



POINT OBSTRUCTION LIGHTS

POL EX LED v3

POINTSPEC® SERIES

Compliances: Class I, Division 2, Groups A B C D, T6
 Class I, Zone 2, Groups IIA IIB+H2 IIC, T6
 Certified FAA L-810 by Intertek Testing Service (ETL) per FAA AC 150/5345-43F
 Complies with ICAO Annex 14 Low Intensity Types A (10 cd) & B (32 cd)
 ETL Listed to UL 844 & UL 1598; Report No. 3110856CRT-009c
 ETL Listed to UL 1598A Marine Vessels
 ETL Listed to CSA C22.2 No. 137-M1981 & No. 250.0-04 Canada
 American Bureau of Shipping (ABS) Type Approved Product

The POL POINTSPEC series of red LED aviation obstruction lights presents the highest grade technical features and the most options available in the industry. POL steady-burning obstruction lights are used to mark tall structures that present hazards to air navigation. At night, these lights warn pilots when installed in accordance with FAA AC 70/7460-1 and applicable FCC and ICAO rules.

Note: FAA certified with FAA lamp number 281

See important alarms note on specifications page.

Point Type & Color	Power Supply	Photometric Specification	Entry	Classified Area	Style
POL-21003-R	1: 120v 2: 220v 3: 12v DC 4: 24v DC	F: FAA & ICAO Type B (32 cd) A: ICAO Type A (10 cd)	10B: 1-inch, Bottom	EX: Explosion-Proof Class I, Division 2 Class I, Zone 2	D: Double MT: Marine Treatment NVG: NVG Compatible*



Intertek ETL Control Number 3030033

For alarm, transfer, flashing and other control options, see page 2

* One head IR and one head visible red (see OL194LED)

POL-21003-R-1F-10B-EX-D



POL-21003-R-1F-10B-EX



POL-21003-R-1F-10B-EX-MT



Option -MT is recommended for all marine, high salt content air and other corrosive environments.

The fixture shall be treated for marine conditions by cleaning per US MIL method III of TT-C-490, chromate priming per US MIL-C-5541, epoxy powder base coat and glossy polyester powdercoat finish coat in color RAL 6003 (FED-STD-595 color #14097) green. Oven cured per US MIL-PRF-24712A.



CONTROL & MONITORING
OPTIONS

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ADD THE SELECTED UNIT TO EACH POL LIGHT *

FOR SINGLE LIGHTS: -x voltage -1: 120v -2: 220-240v -3: 12V DC -4: 24V DC

-S1	Flashes at the FAA specified flash rate of 30 +/- 10 per minute
PL10760-x-S2	Non-isolated failure alarm. Upon failure, an alarm relay activates remote alarm contacts powered by the POL's normal line voltage. Required for alarm monitoring with a POC Controller.
PL10760-x-S4	Isolated failure alarm. Upon failure, an alarm relay activates remote alarm contacts. The alarm contacts are isolated "dry" (voltage free) normally open and normally closed.

FOR DOUBLE LIGHTS: -x voltage -1: 120v -2: 220-240v -3: 12V DC -4: 24V DC

PL10760-x-DT	One head operating & one head standby. Upon failure of the operating head, power is transferred to the standby head. No alarm function.
PL10760-x-D2	One head operating & one head standby. Upon failure of the operating head, power is transferred to the standby head & to a primary head failure alarm line powered by the POL's normal line voltage.
PL10760-x-D2.2	Both heads operating. Upon failure of the first head, the alarm contacts are activated powered by the POL's normal line voltage.
PL10760-x-D4	One head operating & one head standby. Upon failure of the operating head, power is transferred to the standby head and to alarm contacts. The alarm contacts are isolated (voltage free) normally open and normally closed.
PL10760-x-D4.2	Both heads operating. Upon failure of one head, the alarm contacts are activated. The alarm contacts are isolated "dry" (voltage free) normally open and normally closed.
PL10760-x-D7	Both heads operating & flashing simultaneously. No alarm function.
PL10760-x-D8	One operating head that is flashing and one standby head. Upon failure of the operating head, power is transferred to the standby head and it flashes. No alarm function.
PL10760-x-D10	One operating head is flashing and one standby head. Upon failure of the operating head, the standby head activates & flashes and a failure alarm line is activated powered by the POL's normal line voltage.
PL10760-x-D14	Both heads operating & flashing simultaneously. Upon failure of the first head, the alarm contacts are activated. The alarm contacts are isolated "dry" (voltage free) normally open and normally closed.
PL10760-x-D15	Both heads operating & flashing simultaneously. Upon failure of the first head, the alarm line is activated powered by the POL's normal line voltage.

* The PL10760-xx Control Unit is Class I, Division 2 and must be installed within 3-ft (1-meter) of its associated POL-EX obstruction light. Proper installation and sealing in accordance with all applicable standards is the responsibility of the installer. See page 4 for enclosure details.

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POWER CONSUMPTION PER POL EX LED LIGHT HEAD

Code	Type	Voltage	Frequency	Watts*	mA	VA*
-1F	FAA & ICAO B	93 to 144	50/60 Hz	9.7	91	10.8
-2F	FAA & ICAO B	176 to 250	50/60 Hz	9.7	49	10.8
-3F	FAA & ICAO B	12	---	13.0	960	13.0
-4F	FAA & ICAO B	24	---	13.0	540	13.0
-1A	ICAO A	93 to 144	50/60 Hz	4.7	48	5.8
-2A	ICAO A	176 to 250	50/60 Hz	4.7	26	5.9
-3A	ICAO A	12	---	4.7	390	4.7
-4A	ICAO A	24	---	4.6	190	4.6



* Power consumption includes the effect of the unit's power factor which accounts for the difference between Watts and VA.

POL EX SPECIFICATIONS

The red LED lighted (specify: voltage) aviation obstruction light shall be tested and certified FAA L-810 (ICAO low intensity Type B). The obstruction light shall operate properly at 50 or 60 Hz at an input voltage supply of 120V +/-20% (93V to 144V) or, for 220V units, 176V to 250V. Within the preceding ranges, the output to the LED board shall be a controlled, stabilized constant current. AC lights shall not exceed 11 VA power consumption per head.

The obstruction lights shall be listed and labeled for use in hazardous locations: Class I, Division 2, Groups A, B, C, D & T6 and Class 1, Zone 2, Groups IIA, IIB+H, IIC with a temperature rating of T6 per UL844 & CSA C22.2 No. 137-M1981.

The AC obstruction lights shall be listed and labeled *Suitable for Use in Wet Locations* to UL1598A Marine Vessels, UL1598 2nd Edition Luminaries; CSA C22.2 No. 250.0-04, 2nd Edition; UL50 11th Edition Standard for Enclosures for Electrical Equipment and CSA C22.2 No. 94-M91 Special Purpose Enclosures. Sealed to IP66 ingress protection.

The unit shall have passed the FAA certification tests: the constant high temperature test to +130 deg F (+55 deg C) and the constant low temperature test to -67 deg F (-55 deg C) conducted in accordance with US MILSTD-810E, Method 501.3, Procedure II; the wind-blown rain test conducted in accordance with US MIL-STD-810E, Method 506.3, Procedure I; and the humidity test shall be in accordance with US MIL-STD-810E, Method 507.3, Procedure I. The complete test regime shall exceed the requirements of NEMA 4X and IP 65. The light head shall be powdercoat painted aviation yellow* for corrosion resistance certified by the manufacturer to comply with the US Military Standard Salt Fog Test conducted per MIL-STD-810E, Method 509.3, Procedure I.

* Option -MT: The fixture shall be treated for marine conditions by cleaning per US MIL method III of TT-C-490, chromate priming per US MIL-C-5541, epoxy powder base coat and glossy polyester powdercoat finish coat in color RAL 6003 (FED-STD-595 color #14097) dark green. Oven cured per US MIL-PRF-24712A.

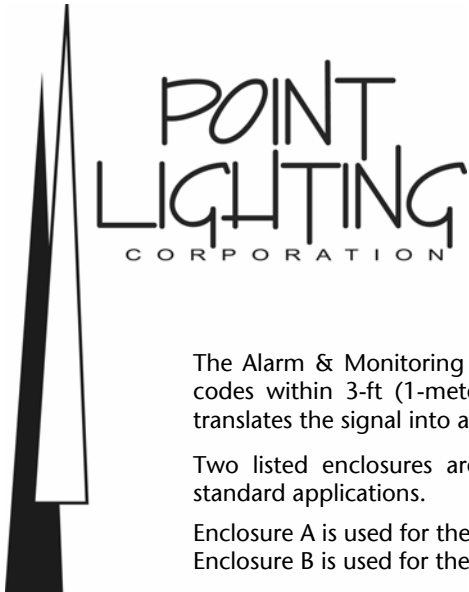
The red lens shall be strong soda lime glass with the wave-length matched to the LEDs to permit the fullest light transmission. The lens shall be smooth and rounded to reduce the adhesion of dirt, ice and snow.

The red emitting LEDs shall meet the chromaticity requirements of US MIL-C-25050. The high output LEDs shall not exceed eight (8) in number and shall be the latest technology providing uniform light output over the range required by the governing standard. The LED average life shall exceed 100,000 hours. The LEDs shall be soldered in a factory set position to insure consistent light output. Wire mounted raised LEDs that can be bent out of position shall be unacceptable and cause for rejection.

The LED board shall be treated with a protective dielectric conformal coating for protection from moisture and corrosion. There shall be a clear design element for the dissipation of LED heat to insure the LEDs do not fail prematurely. The power supply board shall include short circuit and open circuit protection and the unit shall be protected from line surges by metal oxide varistors (MOVs).

The red LED aviation obstruction light shall be POINTSPEC Series POL-21003-EX manufactured by Point Lighting Corporation.

Important Note: Alarm and other control options must be selected at time of initial order by adding the proper PL10760 unit. The POL-EX LED light can only be monitored by 3rd party systems or controllers by selecting a POL-EX with a PL10760 monitoring unit.



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PL10760 ALARM & MONITORING UNIT

The Alarm & Monitoring Unit must be installed in accordance with all applicable local electrical codes within 3-ft (1-meter) of the POL EX light fixture. The PL10760 monitors the LEDs and translates the signal into a form usable by a POC controller or other alarm scheme.

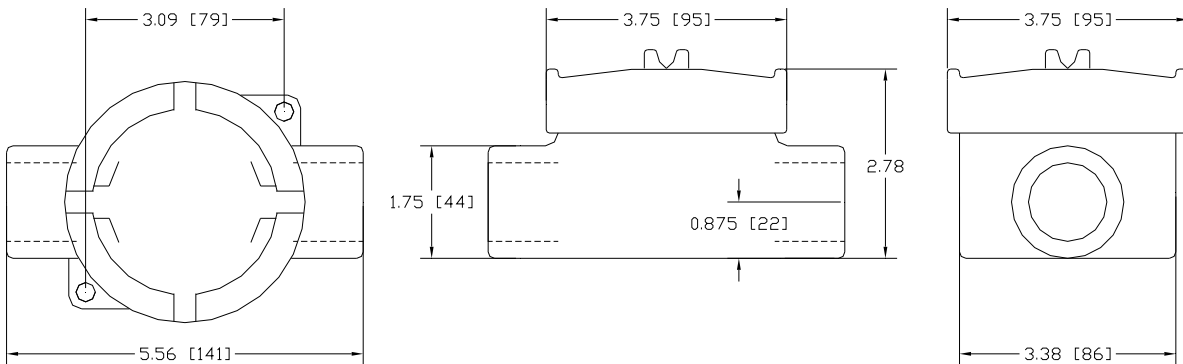
Two listed enclosures are used depending on the functions required. The following are the standard applications.

Enclosure A is used for the following versions: S2 S4 DT D2 D4 D7 D8 D10

Enclosure B is used for the following versions: D2.2 D4.2 D14 D15

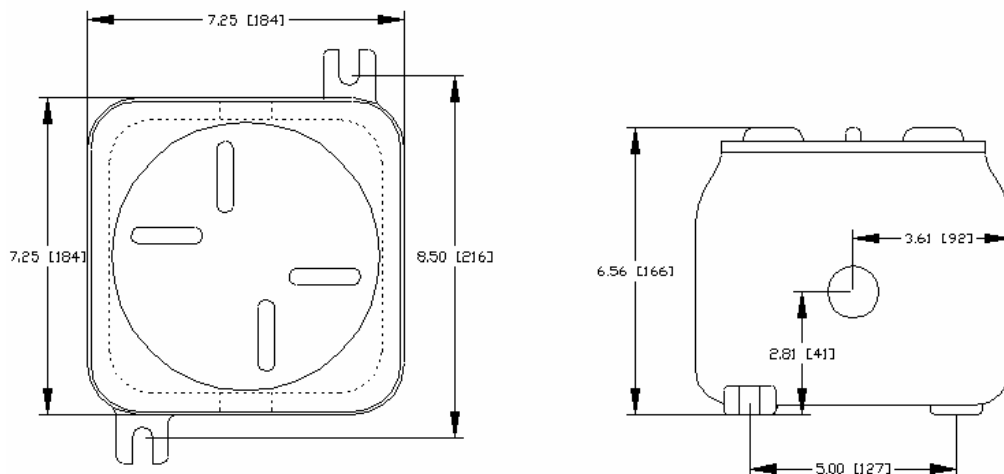
PL10760 ENCLOSURE A

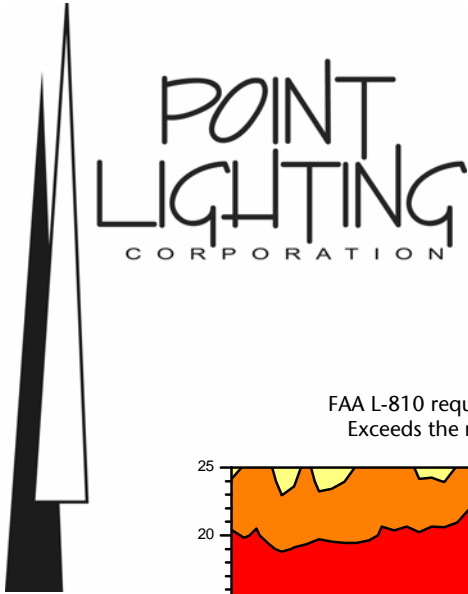
Manufacturer: Crouse-Hinds File: QBCR.E10518
Class I, Divisions 1 & 2, Groups A B C D



PL10760 ENCLOSURE B

Manufacturer: Akron File: E94590
Class I, Divisions 1 & 2, Groups B C D
NEMA 4X, 7, 9



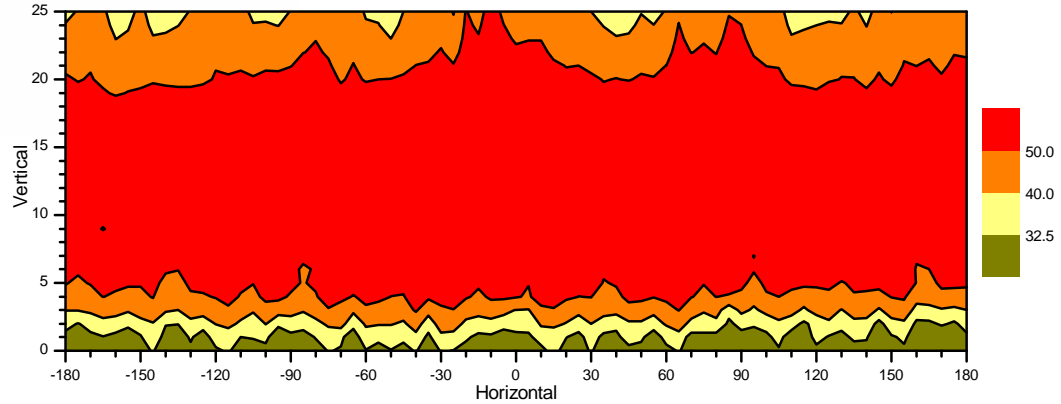


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PHOTOMETRIC DATA

FAA VERSION

FAA L-810 requires 32.5 candelas minimum over 10-deg vertical beam spread
Exceeds the recommendation of ICAO Low Intensity Type B (32 candelas)



REPLACEMENT PARTS

Note: Single POLs and the fixture heads of double POLs are permanently sealed. In the event of failure, the fixture must be returned to the factory for evaluation and repair.

PL210R3-R-xx-10B-EX Replacement Light Head Double

Note: Failure caused by surge normally requires fixture replacement

WEIGHT, DIMENSIONS & SHIPPING DATA

inches (mm)	<u>Weight</u>	<u>Height</u>	<u>Width</u>	<u>Depth</u>	<u>Multi-Pack Carton</u>		
					Qty	Weight	Dim (inches)
POINTSPEC Single:	3.8 lbs 1.7 kg	8.3 (210)	6.0 (152)	5.0 (127)	12	47 lbs 21.3 kg	22 x 15 x 17
POINTSPEC Double:	12.4 lbs 5.6 kg	13.3 (337)	14.9 (378)	5.0 (127)	2	27 lbs 12.3 kg	19 x 19 x 19
Wind Loading:	Effective Projected Area (EPA) for POINTSPEC Double				0.69 square feet		

POINT LIGHTING CORPORATION

Mail: P.O. Box 686, Simsbury, CT 06070 Plant: West Dudley Town Rd, Bloomfield, CT
Tel 01 860.243.0600 USA Fax 01 860.243.0665
email: Info@PointLighting.com website: www.PointLighting.com