



# POINT OBSTRUCTION LIGHTS POL LED v5 POINTSPEC® SERIES

Compliances: ETL Listed to UL 1598A Marine Vessels at -40 deg C to +55 deg C  
 ETL Listed to CSA C22.2 No. 137-M1981 & No. 250.0-08 Canada  
 ETL Listed to UL 1598 at -40 deg C to +55 deg C  
 ETL Verified FAA L-810 to FAA AC 150/5345-43H at -55 deg C to +55 deg C  
 Registered ISO 9001: 2015  
 Compliance to ICAO Annex 14 Low Intensity Types A (10 cd) & B (32 cd)  
 Compliance to CL810 Transport Canada CAR 621, Table 13-2  
 Compliance to CAP 437 & UK CAP 168 Table 6A.1 Low Intensity (Group A)  
 IMO 2009 MODU Code (2010) paragraphs 13.5.24 & 13.5.25  
 American Bureau of Shipping (ABS) Type Approved Product

The POL LED red low intensity obstruction lights are for use on aviation obstructions.

- ☑ The casting is copper-free (< 0.25%) aluminum.
- ☑ The lens is glass.
- ☑ The hardware is 316 (A4) stainless steel.
- ☑ The LED's are rated for 100,000 hours.
- ☑ Only 1.5 watts per head for 120V.
- ☑ IP66 tested and listed.
- ☑ Standard with the exclusive yellow Point Lighting Marine Treatment finish that is bonded to the metal and far exceeds the corrosion resistance of the standard FAA approved finish.
- ☑ Six (6) years limited warranty subject to Point Lighting "Terms & Conditions of Sale".

Point Type	Power*	Specification	Color	Mounting	Style	Options^
POL-21005	1: 120v 2: 220v 3: 12v DC 4: 24v DC 5: 48v DC 6: 277v	F: FAA L-810 F: ICAO Type A B: Trans. Canada B: ICAO Type B B: UK CAP 168 Group A	R: Red	34B: ¾-inch, Bottom 10B: 1-inch, Bottom 34F: ¾-in, Feed-thru M20B: Metric, Bottom SF: Slipfitter 2.375-in (60 mm)	S: Single D: Double See page 3	NC: NVG Compatible CF: Cable Fitting P: Photoelectric Controller ^ See page 4

POL-21005-1F-R-34B-D  
DOUBLE OBSTRUCTION LIGHT



POL-21005-1F-R-34B-S  
SINGLE OBSTRUCTION LIGHT



\* AC voltages are nominal. See page 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 project plans  
 FAA approved "lamp" number 631.



**POL-21005-1F-R-SF-S**  
SINGLE OBSTRUCTION LIGHT  
WITH 60MM SLIPFITTER  
FITS 2-3/8-INCH TENON



**POL-22001-3F-R-SOL-FP**  
PORTABLE SOLAR POWERED LIGHT  
SEE FILE OL189POL



**POL-21005-1F-R-34B-EX-MT**  
SINGLE OBSTRUCTION LIGHT  
CLASS I, DIVISION 2  
SEE FILE OL194POLEX



**POL-21005-1F-R-34B-D-P**  
DOUBLE OBSTRUCTION LIGHT  
WITH PREWIRED FAA  
PHOTOELECTRIC CONTROL



**POL-21005-1F-R-34B-S2-MT**  
SINGLE OBSTRUCTION LIGHT  
WITH GREEN MARINE TREATMENT  
& ALARM RELAY



**POL-21005-1F-R-34B-S3-P**  
SINGLE OBSTRUCTION LIGHT  
WITH JUNCTION BOX & PREWIRED  
FAA PHOTOELECTRIC CONTROL



**FAA PHOTOELECTRIC CONTROLLER  
PPC-40700-1-34T  
SEE FILE OL410PPC**



# STYLE SELECTION CHART      POINT OBSTRUCTION LIGHTS      POL v5

Style	Transfer	Alarm Non-Isolated	Alarm Isolated	Pilot Light	Flashing	Description
-S						Standard Single
-S1					■	Single flashing (no junction box & no sync)
-S15					■	Single flashing, w/alarm line & J-box (Note 1 & no sync)
-S15K					■	As above only for use w/POC to flash all lights in sync
-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)
-S5.3					□	Dual Mode Single: flashing, but may be set in the field to be steady-burning (Note 1)
-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
-D10K	■	■			■	As above only for use w/POC to flash all lights in sync
-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
-D15K		■			■	As above only for use w/POC to flash all lights in sync
-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
-D19	■		■		■	Double: primary head flashes and transfer to standby head flashes; with isolated alarm line

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 v5

## TECHNICAL NOTES & OPTIONS

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

**Option –MT: Marine Treatment** Note: Yellow MT is standard

The fixture shall be treated for marine conditions by cleaning per US Department of Defense TT-C-490 method III, pretreated with chrome-free aluminum conversion coating per US MIL-C-5541 type II, epoxy powder base coat primer and glossy polyester powder coat finish in color RAL 6003 (FED-STD-595 color #14097) dark green. Powder coating per US Department of Defense MIL-PRF-24712A type VI and oven cured.

**Option –NC: NVG Compatible**

Adds infrared LED at 855 nm to allow visibility to pilots with or without night vision goggles.

Infrared Radiant Power F-array: 137 mW/sr B-array: 205 mW/sr

**Option –P: Photoelectric Control** see Detail OL06 in file 0MOUNTINGS

Adds a prewired FAA PEC to single with junction box or double.

**Option –FF: Floor Flange Mounting** see Details OL19 & OL20 in file 0MOUNTINGS

For use with photoelectric controller option –P. Cover mounted 3-position switch ON-OFF-AUTO. Requires a double or single with junction box. For remote override switch, add item PL40110-3.

**Option –CF[C]: Cable Fitting** – For single with junction box or double

Through holes with 1.5-inch long ¼-20 hex head stainless steel screws and sealing washers. Cable compression fitting for outside diameter: 0.5 to 0.625-inch (12.7 to 15.9-mm).

**Option –BKT, –BKT2 or –BKTU: Mounting Bracket** see Details in the file 0MOUNTINGS

BKT: Simple aluminum bracket for single POL. Screw holes for the structure to be drilled in the field.

BKT2: Simple aluminum bracket for double POL. Screw holes for the structure to be drilled in the field.

BKTU: Aluminum bracket for single or double POL with U-bolts to clamp to the structure.

**Option –OS: Override Switch**

For use with photoelectric controller option –P. Cover mounted 3-position switch ON-OFF-AUTO. Requires a double or single with junction box. For remote override switch, add item PL40110-3.

## POWER CONSUMPTION PER POL LED LIGHT HEAD

Code	Type	Voltage	Frequency	Watts*	mA	VA*
-1F	FAA & ICAO A	120 AC	50/60 Hz	1.5	25	2.9
-2F	FAA & ICAO A	220 AC	50/60 Hz	2.1	25	5.5
-3F	FAA & ICAO A	12 DC	---	1.2	96	1.2
-4F	FAA & ICAO A	24 DC	---	1.5	62	1.5
-5F	FAA & ICAO A	48 DC	---	1.2	25	1.2
-6F	FAA & ICAO A	277 AC	50/60 Hz	1.9	24	5.9
-1B	ICAO B & TRAN CAN	120 AC	50/60 Hz	6.9	63	7.6
-2B	ICAO B & TRAN CAN	220 AC	50/60 Hz	6.9	34	7.4
-3B	ICAO B & TRAN CAN	12 DC	---	4.3	470	4.3
-4B	ICAO B & TRAN CAN	24 DC	---	4.3	230	4.3
-5B	ICAO B & TRAN CAN	48 DC	---	5.0	104	5.0
-6B	ICAO B & TRAN CAN	277 AC	50/60 Hz	6.9	28	7.9

Note: For option –NC, add 1.0 watts (1.1 VA)

\*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: 93 - 144v; for 220v units: 176 - 250v; for 277v units: 263 - 291v.



# POINT OBSTRUCTION LIGHTS POL LED v5 POINTSPEC® 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 or, for 277V units, +/-5% (263V to 291V). Within the preceding ranges, the output to the LED board shall be a controlled, stabilized constant current. The obstruction light shall not exceed 1.5 watts per head for FAA L-810 at 120V.

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-810F, Method 501.4, Procedure II; the wind-blown rain test conducted in accordance with US MIL-STD-810F, 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 66. The light head shall be marine treated aviation yellow for high corrosion resistance certified by the manufacturer to comply with the US Military Standard Salt Fog Test conducted per MIL-STD-810F, Method 509.4, Procedure I, paragraph 4.5.2.

The clear 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 five (5) 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 v5 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 cover tether and all hardware shall be stainless steel.

The red LED aviation obstruction light shall be POINTSPEC Series POL-21005 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.

## WEIGHT, DIMENSIONS & SHIPPING DATA

inches (mm)	Multi-Pack Carton						
	Weight	Height	Width	Depth	Qty	Weight	Dim (inches)
POINTSPEC Single:	3.5 lbs 1.6 kg	8.6 (217)	6.0 (152)	5.0 (127)	12	47 lbs 21.3 kg	22 x 15 x 17
POINTSPEC Double:	11.8 lbs 5.4 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		

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