on lumen depreciation, not failure. Therefore, LED lighting is designed to maintain a safe lights-on condition throughout the useful life of the luminaire.

Easily Programmed or Controlled

Solid State lighting offers the ability to integrate control systems for building unique features into a lighting system. Controls can offer a feature as simple as dimming or on/off to controls of color temperature or monitoring of product condition.



Obstruction Lighting



L810 GENERAL USE LED OBSTRUCTION LIGHT

Certified to: FAA AC NO: 150/5345-43F

Compliant to: Canadian Aviation Regulation
CAR 621.9 (Transport Canada)
ICAO (Annex 14)
Low intensity Type A (10cd)
Low intensity Type B (32cd)



FEATURES/BENEFITS

- Available as a single or dual unit
- Available in 12VDC, 24VDC, 48VDC, 120VAC, and 240VAC versions (50 or 60Hz)
- Earth grounding provisions provided
- Unique optically designed lens to enhance LED operation and provide 360° visibility
- State-of-the-art high-flux LED technology
- Weather/corrosion resistant lamp assembly and housing
- Self-contained wiring compartment eliminates additional boxes
- Threaded 1" and 3/4" bottom hub for mounting
- Can be operated steady or flashed (controller not supplied)
- Resistant to shock and vibration
- NEMA 4X rated and IP66

APPLICATION

- The Cooper Crouse-Hinds LED Obstruction light is a type FAA L810 red obstruction light. Designed for steady burning, this fixture is used to mark any obstacle that may present hazards to aircraft navigation.

SPECIFICATIONS

- Operating Temperature: -67°F to +131°F (-55°C to +55°C)

FINISH

- Cast aluminum housing
- Stainless steel hardware

ORDERING INFORMATION†

Voltage	Single Fixture	Dual Fixture
120VAC	OWLFSR/120	OWLFDR/120
240VAC	OWLFSR/240‡	OWLFDR/240‡
12VDC	OWLFSR/12	OWLFDR/12
48VDC	OWLFSR/48	OWLFDR/48
24VDC	OWLFSR/24	OWLFDR/24

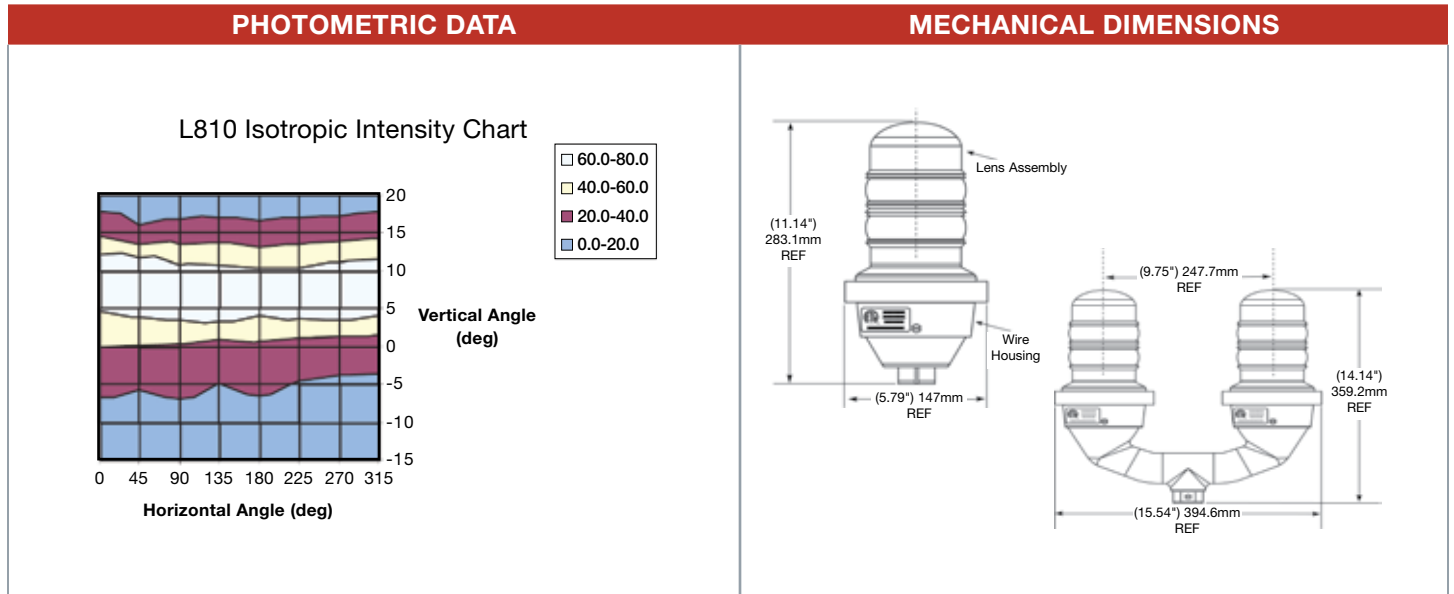
CATALOG NUMBERING SYSTEM

O Obstruction	S Single or D Dual
W Non Hazardous Location	R Red
L Light Emitting Diode (LED)	120, 240 Voltage AC
F FAA Type L810	12, 24, 48 Voltage DC

† Standard product meets both 32cd and 10cd requirements

‡ 240VAC lights are also available in 50cd and 10cd only. For 50cd only, remove "F" from catalog number and add "ICAO50CD" to end. For 10cd only remove "F" from catalog number and add "ICAO10CD" to end. Ex. OWLSR/240 ICAO50CD





WEIGHTS & MEASUREMENTS		
Part Number	Approx. Shipping Weight	Container Dimensions
Single Unit	7.1 lbs	16" x 9" x 8"
Dual Unit	16.1 lbs	22" x 17" x 9"

ELECTRICAL SPECIFICATIONS									
	PF	VA	OPERATING VOLTAGE			WATTS (W)			AMPS
			Min	Typ	Max	Min	Typ	Max	
120VAC UNITS	.3	46.5	92	120	132	10	15	18	0.120
240VAC UNITS (60Hz)	.17	72	198	240	264	11	15	18	0.120
240VAC UNITS (50Hz)	—	—	198	240	264	12	14	17	—
12VDC UNITS (STANDARD)	—	—	10	12	14	20	25	29	2.000
24VDC UNITS	—	—	21	24	27	17	22	29	0.920
48VDC UNITS	—	—	43	48	53	11	14	16	0.275

L810 CLASS I, DIVISION 2 LED OBSTRUCTION LIGHT

Suitable for Use in Hazardous Areas

ETL Listed in compliance with UL1598 and UL844
for use in Class I, Div 2 Hazardous Locations

Certified to: FAA AC NO: 150/5345-43F

Compliant to: ICAO (Annex 14)
Type A or Type B
Canadian Aviation Regulation
CAR 621.9 (Transport Canada)



FEATURES/BENEFITS

- Available as a single or dual unit
- Suitable for all Class I, Div 2, Groups A, B, C, D hazardous environments, T4 rated
- Unique optically designed lens to enhance LED operation and provide 360° visibility
- Up to 100,000 hours of service life
- Weather/corrosion resistant lamp assembly and housing
- Self-contained wiring compartment eliminates additional boxes
- Threaded 1" and 3/4" bottom hub for mounting
- Can be operated steady or flashed (controller not supplied)
- Resistant to shock and vibration
- NEMA 4X rated and IP66
- Available in 120VAC and 240VAC (50 or 60Hz)
- Energy efficient LED technology

APPLICATION

- The Cooper Crouse-Hinds Obstruction Light is an LED based Class I, Division 2 certified fixture. Used to mark obstructions on structures in hazardous environments, these fixtures provide a valuable solution to facilities in demanding and dangerous environments.

OPERATING CONDITIONS

- The fixture is designed for severe duty conditions and hazardous environments.
- Temperatures ranging from -67°F to +131°F (-55°C to +55°C). Will withstand wind in excess of 150 mph (240 kph), salt fog.

ORDERING INFORMATION

Voltage	Single Fixture	Dual Fixture	Color
120VAC	OX2LFSR/120	OX2LFDR/120	Red
240VAC	OX2LFSR/240	OX2LFDR/240	Red

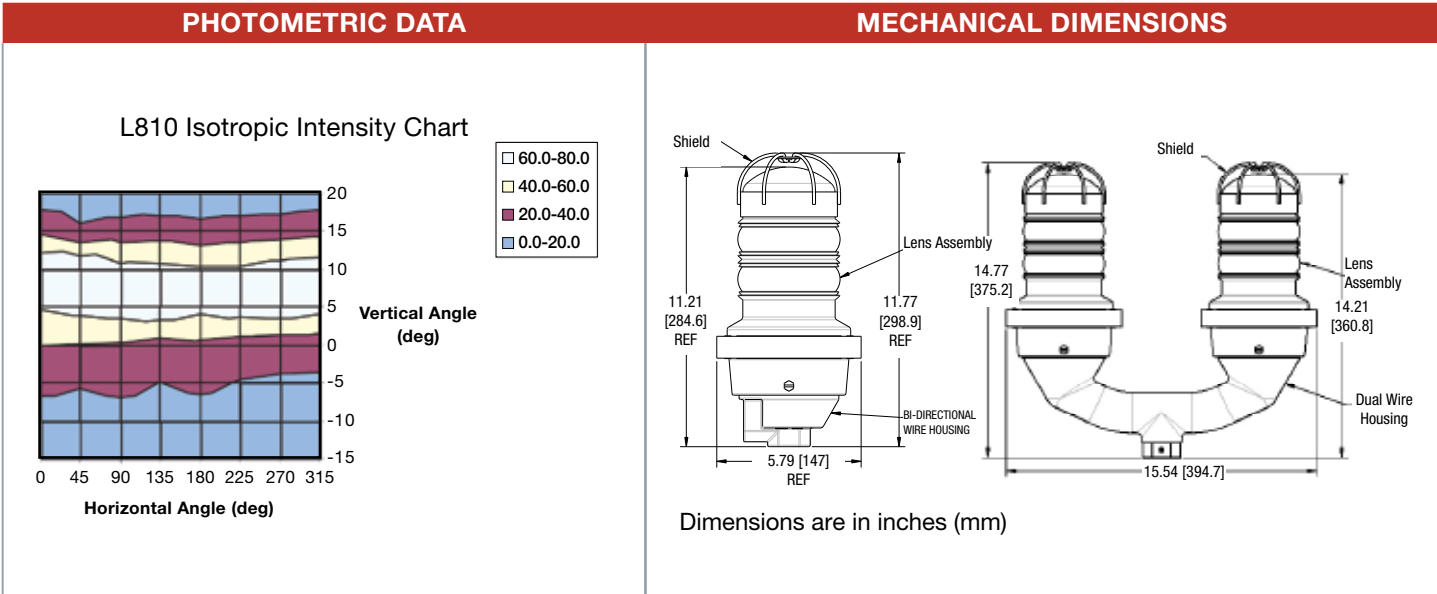
CATALOG NUMBERING SYSTEM

O Obstruction	S Single or D Dual
X2 Hazardous Location Class I, Div 2	R Red
L Light Emitting Diode (LED)	120, 240 Voltage AC
F FAA Type L810	12, 24, 48 Voltage DC

FINISH

- Cast aluminum housing and stainless steel hardware.
- Electrostatically applied powdercoat of aviation orange paint.






WEIGHTS & MEASUREMENTS		
Part Number	Approx. Shipping Weight	Container Dimensions
Single Unit	7.1 lbs	16" x 9" x 8"
Dual Unit	16.1 lbs	22" x 17" x 9"

ELECTRICAL SPECIFICATIONS								
	PF	VA	OPERATING VOLTAGE			WATTS (W)		
			Min	Typ	Max	Min	Typ	Max
120VAC UNITS	0.3	65	92	120	132	10	15	18
240VAC UNITS (60Hz)	0.2	72	198	240	264	11	15	18
240VAC UNITS (50Hz)	0.2	73	198	240	264	12	13	17

L810 HAZARDOUS LOCATION ATEX CERTIFIED LED OBSTRUCTION LIGHT

Suitable for Use in Hazardous Areas

Certified to:  II 3G
Ex nA IIC T4

Compliant to: ICAO (Annex 14)
Low Intensity
Type A or Type B



FEATURES/BENEFITS

- Inherent safety capability; low electrical/thermal energy and high light output
- Unique optically designed lens to enhance LED operation and provide 360° visibility
- Weather/corrosion resistant lamp assembly and housing
- Self-contained wiring compartment eliminates additional boxes
- Can be operated steady or flashed (controller not supplied)
- Available as a single or dual unit
- Resistant to shock and vibration
- Threaded 1" and 3/4" bottom hub for mounting
- NEMA 4X rated and IP66
- LED technology for extended life and energy efficiency
- Available in 120VAC and 240VAC
- T4 rated

APPLICATION

- The Cooper Crouse-Hinds Visual Signal Light is an LED based ATEX certified fixture. Used for visual indication in hazardous environments, providing a valuable solution to the petrochemical industry facilities.

ORDERING INFORMATION ATEX CERTIFIED PRODUCT

Voltage	Single Fixture	Dual Fixture	Color
120VAC	OALSR/120-ATEX	OALDR/120-ATEX	Red
240VAC	VALSR/240-ATEX	VALDR/240-ATEX	Red

CATALOG NUMBERING SYSTEM

O Obstruction or V Visual Signal	R Red
A ATEX Certified	120, 240 Voltage AC
L Light Emitting Diode (LED)	-ATEX
S Single D Dual	

OPERATING CONDITIONS

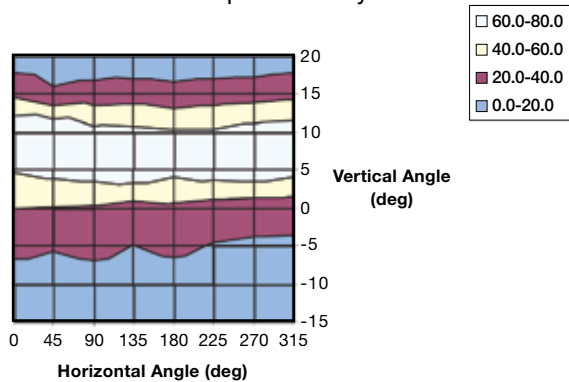
- Temperatures ranging from -67°F to +131°F (-55°C to +55°C). Will withstand wind in excess of 150 mph (240 kph), salt fog.

FINISH

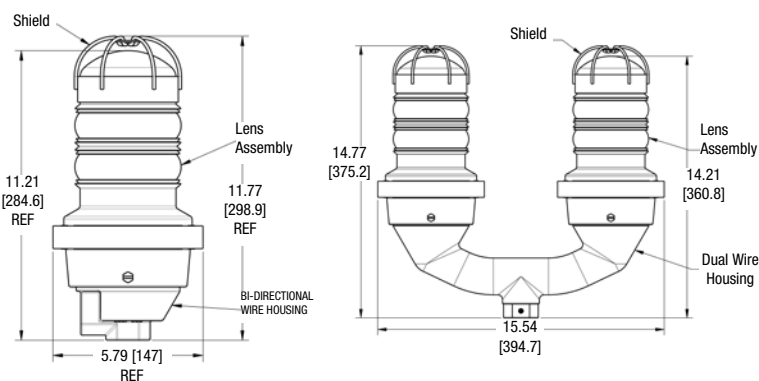
- Cast aluminum housing and stainless steel hardware.
- Electrostatically applied powdercoat of aviation orange paint.

PHOTOMETRIC DATA

L810 Isotropic Intensity Chart



MECHANICAL DIMENSIONS



Dimensions are in inches (mm)

WEIGHTS & MEASUREMENTS

Part Number	Approx. Shipping Weight	Container Dimensions
Single Unit	7.1 lbs	16" x 9" x 8"
Dual Unit	16.1 lbs	22" x 17" x 9"

ELECTRICAL SPECIFICATIONS

	PF	VA	OPERATING VOLTAGE			WATTS (W)		
			Min	Typ	Max	Min	Typ	Max
120VAC UNITS	0.3	65	92	120	132	10	15	18
240VAC UNITS (60Hz)	0.2	72	198	240	264	11	15	18
240VAC UNITS (50Hz)	0.2	73	198	240	264	12	13	17



L810 GENERAL USE
INCANDESCENT
OBSTRUCTION LIGHT

Certified to: FAA AC 150/5345-43F
Compliant to: FCC Rules and Regulations
Canadian Standards Association (CSA)
ICAO (Annex 14)
Low Intensity Type A or Type B
Canadian Aviation Regulation
CAR 621.9 (Transport Canada)



EOL SERIES

FEATURES/BENEFITS

- ETL Certified to FAA (EOL with 116W, 120V Lamp(s) only)
- Red fresnel glass globes for 360° visibility
- Operates on 120 or 220-240V and 60 or 50Hz frequency power supply when used with proper voltage lamp
- Threaded 1" hub for mounting
- Pre-wired leads
- Cast aluminum housing with yellow finish
- Globes with tether & clamp band
- Accepts traffic signal lamps with USA medium screw base and European E27 base
- O-Ring globe seal
- Lamp life 8000 hours at 120V and 4000 hours for 220-240V applications



APPLICATION

- The EOL Series incandescent obstruction light is used for nighttime obstruction marking of tall structures that may present hazards to air navigation. The EOL is designed for steady burning applications.

WEIGHTS & MEASUREMENTS

	50033	50021	40940
Shipping Weight:	4.0 lbs 1.8 kg	10.0 lbs 4.5 kg	3.0 lbs 1.4 kg
Shipping Volume:	0.4 cu ft 0.011 cu m	0.45 cu ft 0.013 cu m	0.4 cu ft 0.011 cu m

ORDERING INFORMATION*



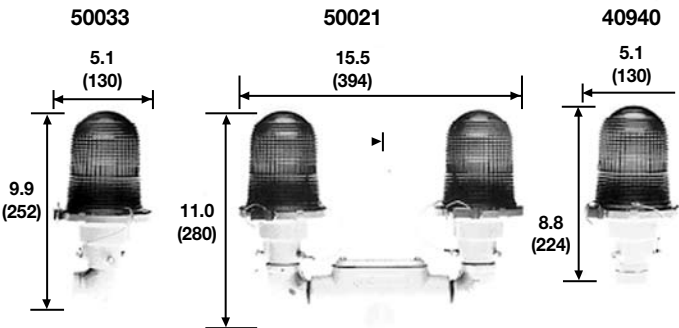
Fixture Type:
40940 = Single, Bottom Entry
50033 = Single, Side Entry
50021 = Double, Bottom Entry

Lamp Type:
No symbols mean lamp(s) not included
116 = 116W 120V 10047-1577
100 = 116W 230V 10047-2145

Options:
GR = Ground Wire(s)

*Other colored globes are available for non-obstruction lighting applications (contact factory).

MECHANICAL DIMENSIONS



Dimensions are in inches (mm)

L810 GENERAL USE INCANDESCENT OBSTRUCTION LIGHT

Compliant to: US Military Specification MIL-L-7830
USAF ANA Standards
FCC Rules and Regulations
Canadian Standards Association (CSA)
ICAO (Annex 14)
Low Intensity Type A or Type B
Canadian Aviation Regulation
CAR 621.9 (Transport Canada)



VAW SERIES

FEATURES/BENEFITS

- Compliant to US Military Specification MIL-L-7830 as well as USAF ANA Standards
- Red fresnel glass globes for 360° visibility
- Threaded bottom 1" hub for mounting
- Cast aluminum housing with natural finish
- Threaded globes
- Accepts traffic signal lamps with USA medium screw base and European E27 base
- Operates on 120 or 220-240V and 60 or 50Hz frequency power supply when used with proper voltage lamp
- Gasket for globe seal
- Lamp Life 8000 hours at 120V and 4000 hours for 220-240V applications
- Optional wire guards (-GG option)

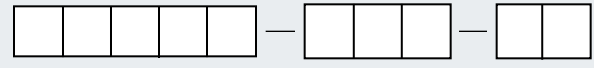
APPLICATION

- The VAW Series incandescent obstruction light is used for nighttime obstruction marking of tall structures that may present hazards to air navigation. The VAW is designed for steady burning applications.

WEIGHTS & MEASUREMENTS

	43961	43958
Shipping Weight:	16.0 lbs 1.4 kg	8.0 lbs 0.7 kg
Shipping Volume:	1.4 cu ft 0.04 cu m	0.7 cu ft 0.02 cu m

ORDERING INFORMATION*



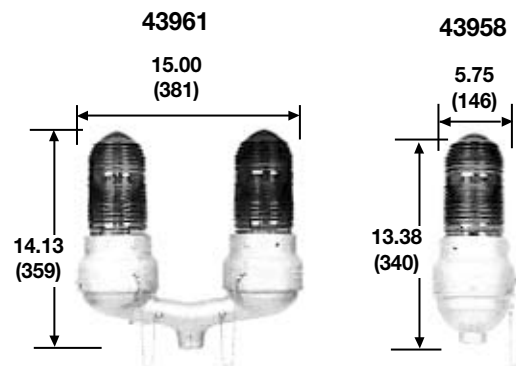
Fixture Type:
43958 = Single
43961 = Double
43950A = Double**

Lamp Type:
No Symbols Mean Lamp(s) Not Included
116 = 116W 120V 10047-1577
100 = 116W 230V 10047-2145

Options:
GG = Wire Globe Guard(s): Factory Installed Only
GR = Ground Wire(s)

- * Other colored globes are available for non-obstruction lighting applications, (contact factory).
- ** Includes brackets for lowering device. Cooper Crouse-Hinds also offers the complete Obstruction Light Lowering System (contact factory).

MECHANICAL DIMENSIONS



Dimensions are in inches (mm)

Application Note:
FAA Advisory Circular 70/7460-1K "Obstruction Marking and Lighting," Chapter 12, paragraph 123.a advises that steady burning red lights should conform to FAA AC 150/5345-43 or Military Specification MIL-L-7830.



Visual Signals



GENERAL USE LED VISUAL SIGNAL LIGHT

UL 1598*



FEATURES/BENEFITS

- Available as a single or dual unit
- Available in 120VAC, 240VAC, 12/24/48VDC
- Unique optically designed lens to enhance LED operation and provide 360° visibility
- State-of-the-art high-flux LED technology for extended life and energy efficiency
- Uses 90% less energy than an incandescent
- Weather/corrosion resistant lamp assembly and housing
- Self-contained wiring compartment eliminates additional boxes
- Threaded 1" and 3/4" bottom hub for mounting
- Can be operated steady or flashed
- Resistant to shock and vibration
- NEMA 4X rated and IP66

APPLICATION

- The Cooper Crouse-Hinds Series Multi-Purpose LED Light fulfills the needs of engineers and architects requiring a rugged, weather-proof fixture with color alternatives to the standard red obstruction lights. Available in green, yellow, blue and white, these fixtures are typically used as a continuous source to warn, communicate, or draw attention to an area, machine, or process. Truly the LED solution to your lighting challenges.

OPERATING CONDITIONS

- Temperature: -67°F to +131°F (-55°C to +55°C)

*UL 1598 pending

ORDERING INFORMATION

Single Fixture

Voltage	Red	White	Blue	Green	Yellow
120VAC	OWLFSR/120	VWLSW/120	VWLSB/120	VWLSG/120	VWLSY/120
240VAC	OWLFSR/240	VWLSW/240	VWLSB/240	VWLSG/240	VWLSY/240
12VDC	OWLFSR/12				
48VDC	OWLFSR/48				
24VDC	OWLFSR/24				

Double Fixture

120VAC	OWLFDR/120	VWLDW/120	VWLDB/120	VWLDG/120	VWLDY/120
240VAC	OWLFDR/240	VWLDW/240	VWLDB/240	VWLDG/240	VWLDY/240
12VDC	OWLFDR/12				
48VDC	OWLFDR/48				
24VDC	OWLFDR/24				

CATALOG NUMBERING SYSTEM

O Obstruction or
V Visual Signal
W Non-Hazardous
Location

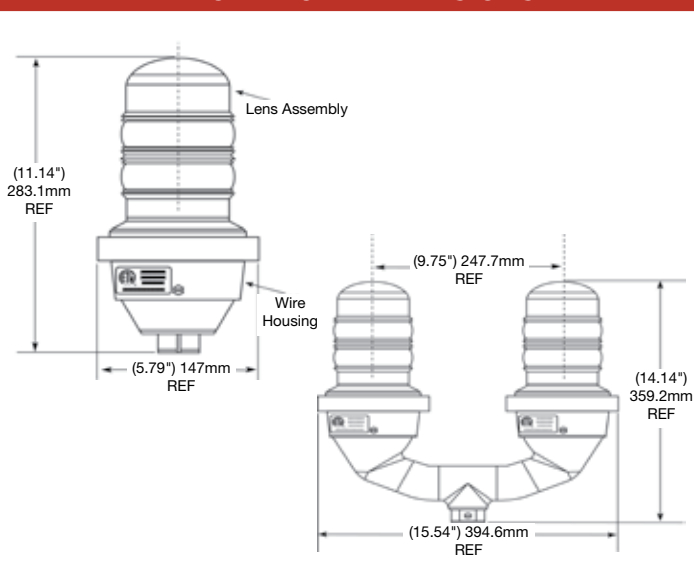
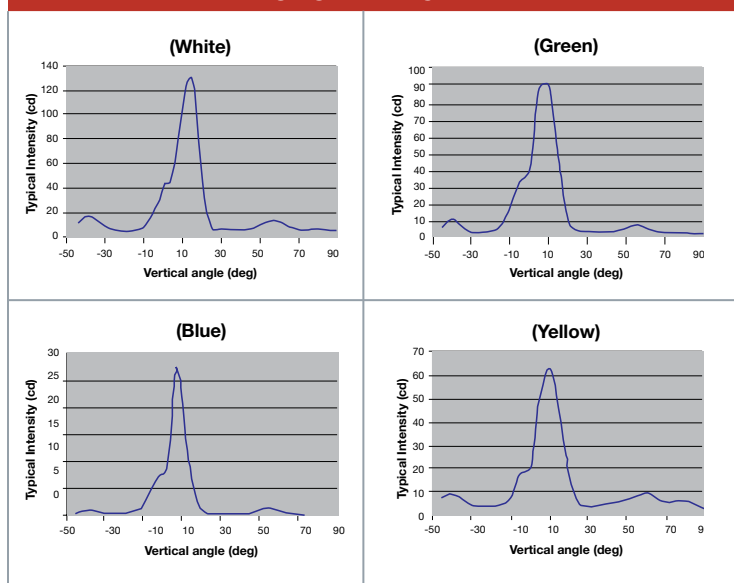
L Light Emitting Diode
(LED)
F FAA Type L810
(Obstruction Only)

S Single or **D** Dual
R, W, B, G, Y
Red, White, Blue,
Green, Yellow

120, 240 Voltage AC
12, 24, 48 Voltage DC

PHOTOMETRIC DATA

MECHANICAL DIMENSIONS



WEIGHTS & MEASUREMENTS

Part Number	Approx. Shipping Weight	Container Dimensions
Single Unit	7.1 lbs	16" x 9" x 8"
Dual Unit	16.1 lbs	22" x 17" x 9"

ELECTRICAL SPECIFICATIONS

	PF	VA	OPERATING VOLTAGE			WATTS (W)			AMPS
			Min	Typ	Max	Min	Typ	Max	
120VAC UNITS (WHITE)	.36	44	92	120	132	12.5	16	18	0.360
120VAC UNITS (GREEN)	.36	44	92	120	132	12.5	16	18	0.360
120VAC UNITS (BLUE)	.36	44	92	120	132	12.5	16	18	0.360
120VAC UNITS (YELLOW)	.36	47	92	120	132	11	15	17	0.400

CLASS I, DIVISION 2 LED VISUAL SIGNAL LIGHT

Suitable for Use in Hazardous Areas

ETL Listed in compliance with
UL1598 and UL844 for use in
Class I, Div 2 Hazardous Locations



FEATURES/BENEFITS

- Inherent safety capability; low electrical/thermal energy and high light output
- Suitable for all Class I, Div 2, Groups A, B, C, D hazardous environments, T4 rated
- Unique optically designed lens to enhance LED operation and provide 360° visibility
- Weather/corrosion resistant lamp assembly and housing
- Self-contained wiring compartment eliminates additional boxes
- Can be operated steady or flashed (controller not supplied)
- Available as a single or dual unit
- Resistant to shock and vibration
- Threaded 1" and 3/4" bottom hub for mounting
- NEMA 4X rated and IP66
- LED technology for extended life and energy efficiency
- Available in 120VAC and 240VAC

APPLICATION

- The Cooper Crouse-Hinds Visual Signal Light is an LED based Class I, Division 2 certified fixture. Used for visual indication in hazardous environments, providing a valuable solution to the petrochemical industry facilities.

OPERATING CONDITIONS

- Temperatures ranging from -67°F to +131°F (-55°C to +55°C). Will withstand wind in excess of 150 mph (240 kph), salt fog.

FINISH

- Cast aluminum housing and stainless steel hardware.
- Electrostatically applied powdercoat of aviation orange paint.

ORDERING INFORMATION CLASS I, DIV 2

Single Fixture

Voltage	Red	White	Blue	Green	Yellow
120VAC	OX2LFSSR/120	VX2LSW/120	VX2LSB/120	VX2LSG/120	VX2LSY/120
240VAC	OX2LFSSR/240	VX2LSW/240	VX2LSB/240	VX2LSG/240	VX2LSY/240

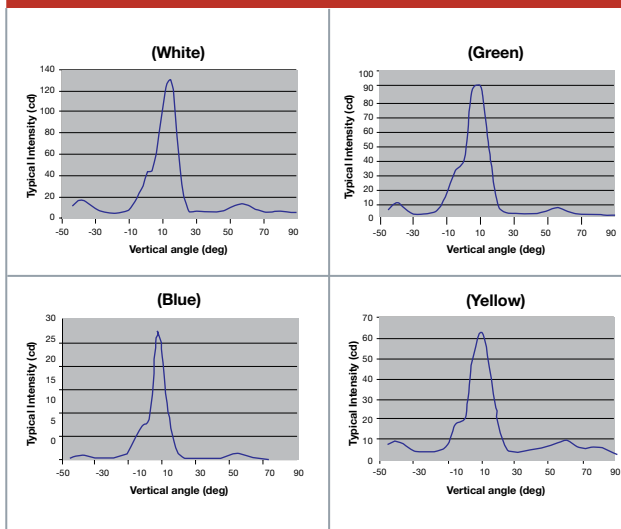
Double Fixture

120VAC	OX2LFDR/120	VX2LDW/120	VX2LDB/120	VX2LDG/120	VX2LDY/120
240VAC	OX2LFDR/240	VX2LDW/240	VX2LDB/240	VX2LDG/240	VX2LDY/240

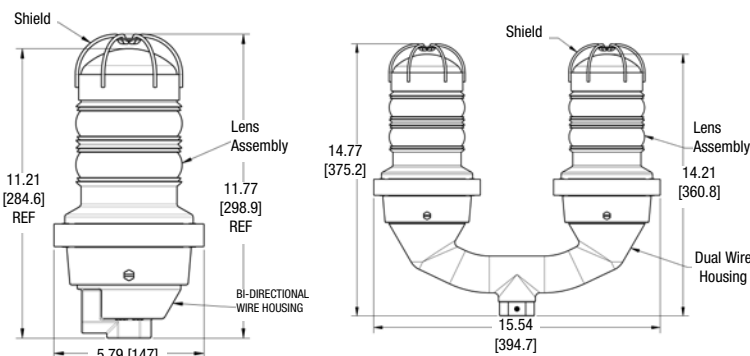
CATALOG NUMBERING SYSTEM

O Obstruction or V Visual Signal	F FAA Type L810 (Obstruction Only)	R, W, B, G, Y Red, White, Blue, Green, Yellow	120, 240 Voltage AC
X2 Class I, Div. 2	S Single D Dual		
L Light Emitting Diode (LED)			

PHOTOMETRIC DATA



MECHANICAL DIMENSIONS



Dimensions are in inches (mm)


WEIGHTS & MEASUREMENTS

Part Number	Approx. Shipping Weight	Container Dimensions
Single Unit	7.1 lbs	16" x 9" x 8"
Dual Unit	16.1 lbs	22" x 17" x 9"

ELECTRICAL SPECIFICATIONS

	VA	OPERATING VOLTAGE			WATTS		AMPS
		Min	Typ	Max	Typ	Max	
120VAC UNITS	47	92	120	132	15	18	0.120
240VAC UNITS	74	198	240	265	15	18	0.120

HAZARDOUS LOCATION ATEX CERTIFIED LED VISUAL SIGNAL LIGHT Suitable for Use in Hazardous Areas

Certified to:  **II 3G**
Ex nA IIC T4



FEATURES/BENEFITS

- Available as a single or dual unit
- Available in 120VAC, 240VAC
- Unique optically designed lens to enhance LED operation and provide 360° visibility
- State-of-the-art high-flux LED technology for extended life and energy efficiency
- Uses 90% less energy than an incandescent
- Weather/corrosion resistant lamp assembly and housing
- Self-contained wiring compartment eliminates additional boxes
- Threaded 1" and 3/4" bottom hub for mounting
- Can be operated steady or flashed
- Resistant to shock and vibration
- NEMA 4X rated and IP66
- T4 rated

APPLICATION

- The Cooper Crouse-Hinds Series Multi-Purpose LED Light fulfills the needs of engineers and architects requiring a rugged, weather-proof fixture with color alternatives to the standard red obstruction lights. Available in green, yellow, blue and white, these fixtures are equally at home in an office building, on the arctic tundra, or a sailboat. Truly the LED solution to your lighting challenges.

OPERATING CONDITIONS

- Temperature: -67°F to +131°F (-55°C to +55°C)

ORDERING INFORMATION

Single Fixture

Voltage	Red	White	Blue	Green	Yellow
120VAC	OALSR/120-ATEX	VALSW/120-ATEX	VALSB/120-ATEX	VALSG/120-ATEX	VALSY/120-ATEX
240VAC	VALSR/240-ATEX	VALSW/240-ATEX	VALSB/240-ATEX	VALSG/240-ATEX	VALSY/240-ATEX

Double Fixture

120VAC	OALDR/120-ATEX	VALDW/120-ATEX	VALDB/120-ATEX	VALDG/120-ATEX	VALDY/120-ATEX
240VAC	VALDR/240-ATEX	VALDW/240-ATEX	VALDB/240-ATEX	VALDG/240-ATEX	VALDY/240-ATEX

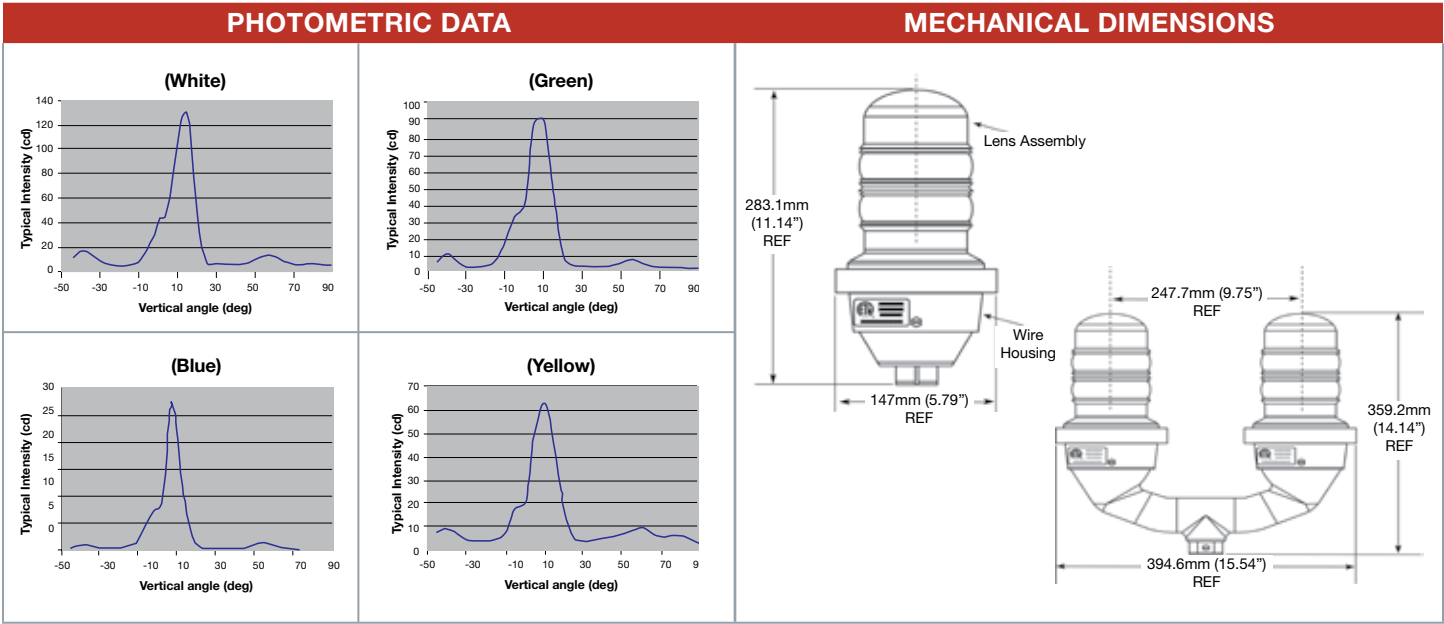
CATALOG NUMBERING SYSTEM

O Obstruction or **V** Visual Signal
A ATEX
W Non-Hazardous Location

L Light Emitting Diode (LED)
S Single or **D** Dual

R, W, B, G, Y
Red, White, Blue,
Green, Yellow

120, 240 Voltage AC
-ATEX



WEIGHTS & MEASUREMENTS		
Part Number	Approx. Shipping Weight	Container Dimensions
Single Unit	7.1 lbs	16" x 9" x 8"
Dual Unit	16.1 lbs	22" x 17" x 9"

ELECTRICAL SPECIFICATIONS							
	PF	VA	OPERATING VOLTAGE			WATTS	
			Min	Typ	Max	Typ	Max
120VAC UNITS	0.37	73	92	120	132	10	18
240VAC UNITS	0.20	74	216	240	264	15	18

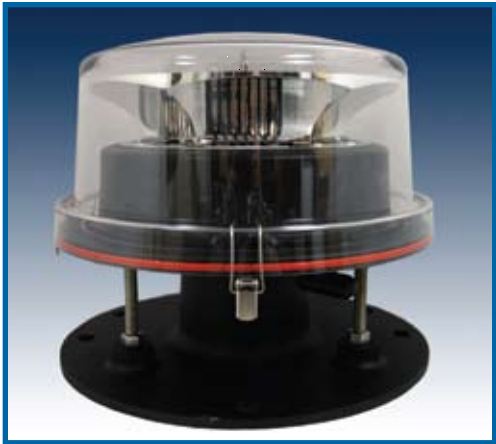


Beacons



L864 GENERAL USE
LED RED BEACON
MEDIUM INTENSITY

Certified to: FAA AC NO: 150/5345-43F
Compliant to: ICAO (Annex 14)
Canadian Aviation Regulation
CAR 621.9 (Transport Canada)



FEATURES/BENEFITS

- Designed to replace 300mm incandescent obstruction lighting fixtures with state-of-the-art high-flux LED technology
- Modular design for simple replacement of light engine
- Can be flashed or steady burned (order controller or flasher separately)
- Uses 90% less energy than incandescent beacons
- Weighs less than 32 lbs.
- Meets or exceeds industry EMI/RFI standards
- Beacon designed to mount onto existing bolt pattern installations
- Resistant to shock and vibration
- NEMA 4X rated and IP66

APPLICATION

- The Cooper Crouse-Hinds LED based medium intensity red beacon utilizes state-of-the-art optical design to achieve the most compact, efficient, FAA compliant L864 device in the market. While it readily interfaces into existing installations, its robust, low power design will provide years of maintenance-free service.

OPERATING CONDITIONS

- The beacon is designed to withstand the dynamic conditions experienced in the most severe environments around the world.
- Temperatures ranging from -67°F to +131°F (-55° to +55° Celsius), direct sunlight, wind blown rain, wind in excess of 150mph, high humidity, salt fog.

ORDERING INFORMATION

Voltage	Catalog Number	Color
120/240VAC	BWLFR/120-240	Red

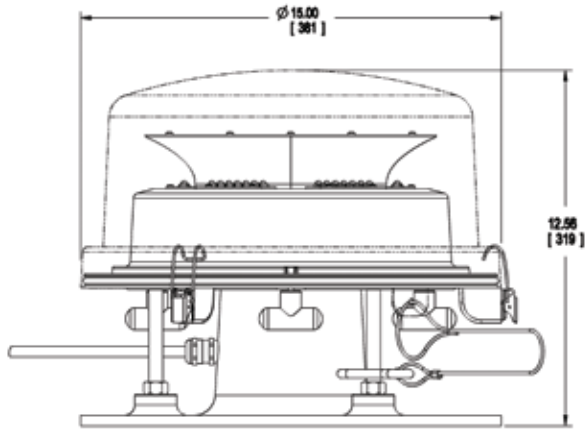
CATALOG NUMBERING SYSTEM

B Beacon	F FAA Type L864
W Non-hazardous Location Rated	R Red
L Light Emitting Diode (LED)	

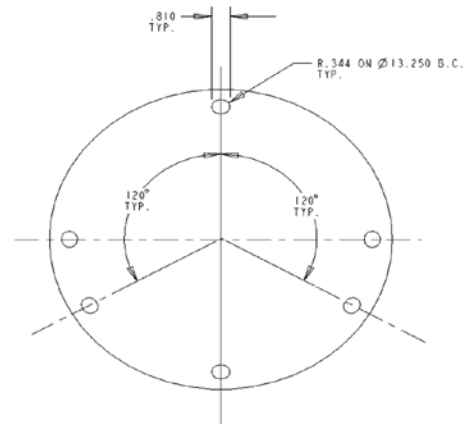
FINISH

- The beacon is designed for durability with a cast aluminum base stainless steel hardware. The dome is made of UV resistant polycarbonate and sealed to ensure maximum life of the product.

MECHANICAL DIMENSIONS



MOUNTING INFORMATION



Beacon Bottom View

WEIGHTS & MEASUREMENTS

Part Number	Approx. Shipping Weight	Container Dimensions
D2 Series	32 lbs (14.5 kg)	24" x 24" x 24" (600x600x600 mm)

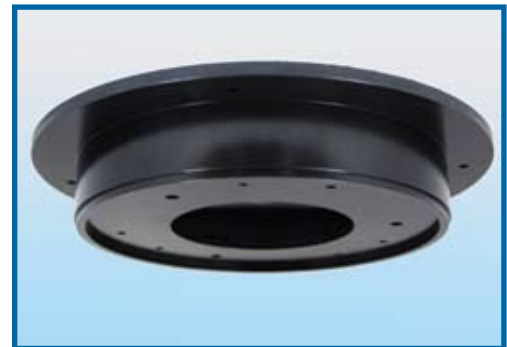
ELECTRICAL SPECIFICATIONS

	OPERATING VOLTAGE			CURRENT (AMPS)		VOLT AMPS (VA)			WATTS
	Min	Typ	Max	Min	Max	Min	Typ	Max	Typ
120/240VAC UNITS	85	120/240	265	0.2	0.8	40	48	70	48

GENERAL USE LED RETROFIT ADAPTER

FEATURES/BENEFITS

- Allows for simple retrofit onto existing incandescent beacons
- Eliminates the need to completely remove the old fixture
- Utilizes a simple socket based electrical interface. No wiring on the tower
- Rugged cast design
- Designed to interface with most existing fixtures in the market
- Reduces retrofit time for an LED beacon to a small fraction of what would be required for a complete fixture removal



ORDERING INFORMATION

Catalog Number	Description
BLF Adaptor	Retrofit Adapter

L864 CLASS I, DIVISION 2
LED RED BEACON
MEDIUM INTENSITY
Suitable for Use in Hazardous Areas

Certified to: FAA AC NO: 150/5345-43F
Compliant to: ICAO (Annex 14)
Type A or Type B
Canadian Aviation Regulation
CAR 621.9 (Transport Canada)



FEATURES/BENEFITS

- Suitable for all Class I, Div 2, Groups A, B, C, D hazardous environments T5 rated
- Designed to replace 300mm incandescent obstruction lighting fixtures with state-of-the-art high-flux LED technology
- Modular design for simple replacement of light engine
- Can be flashed or steady burned (order controller or flasher separately)
- Uses 90% less energy than an incandescent
- Weighs less than 28 lbs.
- Beacon designed to mount onto existing bolt pattern installations
- Resistant to shock and vibration
- NEMA 4X rated and IP66

APPLICATION

- The Cooper Crouse-Hinds LED based Class I, Div 2 certified medium intensity red beacon was designed to easily interface into existing systems or to be provided as a red lighting fixture for new installations. The beacon is used to mark any obstacle that may provide hazards to aircraft navigation.

OPERATING CONDITIONS

- The beacon is designed to withstand the dynamic conditions experienced in the most severe environments around the world.
- Temperatures ranging from -67°F to +131°F (-55° to +55° Celsius), direct sunlight, wind blown rain, wind in excess of 150 mph, high humidity, salt fog. Does not create, nor is the performance degraded by EMI/RFI.

ORDERING INFORMATION

Voltage	Catalog Number	Color
120/240VAC	BX2LFR/120-240	Red

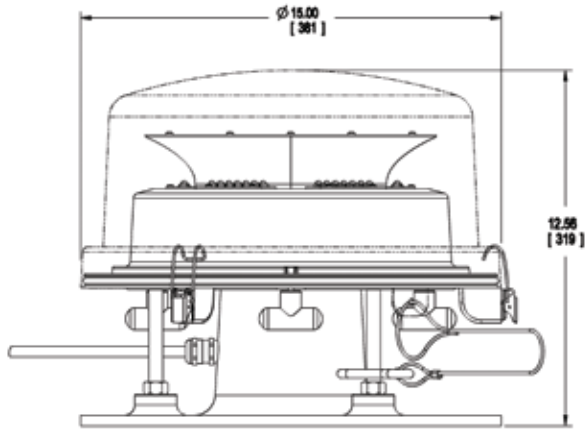
CATALOG NUMBERING SYSTEM

B Beacon	F FAA Type L864
X2 Class I, Div. 2	R Red
L Light Emitting Diode (LED)	

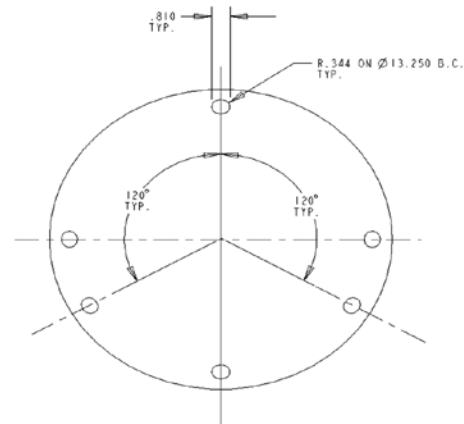
FINISH

- Cast aluminum base and stainless steel hardware.
- Electrostatically applied powdercoat of aviation orange paint.
- Dome is made of UV resistant acrylic and sealed to ensure maximum life of the product.

MECHANICAL DIMENSIONS



MOUNTING INFORMATION



Beacon Bottom View

WEIGHTS & MEASUREMENTS

Part Number	Approx. Shipping Weight	Container Dimensions
D1 Series	28 lbs (12.70 kg)	24" x 24" x 24" (600x600x600 mm)

ELECTRICAL SPECIFICATIONS

	OPERATING VOLTAGE			CURRENT (AMPS)		VOLT AMPS (VA)			WATTS
	Min	Typ	Max	Min	Max	Min	Typ	Max	
D1 Series 120/240VAC UNITS	85	120/240	265	0.2	0.8	40	48	70	48

GENERAL USE LED RETROFIT ADAPTER

FEATURES/BENEFITS

- Allows for simple retrofit onto existing incandescent beacons
- Eliminates the need to completely remove the old fixture
- Utilizes a simple socket based electrical interface. No wiring on the tower
- Rugged cast design
- Designed to interface with most existing fixtures in the market
- Reduces retrofit time for an LED beacon to a small fraction of what would be required for a complete fixture removal



ORDERING INFORMATION

Catalog Number	Description
BLF Adaptor	Retrofit Adapter

L864 GENERAL USE & CLASS I, DIVISION 2 INCANDESCENT RED BEACON MEDIUM INTENSITY

Certified to: FAA AC 150/5345-43F: L-864

Compliant to: US Military Specification MIL-L-6273B
FCC Rules and Regulations
Transport Canada Specification K337
ICAO (Annex 14)



FCB SERIES

FEATURES/BENEFITS

- ETL certified
- Complies with U.S. Military specifications
- Red glass fresnel lenses
- Operates on 120 or 230V* and 60 or 50Hz frequency power supply
- Cast aluminum base and frame
- Hinged at midpoint for easy relamping
- Watertight and nonventilated
- Uses two lamps (order separately)
- Requires an external flasher unit or OLC controller (order separately)
- Draws 11.7 A at 120V (using two 700W lamps)
- Shipped with AWG 14-4 SOW cable (Except 41257G-H Beacon***)

APPLICATION

- The FCB flashing red beacon is used for nighttime obstruction marking of tall man-made structures such as TV, radio communications, and transmission line towers.
- The FCB utilizes four, red lenses that emit a 360° focused beam.
- Each beacon uses two 620 or 700 watt lamps.

ORDERING INFORMATION

Catalog Number	Standard	Voltage	Lamp Type (2 per FCB)
41257G	FAA	120	A
		230	B
		120	C
44660B	MIL	120	C
44389C-TH**	FAA	120	A
		230	B
		120	C
41257G-H***	FAA/NEC Class I, Div 2	120	A
		230	B
		120	C

Example: The standard FCB is 41257G which may be operated on 120 or 230V,* 60 or 50Hz. The two lamps are not included. Order the correct voltage lamps separately. Order a flasher unit separately.

LAMP TYPE (ORDER SEPARATELY)

Type	Watts	Volts	Base Type	Catalog Number	Lamp Life (hours)
A	700	120	Mog. Pref./PS40	10047-2543	6000
B	700	230	Mog. Pref./PS40	10047-2445	6000
C	620	120	Mog. Pref./PS40	620PS40P	3000

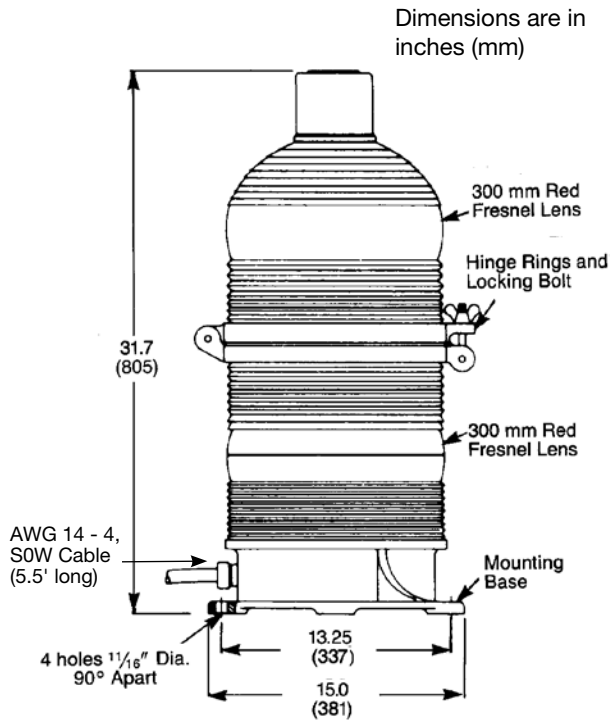
* Typically for 220-240V operation.

** Includes brackets for lowering device. Cooper Crouse-Hinds also offers Obstruction Light Lowering System.

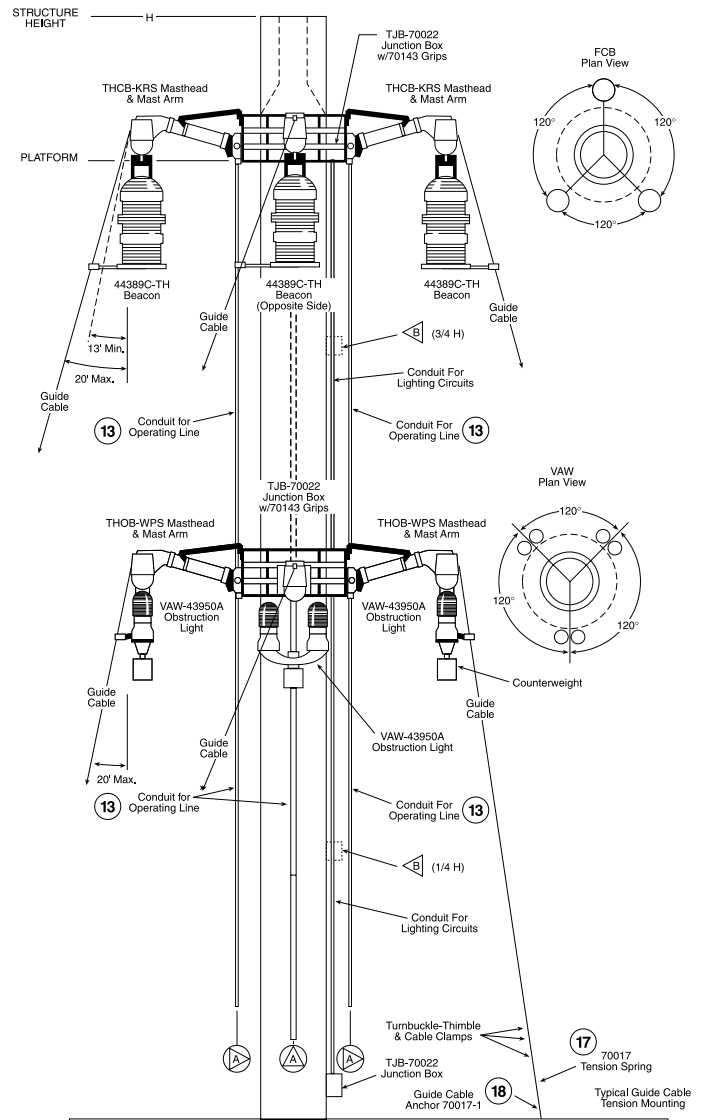
*** For use in Class I, Div. 2, Groups A, B, C, D hazardous environments (contact Cooper Crouse-Hinds for temperature rating compatibility with classified location). 41257G-H Beacon furnished with 1-inch NPT tapped hole and no cable.

MECHANICAL DIMENSIONS

FCB-41257G



OPTIONAL LOWERING SYSTEMS



FCB BEACON WEIGHTS & MEASUREMENTS

Shipping Weight:	80.0 lbs/36.3 kg
Shipping Volume:	8.0 cu ft/.227 cu m

RENEWAL PARTS

Catalog Number	Description
10050-15	Top Lens, Red
10050-14	Upper Lens, Red
10050-13	Lower Lens, Red (2 required)
ML2489	Replacement Gasket Set
601-A	Lamp Socket, Mogul (2 required)

LOWERING SYSTEM ORDERING INFORMATION

System Type	Control Cable Length (5 ft. Increments Only)	Guide cable length
CH ALS-65-WT-3C-()	No. of Electrical Contacts 3C (3 contacts) 4C (4 contacts)	
	Optional Finish Color	

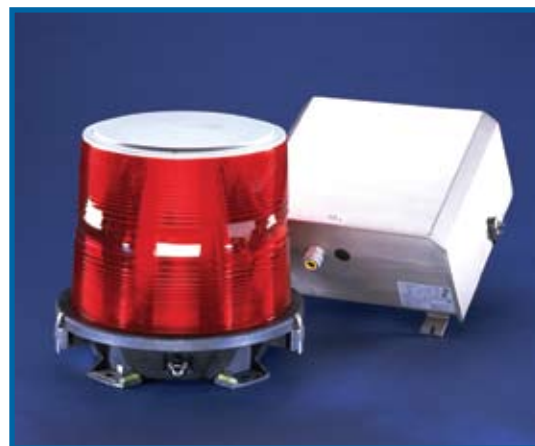
- Design is shipped assembled and prewired.
- Standard System Finish is Raw Aluminum and Galvanized Steel.
- Light Fixture and Lowering Tool ordered separately.
- Fixture Mounting Hardware and hardware to mount fitter to wall by others.

Contact **Cooper Crouse-Hinds** for specific catalog number codes required for your application. **NOT FOR LIFTING PEOPLE OR THINGS OVER PEOPLE.** SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

L864 GENERAL USE XENON RED MEDIUM INTENSITY BEACON

Certified to: FAA AC 150/5345-43F: L-864

Compliant to: FCC Rules and Regulations
Canadian Standards Association (CSA)
ICAO Type B (red)



FEATURES/BENEFITS

- FAA approved L-864
- Meets or exceeds ICAO specifications
- Power consumption is 90% less than conventional incandescent beacons
- Low operating and maintenance costs with long life flashtubes
- NEMA 4X stainless steel enclosure
- Special circuitry eliminates the lens failure due to ozone corrosion common to all other beacons
- Horizontal 360 degree and vertical 5 degree beam spread
- Very narrow, controlled beam
- Smallest size and wind loading
- AC or DC operation available
- Remote alarm indication
- Complete technical data and application assistance available

APPLICATION

- The CHB314 is a medium intensity white beacon system that provides a red beacon for day and night operation for lighting structures up to 500 feet high and is available for Catenary style lighting (L-866). A single beacon provides 360° coverage for structures up to 350 feet. Three beacons provide proper marking for structures between 350 and 500 feet high. The beacon is also available in 60Hz or 50Hz power options. Power consumption is 90% less than conventional incandescent beacons.
- The beacon is operated on a continuous 24 hours basis generating 20,000 effective candelas during the daytime/twilight period and automatically reduces to 2,000 effective candelas during night period.

ORDERING INFORMATION*

Each Beacon System consists of a flashhead and separate power supply. Each system requires a photocell and interconnecting cables. After selecting a beacon, see the Accessories table below.

Voltage	Catalog Number
110/120V 50Hz	CHB314 110/120V 50Hz
208/240V 50Hz	CHB314 208/240V 50Hz
110/120V 60Hz	CHB314 110/120V 60Hz
208/240V 60Hz	CHB314 208/240V 60Hz

* Note: Obstructions over 350 feet require several interconnected power converters and flashheads (typically three) in a master/slave configuration. Contact Cooper Crouse-Hinds Customer Service for further assistance.

ACCESSORIES

Description	Catalog Number
Photocell	PEC 510
Interconnecting Cable ¹	4634000

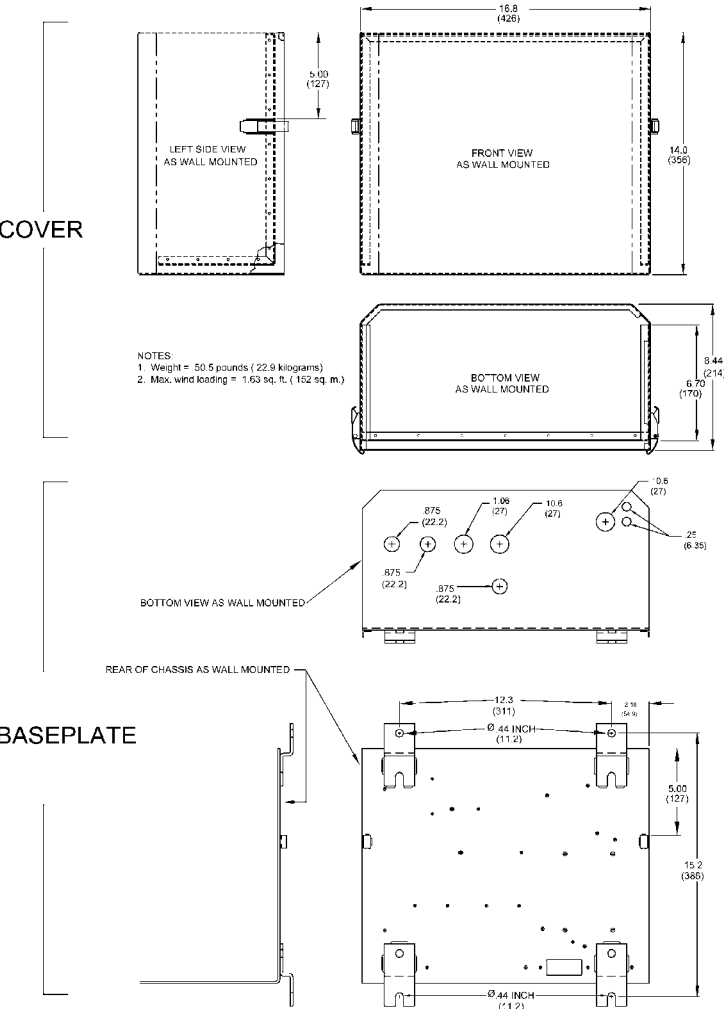
¹ Sold in 50 foot increments. The quantity of cable ordered will reflect the number of feet required. Ex. For 100 feet, order a quantity 100 of 4634000.

ELECTRICAL RATINGS

Mode	Flash Rate (flashes/minute)	Power Used
Night	20	250W

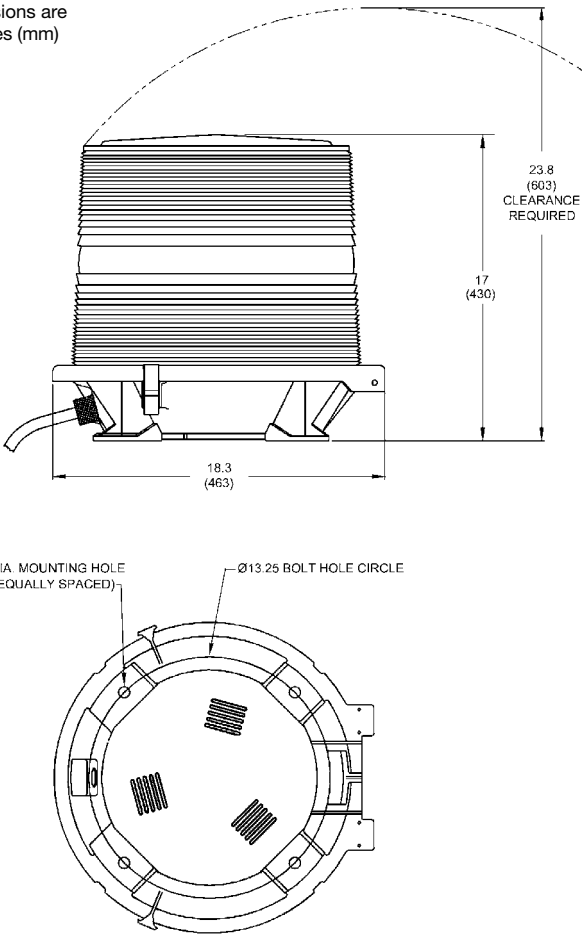
MECHANICAL DIMENSIONS

Power Converter PC314 and Base Plate



Flashhead FH307

Dimensions are in inches (mm)



WEIGHTS & MEASUREMENTS

CHB314

	FH 307	PC 314
Shipping Weight:	17 lbs 7.7 kg	51 lbs 23.1 kg
Shipping Volume:	6.59 cu ft 0.187 cu m	4.25 cu ft 0.120 cu m

L865/L864 GENERAL USE
LED DUAL BEACON
MEDIUM INTENSITY

Certified to: FAA AC NO: 150/5345-43F
Compliant to: ICAO (Annex 14)



FEATURES/BENEFITS

- 20,000 cd nominal daytime white and 2,000 cd nighttime red
- Designed to replace dual xenon strobe units, FAA type L865/L864 ICAO medium intensity type A/B
- Resistant to shock and vibration
- Universal 110/240VAC input 50/60Hz
- Innovative Temperature Management System (TMS) to ensure longevity of LEDs
- Can be controlled and monitored by Cooper Crouse-Hinds approved, industry accepted, obstruction lighting controllers
- Capable of multiple intensity settings
- Eliminates high voltage parts and issues associated with traditional strobes
- Dramatically reduces cable sizing requirements
- Meets or exceeds industry EMI/RFI standards
- NEMA 4X rated and IP66

APPLICATION

- The Cooper Crouse-Hinds dual beacon is the first production medium intensity red/white beacon, utilizing state-of-the-art optics. With the use of a simple controller, the beacon will provide over 20,000 cd in the daytime mode and 2,000 red in the night time mode. In the event of a problem with the nighttime mode red, the light will default to 2,000 cd white night time operation. Its advanced passive temperature management system maintains the LEDs well within their temperature tolerance in all operating conditions. The beacon has a microprocessor controlled driver and a default flash mode if it loses communication with the controller.

ORDERING INFORMATION

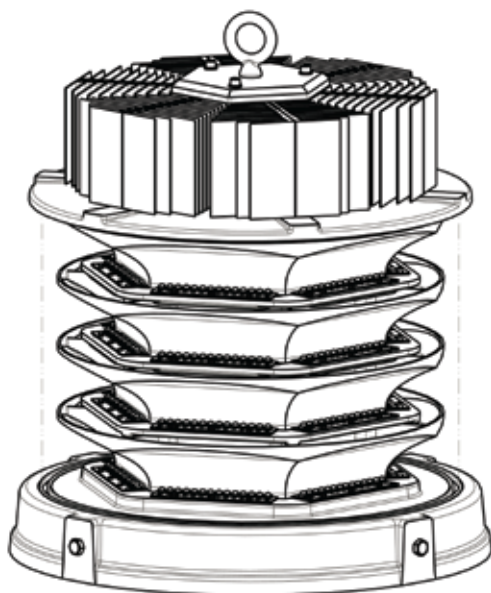
Catalog Number	Description
D8RW-C13-006	Dual beacon 20,000cd daytime white, 2,000cd nighttime red
D8RW-C13-006-EU*	Dual red/white beacon, 120/240VAC (ICAO only)
D8RW-G13-006-EU*	Dual red/white beacon, 170cd red 120/240V (ICAO only)

* ICAO application only (not ETL certified)

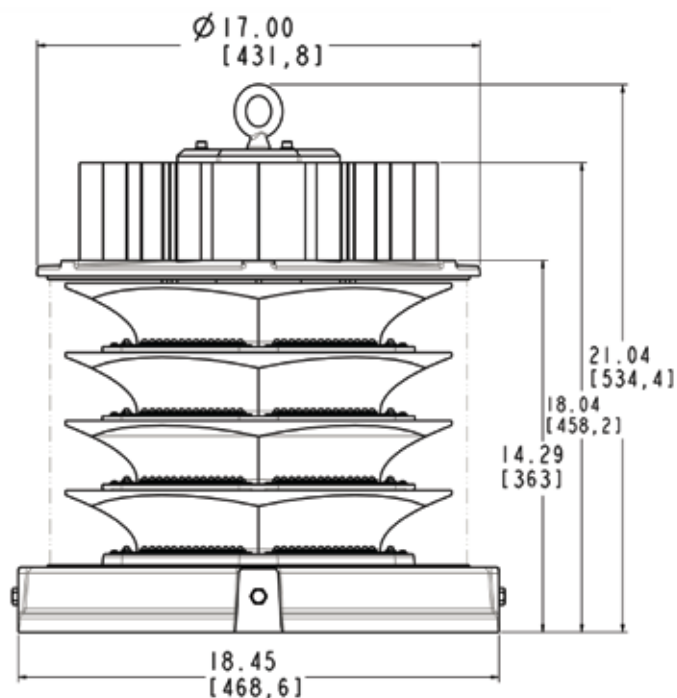
SPECIFICATIONS

- Operating voltage : 110-240VAC \pm 10%, 50 - 60Hz
- Power consumption : 300W continuous @ 40 fpm (daytime), 60W continuous @40 fpm (Nighttime)
- Lightsource : LEDs > 10+ year life expectancy
- Effective intensity : 20,000 cd white \pm 25% in daytime mode, 2,000 cd red \pm 25% in nighttime mode
- Operating temperature = -40°C to +55°C
- Storage temperature = -55°C to +55°C
- Surge/lighting protection : designed to withstand IEC61000-4-5, 6kV/3000A, 1.2/50us, 8/20us, 2 ohm output impedance, combination wave, line-line and line-ground minimums
- Flash Rate : 20-40 fpm (controller dependent)
- Synchronization : 2 unit sync from single controller (operates with other manufacturers of GPS sync devices)

MECHANICAL DIMENSIONS



Dimensions are in
inches (mm)



WEIGHTS & MEASUREMENTS

Product	Approx. Shipping Weight	Container Dimensions
Dual Beacon	181 lbs	23" x 23" x 38"
Control Box	84 lbs	26" x 19" x 11"

ELECTRICAL SPECIFICATIONS

	SUPPLY VOLTAGE (+/- 10%)		INPUT POWER (W)			VOLT AMPS (VA)		
	Min	Max	Min	Nom	Max	Min	Nom	Max
WHITE (40 fpm)	110	240	230	260	290	230	260	290
RED	110	240	35	50	65	35	50	65

L864/L865 GENERAL USE XENON DUAL BEACON MEDIUM INTENSITY

Certified to: FAA AC 150/5345-43F: L-864 & L-865

Compliant to: FCC Rules and Regulations
Canadian Standards Association (CSA)
ICAO Type A (white) or B (red)



FEATURES/BENEFITS

- FAA approved L-864 & L-865
- Meets or exceeds ICAO specifications
- Power consumption is 90% less than conventional incandescent beacons.
- Low operating and maintenance costs with long life flashtubes
- Power supply includes 12 LED indicators to convey operating status
- NEMA 4X stainless steel enclosure
- Special circuitry eliminates the lens failure due to ozone corrosion common to all other beacons
- Horizontal 360 degree and vertical 5 degree beam spread
- Very narrow, controlled beam
- Smallest size and wind loading
- AC or DC operation available
- Remote alarm indication

APPLICATION

- The CHB324 is a medium intensity dual-beacon system that provides a white beacon for day operation and a red beacon for night operation for lighting structures up to 500 feet high. A single beacon provides 360 degree coverage for structures up to 350 feet. Three beacons provide proper marking for structures between 351 and 500 feet high. The beacon is available in 60Hz or 50Hz power options. Power consumption is 90% less than conventional incandescent beacons.
- The beacon is operated on a continuous 24 hour basis generating 20,000 effective candelas during the white daytime/twilight period and automatically reduces to 2,000 effective candelas during red night period.

ORDERING INFORMATION*

Each Beacon System consists of a flashhead and separate power supply. Each system requires a photocell and interconnecting cables. After selecting a beacon, see the Accessories table below.

Voltage	Catalog Number
110/120V 50Hz	CHB324 110/120V 50Hz
208/240V 50Hz	CHB324 208/240V 50Hz
110/120V 60Hz	CHB324 110/120V 60Hz
208/240V 60Hz	CHB324 208/240V 60Hz

* Note: Obstructions over 350 feet require several interconnected power converters and flashheads (typically three) in a master/slave configuration. Contact Cooper Crouse-Hinds Customer Service for further assistance.

ACCESSORIES

Description	Catalog Number
Photocell	PEC 510
Interconnecting Cable ¹	4634000

¹ Sold in 50 foot increments. The quantity of cable ordered will reflect the number of feet required. Ex. For 100 feet, order a quantity 100 of 4634000.

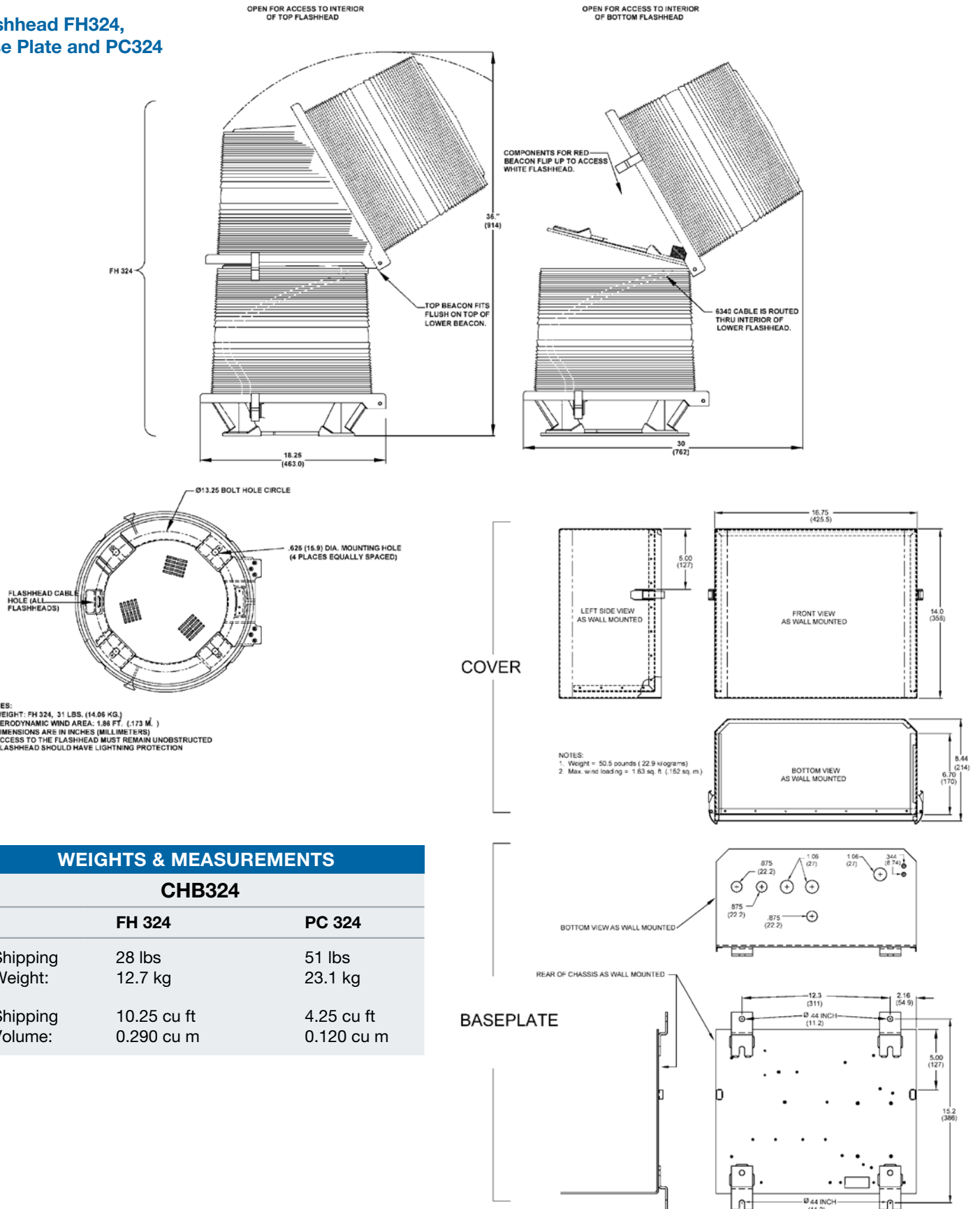
ELECTRICAL RATINGS

Mode	Flash Rate [†] (flashes/minute)	Power Used
Day/Twilight	40	130W
Night	20	145W

[†] Flashtube light output meets the FAA minimum requirements of 20,000 candelas day/twilight and 2,000 candelas night for a period of not less than two years.

MECHANICAL DIMENSIONS

Flashhead FH324, Base Plate and PC324



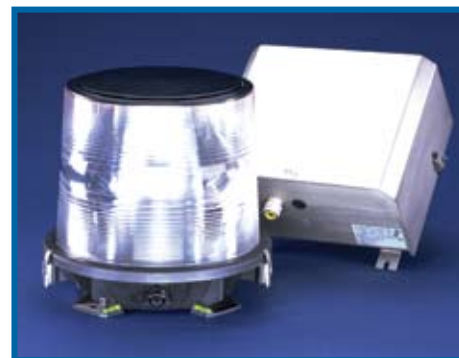
WEIGHTS & MEASUREMENTS

CHB324

	FH 324	PC 324
Shipping Weight:	28 lbs 12.7 kg	51 lbs 23.1 kg
Shipping Volume:	10.25 cu ft 0.290 cu m	4.25 cu ft 0.120 cu m

L865/L866 GENERAL USE XENON WHITE BEACON MEDIUM INTENSITY

Certified to: FAA AC 150/5345-43F: L-865 & L-866
Compliant to: FCC Rules and Regulations
 Canadian Standards Association (CSA)
 ICAO (Annex 14)
 Type A (white)



FEATURES/BENEFITS

- FAA approved L-865 & L-866
- Meets or exceeds ICAO specifications
- Power consumption is 90% less than conventional incandescent beacons
- Low operating and maintenance costs with long life flashtubes
- NEMA 4X stainless steel enclosure
- Special circuitry eliminates the lens failure due to ozone corrosion common to all other beacons
- Horizontal 360 degree and vertical 5 degree beam spread
- Very narrow, controlled beam
- Smallest size and wind loading
- AC or DC operation available
- Remote alarm indication
- Complete technical data and application assistance available

APPLICATION

- The CHB310 is a medium intensity white beacon system that provides a white beacon for day and night operation for lighting structures up to 500 feet high and is available for Catenary style lighting (L-866). A single beacon provides 360° coverage for structures up to 350 feet. Three beacons provide proper marking for structures between 350 and 500 feet high. The beacon is also available in 60Hz or 50Hz power options. Power consumption is 90% less than conventional incandescent beacons.
- The beacon is operated on a continuous 24 hours basis generating 20,000 effective candelas during the daytime/twilight period and automatically reduces to 2,000 effective candelas during night period.

ORDERING INFORMATION*

Each Beacon System consists of a flashhead and separate power supply. Each system requires a photocell and interconnecting cables. After selecting a beacon, see the Accessories table below.

Voltage	Catalog Number
110/120V 50Hz	CHB310 110/120V 50Hz
208/240V 50Hz	CHB310 208/240V 50Hz
110/120V 60Hz	CHB310 110/120V 60Hz
208/240V 60Hz	CHB310 208/240V 60Hz

* Note: Obstructions over 350 feet require several interconnected power converters and flashheads (typically three) in a master/slave configuration. Contact Cooper Crouse-Hinds customer service for assistance.

ACCESSORIES

Description	Catalog Number
Photocell	PEC 510
Interconnecting Cable ¹	4634000

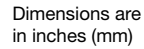
¹ Sold in 50 foot increments. The quantity of cable ordered will reflect the number of feet required. Ex. For 100 feet, order a quantity 100 of 4634000.

ELECTRICAL RATINGS

Mode	Flash Rate [‡] (flashes/minute)	Power Used
Day	40	130W
Night	40	75W

[‡] Flashtube light output meets the FAA minimum requirements of 20,000 candelas day/twilight and 2,000 candelas night for a period of not less than two years.

Flashhead FH308, Base Plate and PC 310

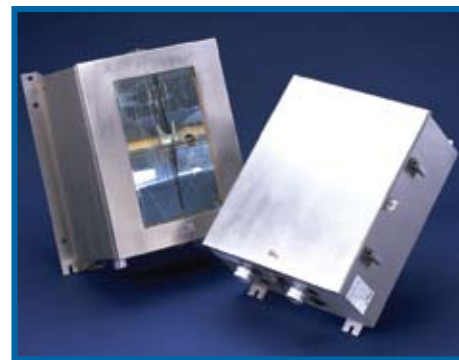


WEIGHTS & MEASUREMENTS		
CHB310		
	FH 308	PC 310
Shipping Weight:	17 lbs 7.7 kg	51 lbs 23.1 kg
Shipping Volume:	6.59 cu ft 0.187 cu m	4.25 cu ft 0.120 cu m

L856/L857 GENERAL USE XENON WHITE BEACON HIGH INTENSITY

Certified to: FAA AC 150/5345-43F: L-856 & L-857

Compliant to: FCC Rules and Regulations
Canadian Standards Association (CSA)
ICAO (Annex 14)
Type A or B (white)



FEATURES/BENEFITS

- FAA approved L-856 or L-857
- Meets or exceeds ICAO type A or type B (white) specifications
- NEMA 4X stainless steel enclosure
- Low operating and maintenance costs with long life flashtubes
- Horizontal 120 degree and vertical 5 degree beam spread
- Complete technical data and application assistance available

APPLICATION

- The CHB204 Beacon, when combined with the CHC121W Controller or the CHC140W Controller is a high intensity white strobe system that provides a white strobe for day, twilight, and night operation for lighting structures over 500 feet high and is available for Catenary style lighting L-857. Since each beacon provides 120 degree coverage, a minimum of three beacons is required at each level to attain 360 degree coverage on most structures. To determine the number of tiers and placement requirements, please refer to the appropriate publications of your respective governing body.
- The beacon is operated on a continuous 24-hour basis generating 270,000 (L-856), 200,000 (ICAO Type A), 140,000 (L-857) or 100,000 (ICAO Type B) effective candelas during the daytime period, 20,000 effective candelas in the twilight period, 2,000 (optional 4,000) effective candelas during night period when configured with the CHC121W or CHC140W Controller.

ORDERING INFORMATION

Each system consists of a flashhead and separate power supply. Each system requires a photocell and interconnecting cables. After selecting a beacon, see the Accessories table below. Refer to page 58 for Controller information.

Voltage	Catalog Number	Controller
110/120V 50Hz	CHB204 110/120V 50Hz	CHC140W
220/240V 50Hz	CHB204 220/240V 50Hz	CHC140W
110/120V 60Hz	CHB204 110/120V 60Hz	CHC140W
208/220V 60Hz	CHB204 208/220V 60Hz	CHC140W
230/240V 60Hz	CHB204 230/240V 60Hz	CHC140W
480V	CHB204 480V 60Hz	CHC140W
110/120V 50Hz	CHB204S 110/120V 50Hz	CHC121W
208/240V 50Hz	CHB204S 220/240V 50Hz	CHC121W
110/120V 60Hz	CHB204S 110/120V 60Hz	CHC121W
208/240V 60Hz	CHB204S 208/220V 60Hz	CHC121W
230/240V 60Hz	CHB204S 230/240V 60Hz	CHC121W
480V	CHB204S 480V 60Hz	CHC121W

ELECTRICAL RATINGS

Mode	Flash Rate [‡] (flashes/minute)	Power Used
Day/Twilight	40	255W
Night	40	255W

[‡] Flashtube light output meets the FAA minimum requirements of 20,000 candelas day/twilight and 2,000 candelas night for a period of not less than two years.

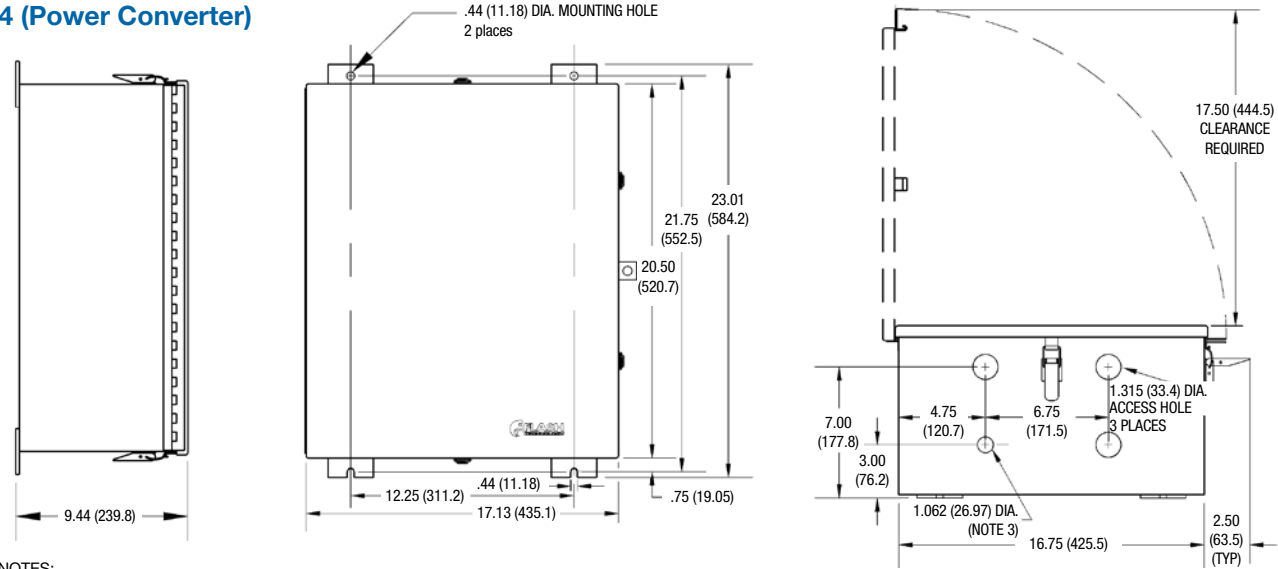
ACCESSORIES

Description	Catalog Number
Photocell	PEC 510*

*NOTE: The PEC510 photocell is required to direct intensity stepping for the CHC121W or the CHC140W controllers.

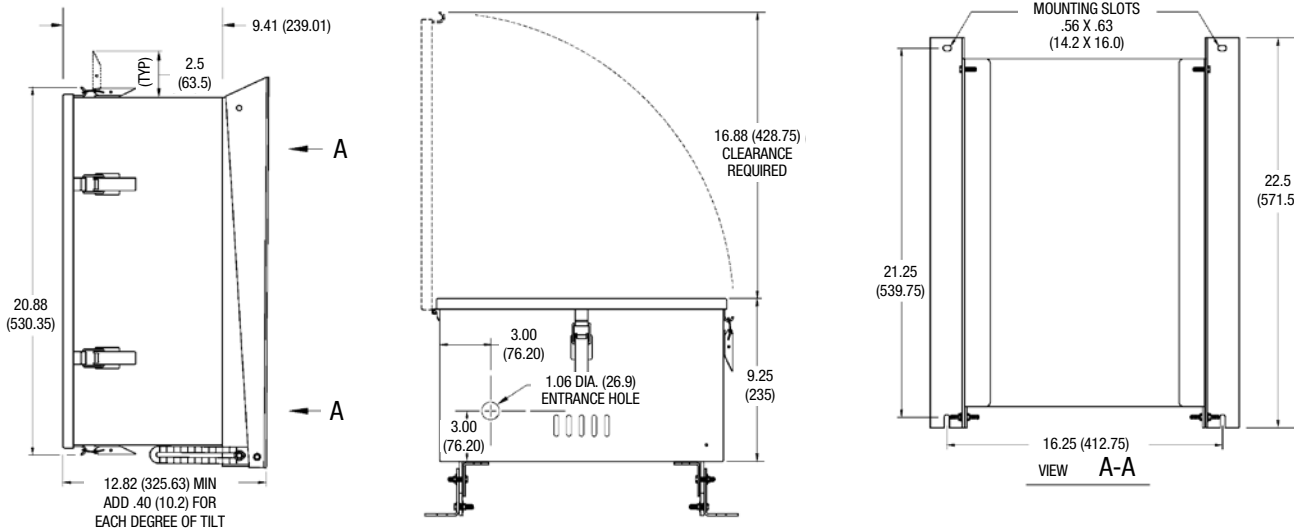
MECHANICAL DIMENSIONS

PC204 (Power Converter)

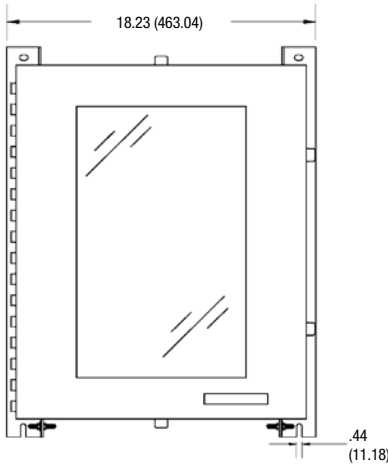


NOTES:
1. Wind area = 2.4 sq ft (.22 sq m) 2. Dimensions are in inches (millimeters) 3. This bottom hole is plugged at factor if photocontrol is not required 4. Weight = 70 lbs (31.8 kg)

FH204 (Flashhead)



NOTES:
1. Weight: 18 lbs (8.2 kg) 2. Wind area: 1.99 sq ft (.18 sq m) 3. Dimensions are in inches (millimeters)



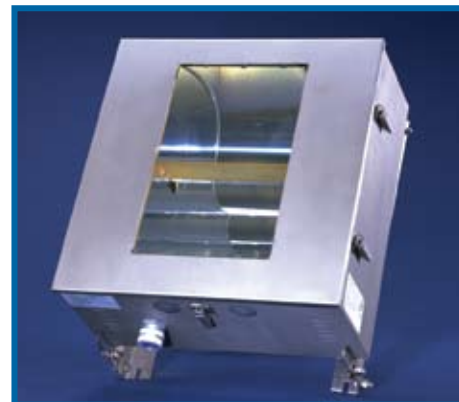
WEIGHTS & MEASUREMENTS

CHB204		
	FH 204	PC 204
Shipping Weight:	18 lbs 8.2 kg	70 lbs 31.8 kg
Shipping Volume:	6.46 cu ft 0.183 cu m	6.46 cu ft 0.183 cu m

L856/L857 GENERAL USE XENON WHITE BEACON HIGH INTENSITY

Certified to: FAA AC 150/2345-43F: L-856 & L-857

Compliant to: FCC Rules and Regulations
Canadian Standards Association (CSA)
ICAO (Annex 14)
Type A or B (white)



FEATURES/BENEFITS

- Same enclosure for power converter and flashhead saves space and installation cost
- FAA approved L-856 or L-857
- Meets or exceeds ICAO type A or type B (white) specifications
- NEMA 4X stainless steel enclosure
- Low operating and maintenance costs with long life flashtubes
- Horizontal 120 degree and vertical 5 degree beam spread
- Complete technical data and application assistance available

APPLICATION

- The CHB205 Beacon, when combined with the CHC121W Controller or the CHC140W Controller is a high intensity white strobe system that provides a white strobe for day, twilight, and night operation for lighting structures over 500 feet high and is available for Catenary style lighting L-857. Since each beacon provides 120 degree coverage, a minimum of three beacons is required at each level to attain 360 degree coverage on most structures. To determine the number of tiers and placement requirements, please refer to the appropriate publications of your respective governing body.
- The beacon is operated on a continuous 24-hour basis generating 270,000 (L-856), 200,000 (ICAO Type A), 140,000 (L-857) or 100,000 (ICAO Type B) effective candelas during the daytime period, 20,000 effective candelas in the twilight period, 2,000 (optional 4,000) effective candelas during night period when configured with the CHC121W or CHC140W Controller.

ORDERING INFORMATION

Each system consists of a flashhead and power supply in one enclosure. Each system requires a photocell and interconnecting cables. After selecting a beacon, see the Accessories table below. Refer to page 58 for Controller information.

Voltage	Catalog Number	Controller
110/120V 50Hz	CHB205 110/120V 50Hz	CHC140W
220/240V 50Hz	CHB205 220/240V 50Hz	CHC140W
110/120V 60Hz	CHB205 110/120V 60Hz	CHC140W
208/220V 60Hz	CHB205 208/220V 60Hz	CHC140W
230/240V 60Hz	CHB205 230/240V 60Hz	CHC140W
480V	CHB205 480V 60Hz	CHC140W
110/120V 50Hz	CHB205S 110/120V 50Hz	CHC121W
208/240V 50Hz	CHB205S 220/240V 50Hz	CHC121W
110/120V 60Hz	CHB205S 110/120V 60Hz	CHC121W
208/240V 60Hz	CHB205S 208/220V 60Hz	CHC121W
230/240V 60Hz	CHB205S 230/240V 60Hz	CHC121W
480V	CHB205S 480V 60Hz	CHC121W

ELECTRICAL RATINGS

Mode	Flash Rate [‡] (flashes/minute)	Power Used
Day/Twilight	40	255W
Night	40	255W

[‡] Flashtube light output meets the FAA minimum requirements of 20,000 candelas day/twilight and 2,000 candelas night for a period of not less than two years.

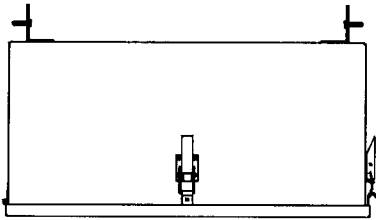
ACCESSORIES

Description	Catalog Number
Photocell	PEC 510*

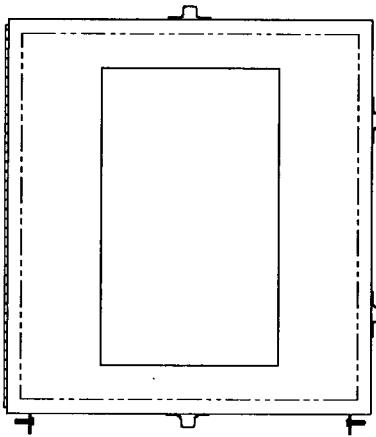
*NOTE: The PEC510 photocell is required to direct intensity stepping for the CHC121W or CHC140W controllers.

MECHANICAL DIMENSIONS

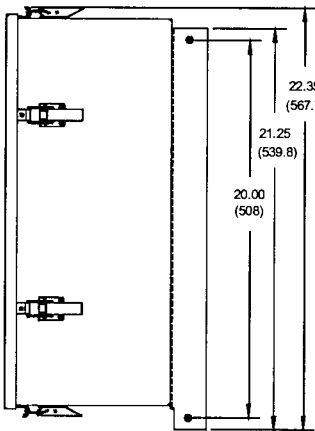
CHB205



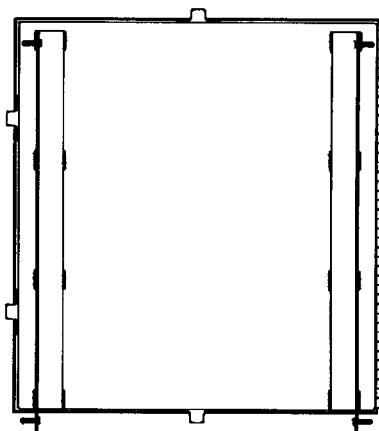
TOP VIEW



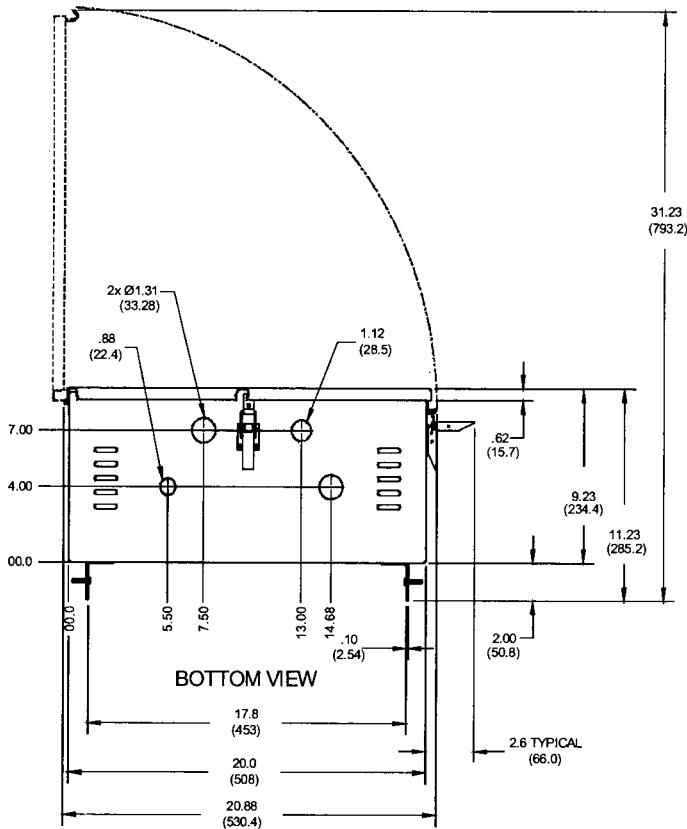
FRONT VIEW



RIGHT SIDE VIEW



REAR VIEW

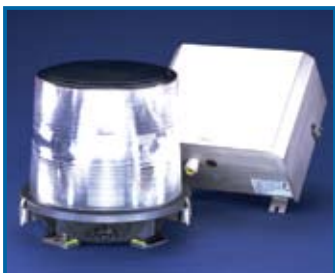


- NOTES:
- 1. WEIGHT: 85 LBS. (38.6 KG.)
 - 2. WIND AREA: 2.9 SQ. FT. (.27 SQ. M.)
 - 3. DIMENSIONS ARE IN INCHES (MILLIMETERS)

WHITE MEDIUM INTENSITY FLASHHEAD WITH CHC140W CONTROLLER

Certified to:
FAA AC 150/5345-43F:
L-865 & L-866

Compliant to:
FCC Rules and Regulations
Canadian Standards
Association (CSA)
ICAO (Annex 14)
Type A (white)



FEATURES/BENEFITS

- FAA approved L-865 & L-866
- Meets or exceeds ICAO specifications
- Power consumption is 90% less than conventional incandescent beacons
- Low operating and maintenance costs with long life flashtubes
- NEMA 4X stainless steel enclosure
- Special circuitry eliminates the lens failure due to ozone corrosion common to all other beacons
- Horizontal 360 degree and vertical 5 degree beam spread
- Very narrow, controlled beam
- Smallest size and wind loading
- AC or DC operation available
- Remote alarm indication
- Complete technical data and application assistance available

APPLICATION

- The CHB302W is a medium intensity white beacon for use with high intensity systems and designed to work with the CHC140W Controller. It will provide a white beacon and night operations for structures up to 500'.
- Complete technical data and application assistance available.

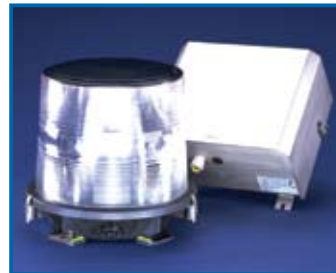
ORDERING INFORMATION*

Voltage	Catalog Number
110/120V 50Hz	CHB302W 110/120V 50Hz
220/240V 50Hz	CHB302W 220/240V 50Hz
110/120V 60Hz	CHB302W 110/120V 60Hz
110/120V 60Hz 4000cd	CHB302W 110/120V 60Hz 4000cd
208/220V 60Hz	CHB302W 208/220V 60Hz
230/240V 60Hz	CHB302W 230/240V 60Hz
480V 60Hz	CHB302W 480V 60Hz

WHITE MEDIUM INTENSITY FLASHHEAD WITH CHC121W CONTROLLER

Certified to:
FAA AC 150/5345-43F:
L-865 & L-866

Compliant to:
FCC Rules and Regulations
Canadian Standards
Association (CSA)
ICAO (Annex 14)
Type A (white)



FEATURES/BENEFITS

- FAA approved L-865 & L-866
- Meets or exceeds ICAO specifications
- Power consumption is 90% less than conventional incandescent beacons
- Low operating and maintenance costs with long life flashtubes
- NEMA 4X stainless steel enclosure
- Special circuitry eliminates the lens failure due to ozone corrosion common to all other beacons
- Horizontal 360 degree and vertical 5 degree beam spread
- Very narrow, controlled beam
- Smallest size and wind loading
- AC or DC operation available
- Remote alarm indication
- Complete technical data and application assistance available

APPLICATION

- The CHB302WS is a medium intensity white beacon for use with high intensity systems and designed to work with the CHC121W Controller. It will provide a white beacon and night operations for structures up to 500'.
- Complete technical data and application assistance available.

ORDERING INFORMATION*

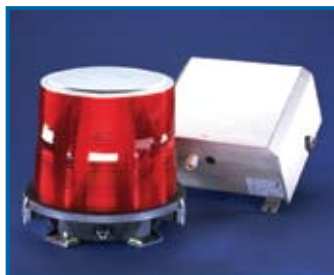
Voltage	Catalog Number
110/120V 50Hz	CHB302WS 110/120V 50Hz
220/240V 50Hz	CHB302WS 220/240V 50Hz
110/120V 60Hz	CHB302WS 110/120V 60Hz
208/220V 60Hz	CHB302WS 208/220V 60Hz
230/240V 60Hz	CHB302WS 230/240V 60Hz
480V 60Hz	CHB302WS 480V 60Hz

* Note: Obstructions over 350 feet require several interconnected power converters and flashheads (typically three) in a master/slave configuration. Contact Cooper Crouse-Hinds customer service for assistance.

RED MEDIUM INTENSITY FLASHHEAD WITH CHC121W CONTROLLER

Certified to:
FAA AC 150/5345-43F:
L-864

Compliant to:
FCC Rules and Regulations
Canadian Standards
Association (CSA)
ICAO (Annex 14)
Type B (red)



FEATURES/BENEFITS

- FAA approved L-864
- Meets or exceeds ICAO specifications
- Power consumption is 90% less than conventional incandescent beacons
- Low operating and maintenance costs with long life flashtubes
- NEMA 4X stainless steel enclosure
- Special circuitry eliminates the lens failure due to ozone corrosion common to all other beacons
- Horizontal 360 degree and vertical 5 degree beam spread
- Very narrow, controlled beam
- Smallest size and wind loading
- AC or DC operation available
- Remote alarm indication
- Complete technical data and application assistance available

APPLICATION

- The CHB302R is a medium intensity red beacon for use with high intensity systems and designed to work with the CHC121W Controller. It will provide a red beacon for night operations for structures up to 500'.
- Complete technical data and application assistance available.

ORDERING INFORMATION*

Voltage	Catalog Number
220/240V 50Hz	CHB302R 220/240V 50Hz
110/120V 60Hz	CHB302R 110/120V 60Hz

* Note: Obstructions over 350 feet require several interconnected power converters and flashheads (typically three) in a master/slave configuration. Contact Cooper Crouse-Hinds customer service for assistance.

RED/WHITE MEDIUM INTENSITY FLASHHEAD WITH CHC121W CONTROLLER

Certified to:
FAA AC 150/5345-43F:
L-864 & L-865

Compliant to:
FCC Rules and Regulations
Canadian Standards
Association (CSA)
ICAO (Annex 14)
Type A (white)
or B (red)



FEATURES/BENEFITS

- FAA approved L-864 & L-865
- Meets or exceeds ICAO specifications
- Power consumption is 90% less than conventional incandescent beacons
- Low operating and maintenance costs with long life flashtubes
- Power supply includes 12 LED Indicators to convey operating status
- NEMA 4X stainless steel enclosure
- Special circuitry eliminates the lens failure due to ozone corrosion common to all other beacons
- Horizontal 360 degree and vertical 5 degree beam spread
- Very narrow, controlled beam
- Smallest size and wind loading
- AC or DC operation available
- Remote alarm indication

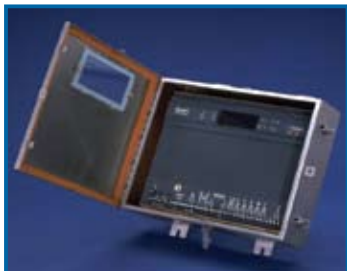
APPLICATION

- The CHB302D is a dual medium intensity beacon for use with high intensity systems and designed to work with the CHC121W Controller. It will provide a white beacon for day operation and red beacon for night operations for structures up to 500'.
- Remote alarm indication.

ORDERING INFORMATION*

Voltage	Catalog Number
110/120V 50Hz	CHB302D 110/120V 50Hz
220/240V 50Hz	CHB302D 220/240V 50Hz
110/120V 60Hz	CHB302D 110/120V 60Hz
208/220V 60Hz	CHB302D 208/220V 60Hz
230/240V 60Hz	CHB302D 230/240V 60Hz
480V 60Hz	CHB302D 480V 60Hz

CHC121W CONTROLLER INTERACTIVE DIAGNOSTICS, PROGRAMMING & CONTROL



FEATURES/BENEFITS

- Remote diagnostics capability
- Integrates with external red light controller
- LED indicators for at-a-glance status
- Digital display
- User programmable via scroll menus or software
- (15) discrete dry contact data points
- Utilizes resistive photocell
- Rack mount available
- NEMA 4X stainless steel outdoor rated enclosure

APPLICATION

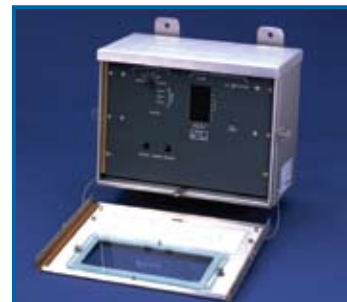
- The CHC121W controller includes a convenient display panel allowing for easily readable programming, status, and diagnostics. The "Graphic display" shows real time status and location of each individual strobe in the system. The digital display allows the user to interrogate an individual light to view flash counts (overall and mode specific), internal temperature, line voltages, trigger voltage, bank voltage, mode energy, marker voltage, operating marker bulbs, and current firmware version.
- This system controls, monitors, diagnoses, logs and communicates lighting system events from the convenience of your computer that is connected via POTS.

ORDERING INFORMATION*

Voltage	Catalog Number
230V 50Hz	CHC121W 230V 50Hz
120V 60Hz	CHC121W 120V 60Hz
240V 60Hz	CHC121W 240V 60Hz

*NOTE: Interconnect wiring used between the CHC121W or CHC140W controllers and the flasheads is not supplied. Appropriate length of two-conductor, twisted pair cable (Belden #8719 or equal) can be ordered locally.

CHC140W CONTROLLER HIGH INTENSITY STROBE SYSTEM CONTROLLER



FEATURES/BENEFITS

- Independent LED status light for each beacon
- Mode Alert and Transition System
- LED indicators for at-a-glance status
- Capable of operating up to 28 flashheads
- Synchronizes beacons and directs flash timing and intensity
- Records and reports beacon operating status
- Utilizes resistive photocell
- Rack mount available
- NEMA 4X stainless steel outdoor rated enclosure

APPLICATION

- The CHC140W controller includes a convenient LED display panel allowing for easy viewing. The "Graphic display" shows real time status and location of each individual strobe in the system. The digital display allows the user to determine individual beacon status "at-a-glance." For 24-hour white strobe systems where automated monitoring is not necessary.

ORDERING INFORMATION*

Voltage	Catalog Number
115V 50Hz	CHC140W 115V 50Hz
230/240V 50Hz	CHC140W 230/240V 50Hz
120V 60Hz	CHC140W 120V 60Hz
220/240V 60Hz	CHC140W 220/240V 60Hz



Standard and Custom Controllers to Meet Your Specific Needs

Cooper Crouse-Hinds offers the very best Obstruction Lighting Control Systems. In this section you will find listed some basic standard red lighting (incandescent and LED) as well as dual lighting controllers.

Whether you purchase one of our standard controllers or a custom controller designed specifically to meet your needs, Cooper Crouse-Hinds controllers meet the highest of quality standards. Each controller must pass a rigorous quality review and test procedure before being shipped from our manufacturing facility.

Our design staff has the expertise and experience to provide you with the very best product—one that meets all the latest FAA and FCC requirements. We incorporate field proven designs and components and we back this quality with a 5-year warranty on all our solid-state components and the very best in customer support and service available.



STANDARD FEATURES

- NEMA 4 rated enclosure
- 120VAC or 230VAC, 50/60Hz
- Solid state flashers with zero voltage switching for longer lamp life, encapsulated to protect against harsh conditions and vibration
- Solid state alarm modules, encapsulated to protect against harsh conditions and vibration
- Line voltage transient protection
- Fused outputs
- Failure detection for:
 - Beacon lamp failure
 - Obstruction lamp failure
 - Flasher failure (force beacon on steady in the event of failure)
 - Power failure
- Local LED indicators for:
 - Beacon lamp failure
 - Obstruction lamp failure
 - Flasher failure
 - Power present
- Individual isolated alarm contacts for remote alarming for:
 - Beacon lamp failure
 - Obstruction lamp failure
 - Flasher failure
 - Power failure
- Photo-control override switch on enclosure door
- Technical support line

OPTIONAL FEATURES FOR CUSTOM OBSTRUCTION LIGHTING CONTROL SYSTEMS

- Enclosures:
 - NEMA 1
 - NEMA 4X (stainless steel, fiberglass, or polycarbonate)
- Class I, Division 1 & 2 explosionproof (NEMA 7, EEX d, ATEX)
- Custom paint
- Pilot lights on enclosure door (standard on Class I, Division 1 & 2 enclosures)
- Remote indicator panel
- Lightning arrestor
- Circuit breakers
- Alternating feature—Doubles lamp life
- Audible alarms
- Auto dialer
- Backup designs:
 - Beacons
 - Obstruction side lights
 - Power
 - Photo-control
- Custom alarms:
 - Last beacon lamp failure
 - Photo-control failure
- GPS synchronization
- Integrated with other systems including BMS
- Solar
- Dual power source
- Backup power source
- Heliport control

LED RED OBSTRUCTION LIGHTING CONTROL SYSTEMS

Certified to: FAA AC 70/7460-1

Compliant to: FCC Rules and Regulations
NEMA & UL Enclosures
IEC 529 Enclosures
NEMA 4X rated and IP66



OLC SERIES

SELECTION CHART—LED RED

OLC Catalog Number*	Input Voltage ² L864	BWLFR/ 120-240 Flashing Beacons L864	OWLFSR/ 120 or /240 Single Obstruction Lights L810	OWLFDR/ 120 or /240 Double Obstruction Lights L810	Maximum Structure Height ¹		Typical FAA Structure
					Feet	Meters	
Control Systems for Towers							
72000T-ALTR	120	0	–	1	150	45.7	A0
72001T-3	120	1	3	–	350	106.7	A1
72002T-3	120	3	6	–	700	213.4	A2
72003T-3	120	5	9	–	1050	320.0	A3
72200T-ALTR	230	0	–	1	150	45.7	A0
72201T-3	230	1	3	–	350	106.7	A1
72202T-3	230	3	6	–	700	213.4	A2
72203T-3	230	5	9	–	1050	320.0	A3
Control Systems for Solid Structures							
73000S-3-ALTR	120	0	–	3	150	45.7	A0
73000S-4-ALTR	120	0	–	4	150	45.7	A0
73001S-3	120	3	3	–	350	106.7	A1
73001S-3-ALTR	120	3	–	3	350	106.7	A1
73200S-3-ALTR	230	0	–	3	150	45.7	A0
73200S-4-ALTR	230	0	–	4	150	45.7	A0
73201S-3	230	3	3	–	350	106.7	A1
73201S-3-ALTR	230	3	–	3	350	106.7	A1

¹ Heights are calculated maximums based upon OLC capacities with regards to FAA specifications.

² Voltages are line to neutral. The 230V units are typically for 220-240V export applications and require a neutral or grounded leg.

* ALTR options- Each time the photocell energizes the opposite light will operate from the previous day.

Note: For custom control systems, contact Cooper Crouse-Hinds Customer Service.

INCANDESCENT RED OBSTRUCTION LIGHTING CONTROL SYSTEMS

Certified to: FAA AC 70/7460-1

Compliant to: FCC Rules and Regulations
NEMA & UL Enclosures
IEC 529 Enclosures
NEMA 4X rated and IP66



OLC SERIES

SELECTION CHART—INCANDESCENT RED

OLC Catalog Number	Input Voltage ³	Flashing Beacon Options ¹	Obstruction Light Outputs ¹		Maximum Structure Height ²		Booster Txmr	Lamp Transfer Relays	Typical FAA Structure
			Singles	Doubles	Feet	Meters			
Control Systems for Towers									
70000AJ	120	1	2	0	225	70	–	–	A1
70001AJ	120	1	2	0	350	305	X	–	A1
70002BJ	120	3	6	0	700	305	X	–	A2
70002CJ	120	3	8	0	700	305	X	–	A2
70003BJ	120	5	9	0	1180*	388*	X	–	A3
70003CJ	120	5	12	0	1180*	388*	X	–	A3
70200AJ	230	1	2	0	350	365	–	–	A1
Control Systems for Solid Structures									
70003AJ	120	3	0	3	800*	388*	X	–	A1
70042AJ	120	3	0	3	225	70	–	X	A1
70043AJ	120	3	0	3	470	305	X	X	A1
70242AJ	230	3	0	3	700	365	–	X	A1
Control Systems for Other Applications									
70002AJ	120	2	6	0	700	305	X	–	–
70004AJ	120	2	4	0	225	70	–	–	–
70038AJ	120	1	0	2	225	70	–	X	–
70204AJ	230	2	4	0	700	365	–	–	–
70238AJ	230	1	0	2	700	365	–	X	–

¹ Flashing FCB beacons use two 620W lamps or two 700W lamps at 120V, and two 700W lamps at 230V.

Obstruction lights use 116W lamps at 120V and 116W lamps at 230V.

Double EOL or VAW obstruction lights have one lamp burning and one lamp standby.

² Heights are calculated maximums based upon OLC capacities with certain wire sizes and are not related to FAA specified configurations.

³ Voltages are line to neutral. The 230V units are typically for 220-240V export applications and require a neutral or grounded leg.

* Based upon #6 AWG wire. All other heights are based upon #8 AWG wire.

Note: For custom control systems, contact Cooper Crouse-Hinds Customer Service.

LED DUAL RED/WHITE OBSTRUCTION LIGHTING CONTROL SYSTEMS

Certified to: FAA AC 70/7460-1

Compliant to: FCC Rules and Regulations
NEMA & UL Enclosures
IEC 529 Enclosures
NEMA 4X rated and IP66



OLC SERIES

SELECTION CHART—LED DUAL RED/WHITE

Catalog Number	Input Voltage¹	BWLFD/RWH/ 120-240 Dual Red/White Flashhead	OWLFSD/120 or /240 Single Obstruction Lights	OWLFDR/120 or /240 Double Obstruction Lights	Maximum Structure Height²		Typical FAA Structure
					Feet	Meters	
Control Systems for Towers							
75001T-3	120	1	3	–	350	106.7	E1
75002MT-3	120	3	6	–	500	152.4	E2
75201T-3	230	1	3	–	350	106.7	E1
75202MT-3	230	3	6	–	500	152.4	E2
Control Systems for Solid Structures							
75000S-3	120	0	–	3	150	45.7	E0
75001S-3	120	3	3	–	350	106.7	E1
75001S-3	120	3	–	3	350	106.7	E1
75200S-4-ALTR*	230	0	–	3	150	45.7	E0
75201S-3	230	3	3	–	350	106.7	E1
75201S-3-ALTR*	230	3	–	3	350	106.7	E1

¹ Voltages are line to neutral. The 230V units are typically for 220-240V export applications and require a neutral or grounded leg.

² Heights are calculated maximums based upon OLC capacities with regards to FAA specifications.

* ALTR options- Each time the photocell energizes the opposite light will operate from the previous day.

Note: For custom control systems, contact Cooper Crouse-Hinds Customer Service.

GPS SYNCHRONIZED FLASHER

APPLICATION

The Synchronized Flasher Module (SFM) with GPS technology provides the synchronized flashing function (proper sequence of ON/OFF time) for multiple LED beacons or LED obstruction lights. With a GPS system, beacon synchronizations will occur within seconds from when the power is applied to the SFC. Synchronization is maintained whenever power is applied to the controller. Applications include wind turbines, broadcast (including hot AM towers), cellular, tall buildings, bridges, and more.

Our L864 LED Beacon provides the most focused beam meeting FAA requirements.



The SFM (Synchronized Flasher Module) consists of solid-state components encapsulated in a rugged plastic housing to protect against shock, vibration and humidity.

CATALOG NUMBER

11510-001

VOLTAGE

120/230 VAC



The SFM can be packaged into a NEMA 4X Enclosure. This will provide additional protection from environmental elements, as well as the ability to monitor the unit in a location away from the beacon.

CATALOG NUMBER

11501-001

11502-001

VOLTAGE

120VAC

230VAC



An additional available option is the mounting of the synchronized flasher assembly and photocell directly into the LED beacon. This option provides the convenience of a single package which eliminates the need for the separate NEMA 4X Enclosure and reduces installation costs.

Preferred: An additional available option is the integration of the beacon, synchronized flasher, GPS and photocell into a single assembly. This option provides the convenience of a single package which eliminates the need for the separate NEMA 4X Enclosure and reduces installation costs.

CATALOG NUMBER

BNLFR/120-240

VOLTAGE

120-240VAC

SPECIFICATIONS

Power Source: 120 or 230 VAC; 50/60Hz
Flash Rate: 30 +/- 1% flashes per minute
(1/2 ON and 1/2 OFF)

Maximum Load: 132 Watts
Inrush Current: 10 amperes peak for
1 cycle of AC line

Operating Temp: -40° C to +60° C

ACCESSORIES FOR THE SFM

ANTENNA OPTIONS (ANTENNA PURCHASED SEPARATELY)



Miniature 3V GPS Antenna
Compact GPS Antenna with magnetic mounting for quick and convenient placement. Lower cost alternative.

Catalog No:
11511-100



Bullet 3.3V GPS Antenna

Waterproof and extra rugged; the antenna cable can be threaded through a mounting pole for added protection and reliability. Jam-resistant.

Catalog No:
11511-200

Catalog Number:

T-TM-LED-1
T-T1-LED-1

MONITORING OPTIONS

Solid-state alarm controller for remote alarming
Synchronized flasher controller with monitoring

PEC GENERAL USE PHOTOELECTRIC CONTROLLER

Certified to: FAA AC 70/7460-1

Compliant to: FCC Rules and Regulations
Canadian Standards Association (CSA) PEC



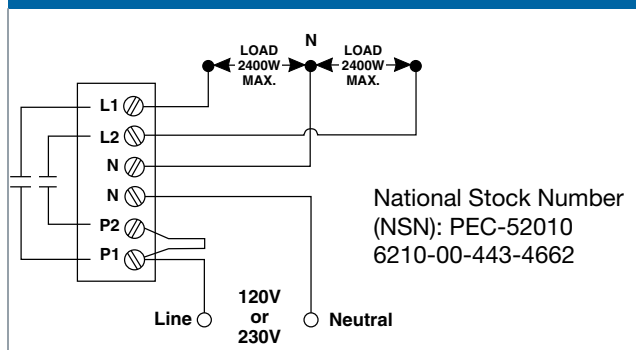
FEATURES/BENEFITS

- Meets FAA and FCC requirements
- Two 30A load contacts
- Maximum of 2,400W load per contact
- Surge protection
- LED power indicator
- Cast aluminum weatherproof box
- Solid-state circuitry for high reliability
- Light actuation: Energizes at 35 foot-candles
De-energizes at 60 foot-candles
- Each contact may directly switch a load, activate an OLA lighting contactor, or activate an OLC controller
- Operates on 60 or 50Hz frequency power
- Front housing hooks onto lower edge of the aluminum box for easy installation
- Screw terminals for 8 AWG wire
- Voltage tolerance $\pm 20\%$

APPLICATION

- The PEC Photoelectric controller automatically switches lighting circuits directly as a load contactor or indirectly through other lighting contactors or controllers.

WIRING DIAGRAM



Two Wire Service with Split Loads

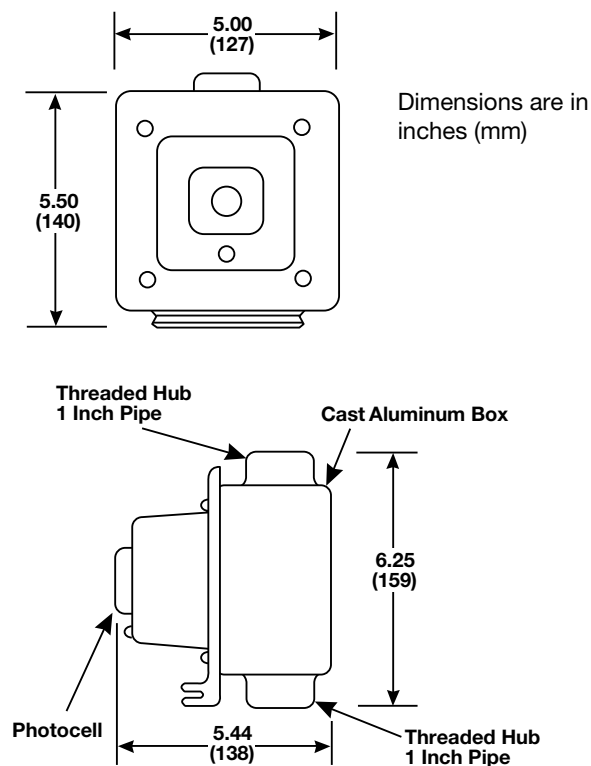
Note: For a combination photoelectric controller and flasher in the same housing as the PEC, order PCF-70006 for 120V operation or PCF-70206 for 220V operation.

ORDERING INFORMATION

Catalog Number	Voltage*
52010	120
52010-1	230

* Voltages are line to neutral. The 230V units are typically for 220-240V operation.

INSTALLATION DRAWING



WEIGHTS & MEASUREMENTS

Shipping Weight:	5 lbs	2.3 kg
Shipping Volume:	0.3 ft ³	0.008 m ³

PEC CLASS I, DIVISION 2
PHOTOELECTRIC
CONTROLLER

Certified to: FAA AC 70/7460-1

Compliant to: Class I, Division 2, Groups B, C & D
FCC Rules and Regulations



FEATURES/BENEFITS

- Enclosure (NEMA 7/4X) is rated for hazardous duty Class I, Div 2, Group D (70061; 70261)
- Groups B, C and D (UNI-70061; UNI-70261)
- Bottom side of cast housing fitted with 1" NPT hub
- Factory calibrated Light Actuation Levels:
Energized at 35fc and below
De-energized above 60fc
- Power: 120 VAC ± 20%; 50/60Hz
230 VAC ± 20%; 50/60Hz
- Two SPST N.O. 30 amp contacts
(see connection diagrams)
- Screw terminals for up to #8 AWG wire
- Meets all FAA Specifications
- LED Power Indicator

NOTE: For Class I, Groups B and C, Zone 1, Groups IIB and H2, all conduit entries must be sealed with approved sealing fittings.

APPLICATION

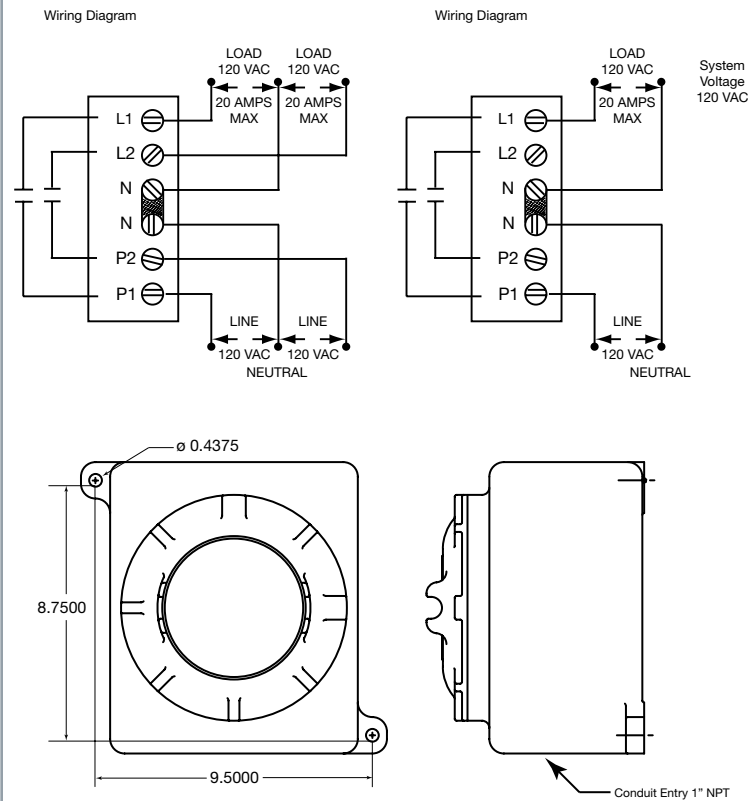
- The PEC Photoelectric controller is designed for use in hazardous applications. It is to be used for ON at dusk, OFF at dawn operation of tower and obstruction lighting in aviation service.

ORDERING INFORMATION

Catalog Number	Description	Voltage
70061	Class 1, Div 2, Group D	120
70261	Class 1, Div 2, Group D	230
UNI-70061*	Class 1, Div 2, Groups B, C, D	120
UNI-70261*	Class 1, Div 2, Groups B, C, D	230

* Enclosure dimensions different from those shown below.

WIRING DIAGRAM



PEC LOCKING TYPE DELAYED RESPONSE PHOTOELECTRIC CONTROLLER

Certified to: FAA AC 70/7460-1

Compliant to: FCC Rules and Regulations



FEATURES/BENEFITS

- Housing: UV stabilized high-impact polypropylene
- Photocell: 1-inch cadmium sulfide light sensitive element
- Turn-on/Turn-off: 35 foot-candles turn-on; 58 foot-candles turn-off
- Time Delay: Minimum 15 seconds
- Switch Type: Single-pole, single-throw. Contact position at night normally closed
- Temperature Range: -40°F to 170°F
- Power Consumption: 1.1 watts average at 120 VAC
- Rated Life: 5,000 operations minimum at rated load
- Surge Protection
- Dimensions: 3.07" diameter, 2.15" high
- Built-in time delay prevents false cycling caused by lightning flashes or stray headlights
- Meets FAA/FCC requirements for airway obstruction lighting

APPLICATION

- The PEC Photoelectric Controller automatically switches lighting circuits directly as a load contactor or indirectly through other lighting contactors or controllers.

ORDERING INFORMATION

Catalog Number	Description	Voltage
18001-007	Locking-Type Photoelectric Control for Red Light Systems	120VAC
18002-007	Locking-Type Photoelectric Control for Red Light Systems	230VAC
18001-008	Locking-Type Photoelectric Control for White Strobe Systems	120VAC
18002-008	Locking-Type Photoelectric Control for White Strobe Systems	230VAC
18003-001	Locking-Type Photoelectric Control	12VDC
18003-002	Locking-Type Photoelectric Control	24VDC
18003-003	Locking-Type Photoelectric Control	48VDC
8506-001	Receptacle (Socket)	480V (MAX)

RECEPTACLES FOR LOCKING-TYPE PHOTOCONTROLS



With all-weather locking type receptacle and Lexan® housing.

With 14 inch 14 AWG wire color-coded as follows: line = black; neutral = white; load = red. Threaded stem fits through a 1/2 inch knockout.

Dimensions: 2 5/8" diameter (socket); 2 5/8" high (including stem). 1/2" NPT at bottom fitting.

PCF GENERAL USE PHOTOELECTRIC CONTROLLER AND FLASHER

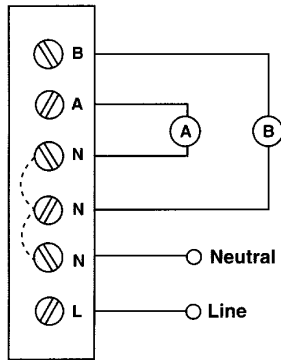
Certified to: FAA AC 70/7460-1
Compliant to: FCC Rules and Regulations



FEATURES/BENEFITS

- Meets FAA & FCC requirements
- Combines flasher and PEC in one compact unit
- Controller housing hooks onto the box for easy wiring
- Solid-state flasher for high reliability
- Flashes up to 1,400W
- Flash rate: 30 ± 10 per minute with 2/3 on and 1/3 off
- LED power indicator
- Cast aluminum box
- Zero switching voltage for longer lamp life
- Inrush: 300A at 120V
- Light actuation: Energizes at 35 foot-candles
De-energizes at 60 foot-candles
- Voltage tolerance ± 15%

WIRING DIAGRAM



A = Obstruction Light Lamp(s)
Maximum Total Load of 1,000 W

B = Beacon Lamps Maximum
Total Load of 1,400 W

Note: For a photoelectric controller only in the same housing, order PEC-52010 for 120V operation or PEC-52010-1 for 220-240V operation.

WEIGHTS & MEASUREMENTS

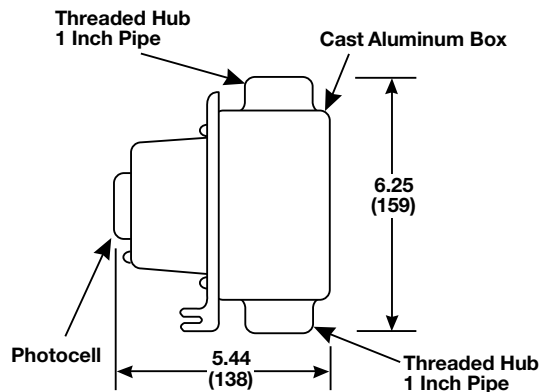
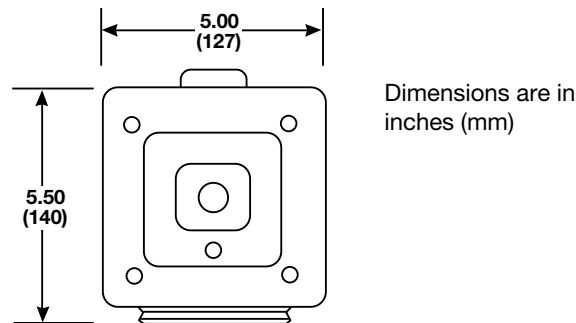
Shipping Weight:	5 lbs	2.3 kg
Shipping Volume:	0.3 ft ³	0.008 m ³

ORDERING INFORMATION

Catalog Number**	Description	Voltage*
70006	Photoelectric Controller/Flasher	120
70206	Photoelectric Controller/Flasher	220-240

*Two wire voltage line to neutral
** For high RF environment add suffix "RF" to catalog number

INSTALLATION DRAWING



APPLICATION

- The PCF is a combination photo controller and flasher in a single unit. It is perfect for automatic operation of a single FCB beacon. It will flash any incandescent or LED lighting fixtures, including obstruction lights, with a total flashing load of 1,400W or less. The PCF will also switch steady burning lights totaling 1,000W in addition to flashing a beacon.

OLF GENERAL USE & CLASS I, DIVISION 2 OBSTRUCTION LIGHTING FLASHER

Certified to: FAA AC 70/7460-1

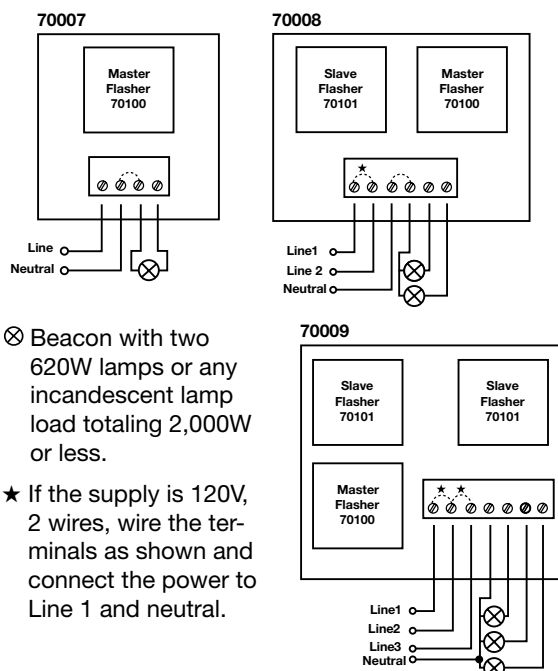
Compliant to: FCC Rules and Regulations



FEATURES/BENEFITS

- Meets FAA and FCC requirements
- Solid-state components for reliability
- Each flasher circuit operates up to 2,000W of lamp load or as low as a single obstruction light
- Zero voltage switching for longer lamp life
- Automatic operation using a single PEC photoelectric controller to directly switch the 1-circuit and 2-circuit OLFs and to activate an OLA lighting contactor to switch the 3-circuit OLF
- Single circuit OLF models have a cast aluminum housing with one-inch threaded hub at top and bottom (70007; 70207; 1-1/2 inch hubs on 70060; 70260)
- Raintight NEMA 3R box with bottom knockouts (2-circuit and 3-circuit OLFs)
- Operates on 60 or 50Hz frequency power
- Voltage tolerance $\pm 15\%$
- Optional NEMA 4 enclosure (suffix -N4)
- Optional RF suppression for hot AM towers (suffix -RF)

WIRING DIAGRAMS



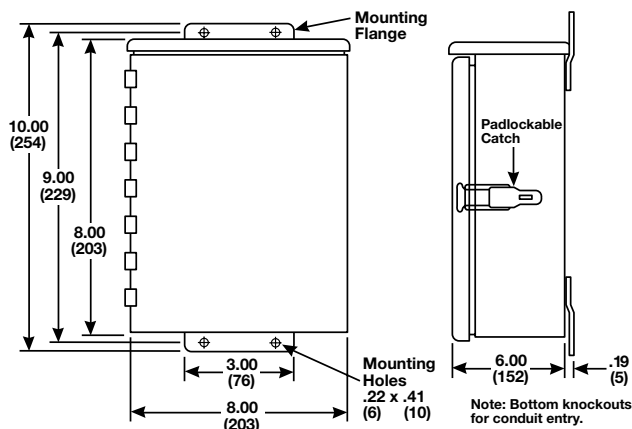
ORDERING INFORMATION

Catalog Number	Voltage*	Number of Outputs
70007	120	1
70008	120	2
70009	120	3
70060**	120	1
70207	230	1
70208	230	2
70209	230	3
70260**	230	1

*Two wire voltage line to neutral

** Enclosure is rated for hazardous atmospheres per NEC Class I, Division 2; Class II; Class III.

DIMENSION DRAWINGS 70008 & 70009



Dimensions are in inches (mm)

APPLICATION

- The OLF flasher provides the flashing function for medium intensity beacons, obstruction lights, or other incandescent lamp loads.

WEIGHTS & MEASUREMENTS

	70007	70008 70009
Shipping Weight:	8.0 lbs 3.6 kg	10.0 lbs 4.5 kg
Shipping Volume:	0.5 ft ³ 0.014 m ³	1.0 ft ³ 0.028 m ³

ALTR GENERAL USE
ALTERNATING LIGHT CONTROL
WITH TRANSFER RELAY



FEATURES/BENEFITS

- Solid state components for high reliability encapsulated to protect against harsh conditions and vibration
- Cast aluminum 4" x 4" x 3" box with one-inch threaded hubs at top and bottom
- 120VAC failure output available for remote alarming
- Suitable for 50 or 60Hz frequency power
- Line voltage transient protection
- Low power consumption
- Designed to connect to a Double Head, L-810 Light Assembly (Incandescent or LED)
- ALTR provides maximum life on both lights
- Doubles the time between service calls
- When used with an LED assembly, mean time to failure can be up to 20+ years

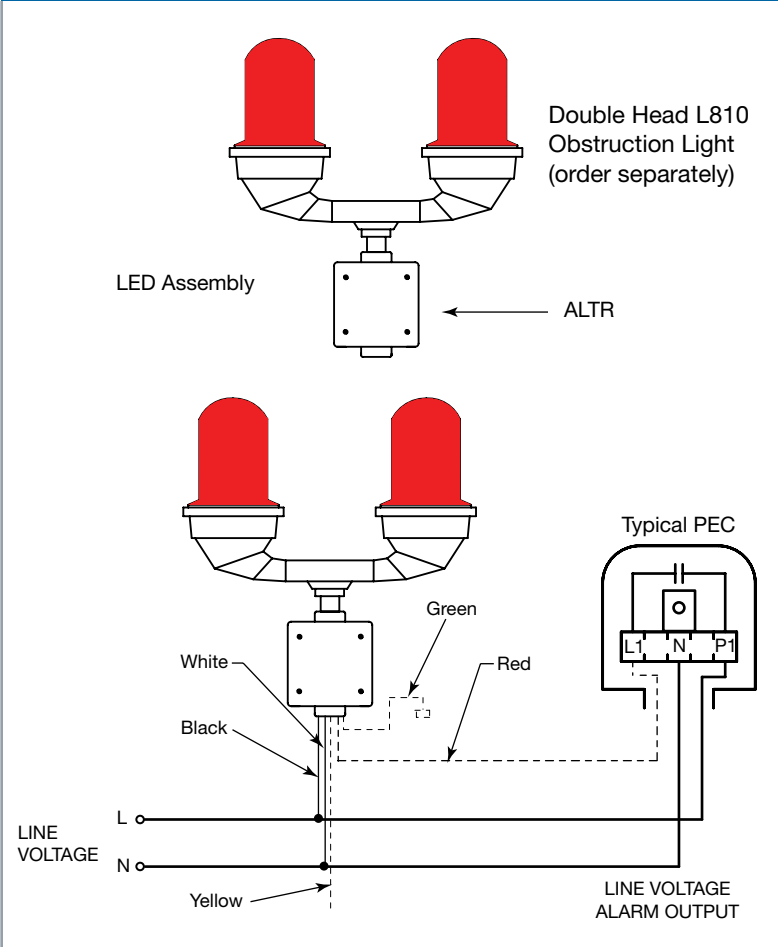
APPLICATION

- The ALTR alternates between each light in a double obstruction light assembly each time the tower lights are energized by the photo-control, ensuring equal usage of the lights over the life of the lamps. In the event one of the lights fails, the ALTR automatically energizes the operational light and provides an output for alarm monitoring. The ALTR provides an economical solution for applications where the obstruction lights are difficult and/or expensive to service such as towers or stacks that are inaccessible through normal methods.

ORDERING INFORMATION

Catalog Number	Description	Voltage
70029	ALTR Relay	120VAC
70229	ALTR Relay	240VAC

WIRING DIAGRAM



OLR GENERAL USE OBSTRUCTION LIGHTING RELAY



FEATURES/BENEFITS

- Solid state components for high reliability
- Cast aluminum 4" x 4" x 3" box with one-inch threaded hubs at top and bottom
- Toroidal current sensing
- Number of lamps selectable:
1 to 4 single head obstruction lights, 1 double head obstruction light, or 2 lamps for beacon
- Lamp wattage selectable: 120V: 620/700W or 116W
230V: 700W or 116W
- Isolated alarm outputs (10 amps at 120VAC or 30VDC)
- Spare lamp output rated 125W
- Red LED lamp failure indicator
- May be installed before or after a flasher unit
- Multiple wires may be passed through the toroid such as for two beacons
- Suitable for 50 or 60Hz frequency power
- Voltage tolerance $\pm 20\%$ of 120 or 240V
- Operating temperature: -40°F to 150°F
 -40°C to 65°C

APPLICATION

The OLR is a universal transfer and alarm relay. It is programmable by means of a selector switch to sense up to two beacons or four obstruction light lamps. Typical applications:

- Lamp failure alarm relay for up to four single obstruction lights.
- Alarm relay for one double head obstruction light with transfer of power from the failed lamp to the standby lamp.
- Lamp failure alarm relay for up to two flashing beacons.

ORDERING INFORMATION

Catalog Number	Description	Voltage*
70020	Universal Transfer/Alarm Relay	120
70220	Universal Transfer/Alarm Relay	220-240

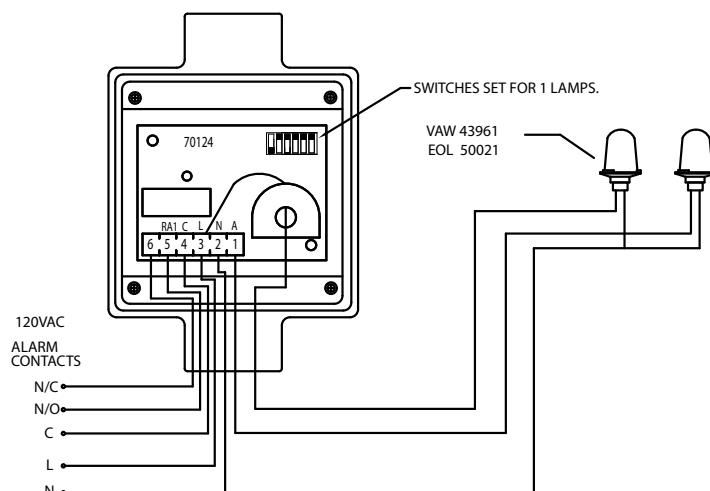
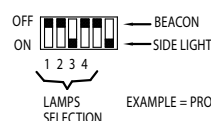
*Two wire voltage

OPTIONS

Options	Add Suffix
OLR unit for use with LED style beacons or obstruction lights	-LED
OLR unit mounted in a Class I, Division 1 & 2 explosionproof (NEMA 4X, 7) enclosure	-X4

WIRING DIAGRAM

NOTE: ALARM RELAY (AR1) IS PROGRAMMABLE FROM 1 TO 4 LAMPS
SELECT ONLY ONE LAMP SWITCH



OTR GENERAL USE TRANSFER RELAY ASSEMBLY



FEATURES/BENEFITS

- Solid state components for high reliability
- Cast aluminum 4" x 4" x 3" box with one-inch threaded hubs at top and bottom
- Instantaneous switching when a failure occurs
- Universal voltage: 120 to 240VAC
- Suitable for 50 or 60Hz frequency power
- Line voltage output: 125 watt maximum
- No trip delay
- Operating temperature : -40°F to 150°F
-40°C to 65°C
- May be purchased mated to a Double EOL Light Assembly as a complete, ready to use solution

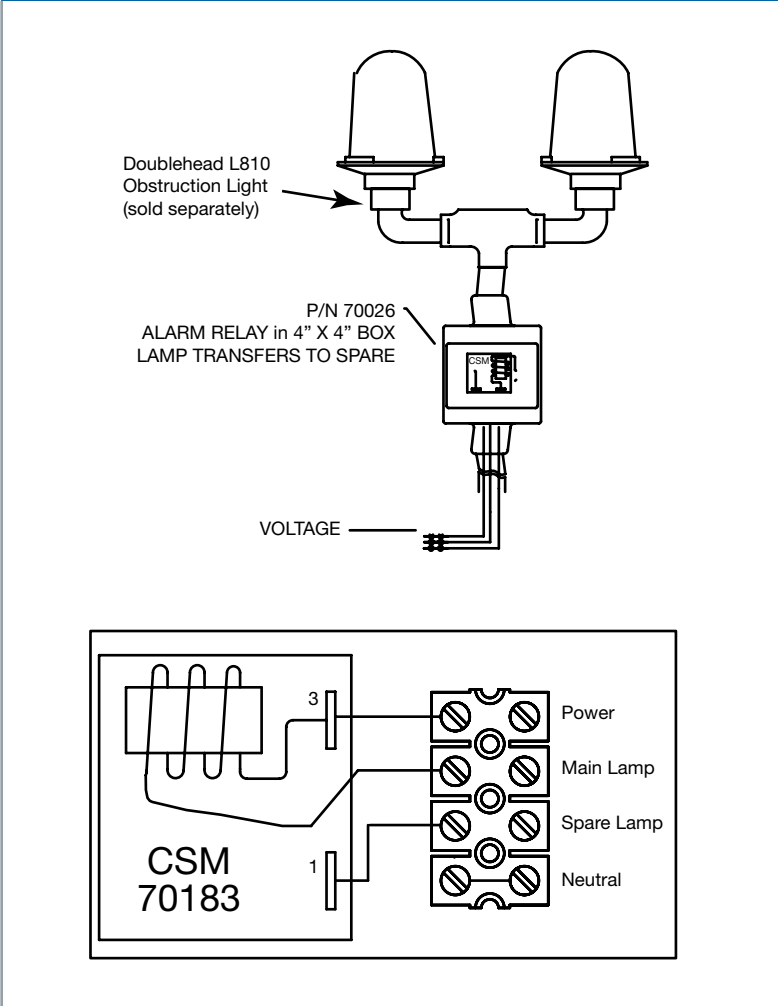
APPLICATION

- The OTR can provide fault monitoring of a steady burning side light. Upon failure of the first lamp, the relay will transfer power to the standby lamp. It will support 100-watt/230VAC, 116-watt/120VAC or 116-watt / 230VAC operation of one EOL or VAW (L810) dual headside lights. Normal operation resumes with replacement of failed lamp.

ORDERING INFORMATION

Catalog Number	Description	Voltage
70026	Transfer Relay Assembly (OTR)	120 to 240VAC

WIRING DIAGRAM



ALARM INDICATING LIGHT

FEATURES/BENEFITS

The Cooper Crouse-Hinds Alarm Indicating Light Assembly consists of the following:

- Cast aluminum box
- Lamp—6W for 120VAC units
- Lamp—10W for 230VAC unit
- Threaded Hub—1 inch NPT
- 120VAC or 230VAC operation
- Gasketed box cover
- 1 inch lens (red, amber, green)

APPLICATION

- This unit may be used to indicate power is applied to the lighting controls, or be used to indicate a fault has occurred.
- This indicator light is designed for outdoor mounting in a vertical conduit run.

WEIGHTS & MEASUREMENTS

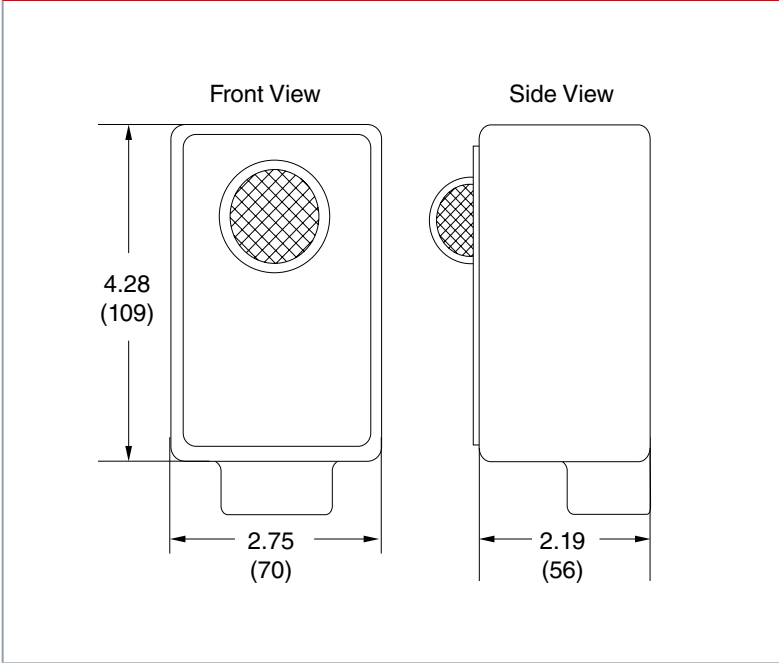
Shipping Weight:	4.0 lbs	1.8 kg
Shipping Volume:	0.2 ft ³	0.006 m ³

ORDERING INFORMATION

Catalog Number	Description	Voltage
12010-001-R*	Indicating light, red	120
12010-002-R*	Indicating light, red	230

*Optional colors: G = Green; A = Amber

INSTALLATION DRAWING



INSTALLATION

Connection to a power source and load

1. Remove four (4) cover screws.
2. Make power and load connections.
3. When field connections are complete, reinstall cover using four (4) screws provided.

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VWLSB/240	30
VWLSG/120	30
VWLSG/240	30
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VWLSW/240	30
VWLSY/120	30
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VX2LSG/240	32
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