



# POINT OBSTRUCTION LIGHTS POL LED v3 POINTSPEC® SERIES

Compliances: ETL Listed to UL 1598 US & CSA C22.2 No.250.0-04 Canada  
 ETL Listed to UL 1598A Marine Vessels  
 ETL Verified FAA L-810 to FAA Advisory Circular 150/5345-43F  
 Verified to ICAO Annex 14 Low Intensity Types A (10 cd) & B (32 cd)  
 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. Use the PPC photoelectric controller or option -P to provide automatic activation at dusk in accordance with FAA specifications.

See important alarms note on specifications page.  
 Intertek ETL SEMKO Control Number 3030033

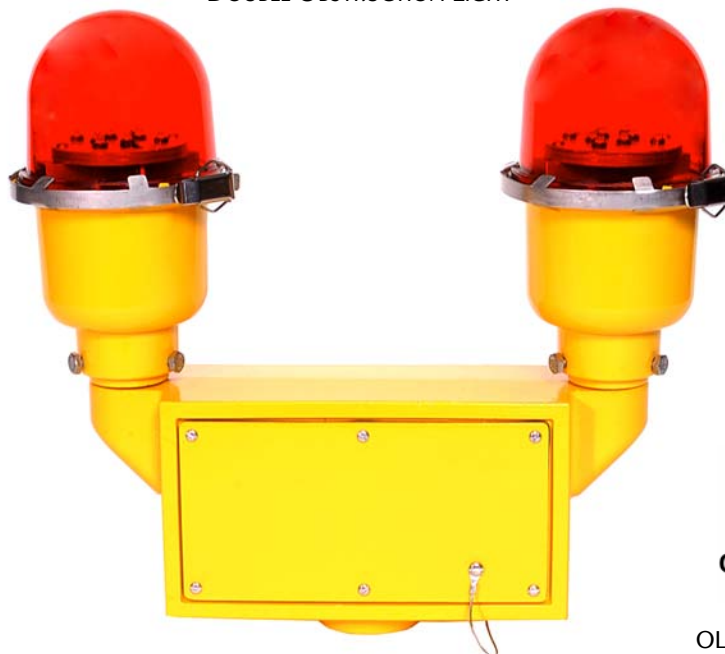
For 277V operation, add option -277  
 Note: FAA certified with FAA lamp number 281

Point Type & Color	Power Supply*	Photometric Specification	Mounting & Entries	Style	Options
POL-21003-R	1: 120v 2: 220v 3: 12v DC 4: 24v DC 5: 48v DC	F: FAA & ICAO Type B (32 cd) A: ICAO Type A (10 cd)	34B: ¾-inch, Bottom 10B: 1-inch, Bottom 34F: ¾-in, Feed-thru M25B: M25, Bottom SF: Slipfitter 2.375-in (60 mm)	S: Single D: Double See Styles Selection Chart	P: Photoelectric Controller CF: Cable Fitting E: Emissions MT: Marine Treatment

\*AC voltages are nominal. See pages 3-4 for operating range; suitable for 50 or 60 Hz.

For mounting options and plan details, see file 0MOUNTINGS  
 All details are available as AutoCAD files for insertion into project plans

POL-21003-R-1F-34B-D  
 DOUBLE OBSTRUCTION LIGHT



OL-1.9.0 August, 2010

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## SELECTION CHART

Style	Transfer	Alarm Non-Isolated	Alarm Isolated	Pilot Light	Flashing	Description
-S						Standard Single
-S1					■	Single: flashing (no junction box)
-S1.3					■	Single with junction box: flashing (Note 1)
-S2		■				Single: non-isolated alarm (Note 1)
-S2.1		■				DC only; same as Style –S2 for use with POC
-S3						Single: integral junction box & cover (Note 1)
-S4			■			Single: isolated failure alarm (Note 1)
-S5					□	Dual Mode Single: flashing, but may be set in the field to be steady-burning
-D						Double: both heads operating
-DT	■					Double: operating head & standby with transfer
-D1	■			■		Double: transfer & pilot light
-D2	■	■				Double: transfer & non-isolated alarm (Note 2)
-D2.2		■				Double: both heads operating & non-isolated alarm
-D3	■	■		■		Double: transfer, non-isolated alarm & pilot light
-D4	■		■			Double: transfer & isolated alarm (Note 2)
-D4.2			■			Double: both heads operating & isolated alarm
-D5	■		■	■		Same as Style –D4 with pilot light (Note 2)
-D6	■		■			Same as Style –D4 prewired with six (6) wires
-D7					■	Double: both heads flashing
-D8	■				■	Double: primary head flashes and transfer to standby head which flashes; no alarm
-D10	■	■			■	Same as Style –D8 with alarm line
-D13	■		■			Double: transfer, primary head alarm, standby head alarm & power failure alarm; tagged wires
-D14			■		■	Double: both heads flashing with isolated alarm
-D15		■			■	Double: both heads flashing; non-isolated alarm
-D16	■			■	■	Double: primary head flashes and transfer to standby head flashes; pilot light on transfer
-D18	■	■				Double: transfer, primary head alarm, standby head alarm; non-isolated alarms

Note 1: This single has a j-box & cover below the LED head assembly; box is required for any single with option –P.

Note 2: Alarm activates on transfer

# POINT OBSTRUCTION LIGHTS

## POL LED v3

### POINTSPEC® SERIES

#### LED ILLUMINATION ILLUSTRATED

TURN IT ON!  
THE DIFFERENCE IS LIKE DAY AND NIGHT!

POL-21003-R-1F-34B-S  
SINGLE OBSTRUCTION LIGHT



Note: Alarm options must be selected at time of initial order. Alarms cannot be added in the field or retrofitted.

Note: The POL optical subassembly is factory sealed to prevent moisture penetration and it is not serviceable.

Option –CF[B]: Through holes with 1.5-inch long ¼-20 hex head stainless steel screws and sealing washers. Metal cable compression fitting for outside diameter: 0.5 to 0.625-inch (12.7 to 15.9-mm). Available for –34L unilet style single lights.

Option –CF[C]: Through holes with 1.5-inch long ¼-20 hex head stainless steel screws and sealing washers. Metal cable compression fitting for outside diameter: 0.5 to 0.625-inch (12.7 to 15.9-mm). Available for all doubles and junction box style single lights.

Option –E: Certified compliant for radiated and conducted radio emissions (EMC) per EU EMC Directive 89/336/EEC to EN55022 Class A and FCC Class A as required for CE labeling per Chomerics Test Services reports TR4849A.07 & TR4849B.07.



#### POWER CONSUMPTION PER POL LED LIGHT HEAD



Code	Type	Voltage	Frequency	Watts*	mA	VA*
-1F	FAA & ICAO B	120 AC	50/60 Hz	9.7	91	10.8
-2F	FAA & ICAO B	220 AC	50/60 Hz	9.7	49	10.8
-3F	FAA & ICAO B	12 DC	---	13.0	960	13.0
-4F	FAA & ICAO B	24 DC	---	13.0	540	13.0
-5F	FAA & ICAO B	48 DC	---	8.6	180	8.6
-1A	ICAO A	120 AC	50/60 Hz	4.7	48	5.8
-2A	ICAO A	220 AC	50/60 Hz	4.7	26	5.9
-3A	ICAO A	12 DC	---	4.7	390	4.7
-4A	ICAO A	24 DC	---	4.6	190	4.6
-5A	ICAO A	48 DC	---	3.4	70	3.4

\*Power consumption for AC units includes the effect of the unit's power factor which accounts for the difference between watts and volt-amperes. Measurements were made at the nominal AC voltages. The operating range for 120v units is 93 - 144v. The operating range for 220v units is 176 - 250v.

# POINT OBSTRUCTION LIGHTS POL LED v3 POINTSPEC<sup>®</sup> SERIES

## POL LED SPECIFICATIONS

### SPECIFICATIONS COMMON TO ALL POL LED VERSIONS

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 AC obstruction lights shall be listed *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.

Special Technical Note\*: DC light fixtures shall be reverse polarity protected.

\* Competitors' units will fail if installed with reverse polarity.

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.

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.

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). All v3 units shall have the power supply and flasher board (if any) potted in the fixture (head subassembly) casting. There shall be a clear design element for the dissipation of LED heat to insure the LEDs do not fail prematurely.

The double LED light unit shall have an integral cast aluminum junction box with a minimum of 100 cubic inches of enclosed wiring space accessible from the front of the light unit. The wiring access cover shall be gasketed to be watertight, shall have captive screws and shall be secured to the unit with a tether. The cast enclosure and cover 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. The cover tether and all hardware shall be stainless steel.

Option -E: Certified compliant for radiated and conducted radio emissions (EMC) per EU EMC Directive 89/336/EEC to EN55022 Class A and FCC Class A.

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

Important Note: Alarm options must be selected at time of initial order. Alarms cannot be added in the field or retrofitted. POL LED lights cannot be monitored by 3<sup>rd</sup> party systems or controllers without selecting an alarm version of the POL LED.

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#### **Myth: All LED's have a useful life of 100,000 hours**

The amount of useable light—about 70% of original light output—from some LED's has been shown to be very short depending on the color and manufacturer of the LED. That is why the quality of the LED array and power supply is very important and they should be of the latest technology as used by Point Lighting Corporation.

#### **Myth: LED's do not create heat**

LED's do create heat, but the heat generated is retained within the LED array and needs to be dissipated. Without a proper design, the LED will fail very early in life. The POL LED array design incorporates an aluminum heat sink to dissipate the heat. Some competitors' lights—by design—cannot handle the heat.



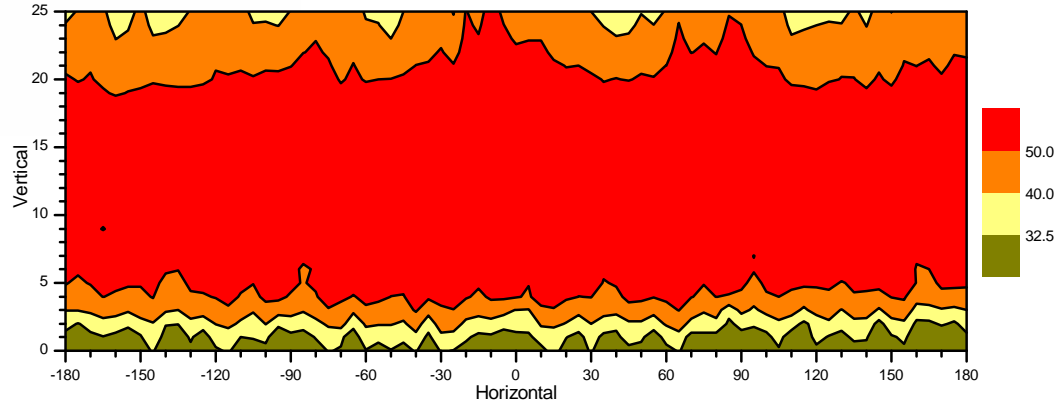
**POINT  
LIGHTING**  
CORPORATION

**POINT OBSTRUCTION LIGHTS  
POL LED v3  
POINTSPEC® SERIES**

**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-xx	Replacement Light Head Double	PL10237A	Photoelectric Socket (-P)
PL10236-120	Photoelectric Subassembly 120v	PL10236-230	Photoelectric Subassembly 230v
PL10462	Cover & Tether Double All Styles	PL10496	Cover & Tether Single (with box)

**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**

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