



POINT ROLLOVER LIGHTS PRL LED HELIPORT INSET LIGHT

Compliances: ETL Listed to UL 1598
 ETL Listed to UL 1598A Marine Vessels
 ETL Listed to CSA C22.2 No.250.0-04 Canada
 FAA AC 150/5390-2B Heliport Design Guide
 ICAO Annex 14, Volume II
 UK CAA CAP 437, Chapter 4, paragraph 3.1
 US Army Aviation Lighting Manual TM 5-811-5, Figure 5-3
 Transport Canada TP14371, AGA 7.17
 American Bureau of Shipping (ABS) Type Approved Product

The PRL LED Point Rollover Light is used for heliport lighting applications where an inset light is required providing better visibility and circling guidance than comparable incandescent. The PRL LED may be serviced without removing the fixture from its mounting base. The lens and optical assembly are sealed mechanically without the use of chemical sealants. The thick soda lime glass dome lens will withstand high rollover loads. Silicone-filled connectors and ground lug are included.

See 0MOUNTINGS details H09 & H11 PLB and PLS bases are standard with 2 x 1-inch NPT at entries 0 & 180-deg

Point Type	Voltage	Array	Color	Mounting & Options
PRL-97002	1: 120v	P: note 1	G: Green	VB: Variable Brightness
	2: 220v	H: note 2	Y: Yellow	PLB: Base & Gasket
	3: 12v DC	F: note 3	C: White	PLS: Shallow Base & Gasket
	4: 24v DC	N: NVG *	R: Red B: Blue IR: Infrared*	TRH: Tamper Resistant Hardware DH: Drain Hole in Base GR: Ground Lug in Base MT: Marine Treatment NC: NVG compatibility**



Note 1: Array P is good for general use fixed brightness (no dimming) at approximately PHC brightness step 2
 Note 2: Array H exceeds ICAO Annex 14, Vol II & is suggested to use with variable brightness PHC controller.
 Note 3: Array F is for UK CAA CAP 437 compliance.

* For NVG tactical use only: PRL-97002-1N-IR-MT-PLB
 ** For use with visible (non-IR) arrays P or H; adds IR LEDs. Option -NC2 is IR or visible mode switchable.

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

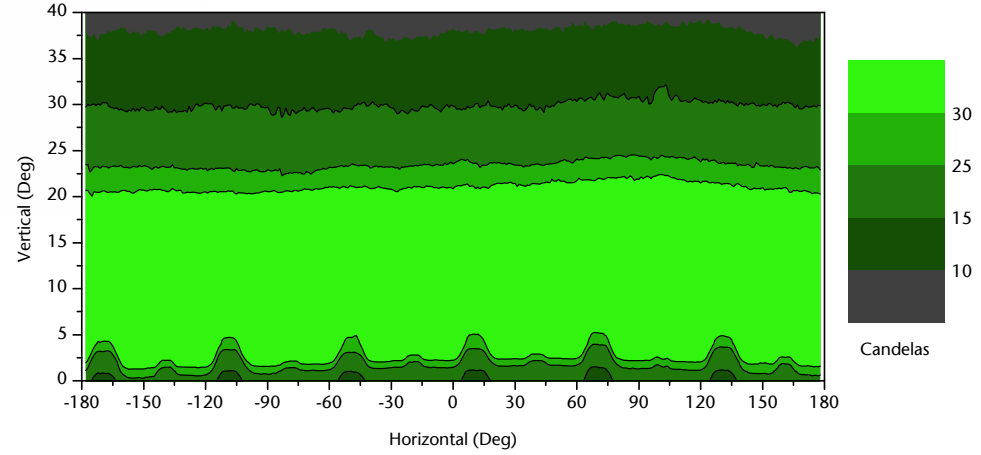
The fixture shall be treated for marine conditions by cleaning per US MIL method III of TT-C-490, chromate priming per US MIL-C-5541, epoxy powder base coat and glossy polyester powdercoat finish coat in color RAL 6003 (FED-STD-595 color #14097) green. Oven cured per US MIL-PRF-24712A.

PRL-97002-1H-G-PLS-VB-GR
 WITH PLS RECESSED BASE, GASKET & GROUND LUG





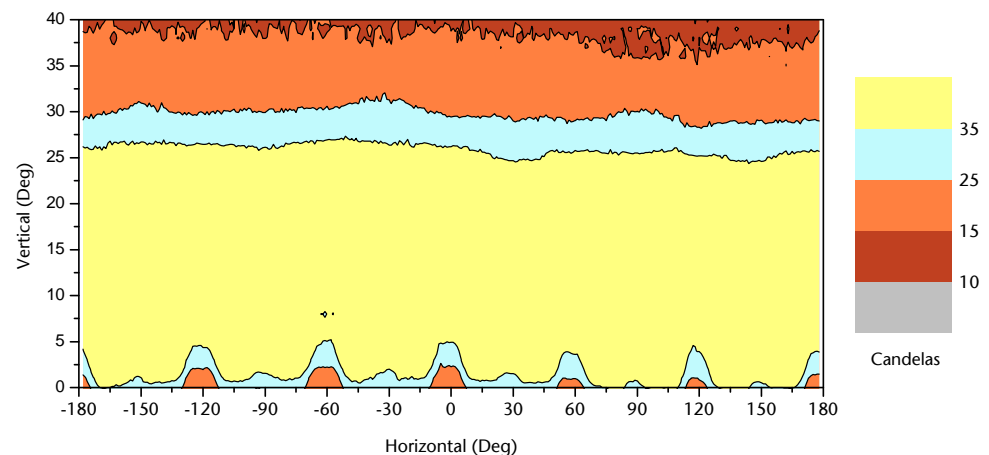
PHOTOMETRIC CHART: GREEN ARRAY H



LED Array H in Green:
Average Peak Beam
50 cd at 12-deg V

ICAO Annex 14
Volume II, Chapter 5:
Minimum 25 cd
at 10 & 20 deg V

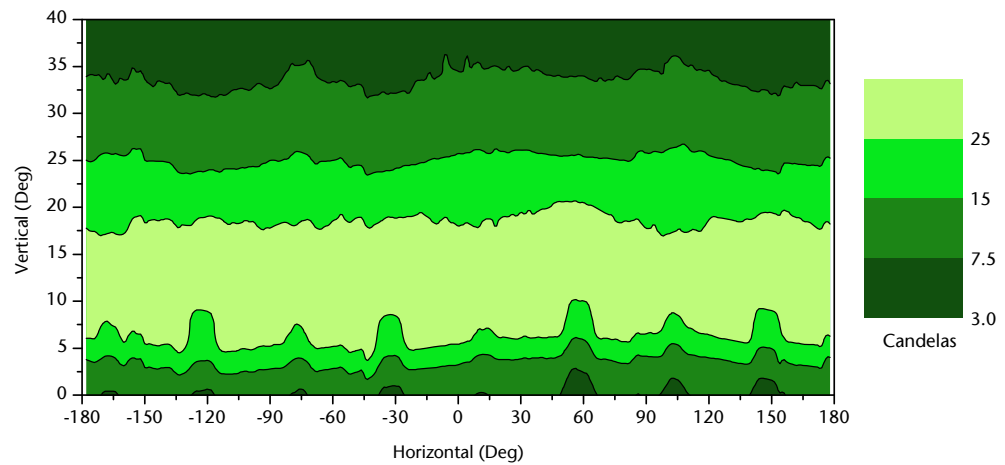
PHOTOMETRIC CHART: YELLOW ARRAY H



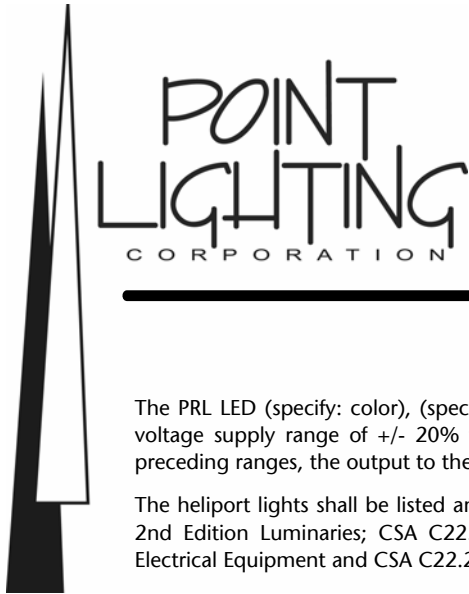
LED Array H in Yellow:
Average Peak Beam
60 cd at 15-deg V

The lights are dimmable
by installing:
POINT LIGHTING CORP
PHC-61002
Heliport Controller

PHOTOMETRIC CHART: GREEN ARRAY P



LED Array P in Green:
Average Peak Beam
30 cd at 12-deg V



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PRL LED SPECIFICATIONS

The PRL LED (specify: color), (specify: voltage) 50/60 Hz aviation inset light shall operate properly within an input voltage supply range of +/- 20% for 120V units (93V to 144V) and for 220V units (176V to 250V). Within the preceding ranges, the output to the LED board shall be a controlled, stabilized constant current.

The heliport 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 inset light shall be cast aluminum and assembled with all stainless steel hardware. All exterior stainless steel hardware shall be recessed so as not to protrude above the fixture surface. The highest point of the lens shall not exceed 0.75-inch (19-mm) above finished grade. The lens and lamp housing (optical assembly) shall be sealed mechanically without the use of chemical sealants. The fixture shall be capable of being serviced without removing the fixture ring from its mounting base. Flexible epoxy sealant may be used to moisture seal the fixture and pavement interface and will not have to be disturbed for service. The inset light shall be prewired with three conductors (line, neutral, ground). Entry to the light housing shall be by means of a watertight cable compression fitting. The manufacturer shall include silicone-filled wire connectors for installer use for watertight connections.

The LED lighting circuits shall be remotely dimmable by means of a heliport controller designed and produced by the lighting manufacturer. Option -VB: For use with the PHC-61002 or PHC-61003 adjustable brightness heliport controller, this option is required. The PHC Heliport Lighting Controller shall incorporate an IEC approved surge suppressor and current limiting circuit breakers on each load output.

The photometric performance shall exceed 25 candelas over a range defined by ICAO Annex 14, Volume II, Figure 5-9. The LED light shall have a tested and verified power consumption not to exceed (see chart next page).

The light casting 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. All hardware shall be stainless steel. The colored outer glass lens shall be smooth and rounded to reduce the adhesion of dirt, ice and snow. The glass color shall be matched to the LED wavelength to maximize light transmissivity.

The unit shall be warranted to withstand an ambient temperature range of +130 deg F (+55 deg C) to -67 deg F (-55 deg C).

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 color emitting LEDs shall meet the chromaticity requirements of US MIL-C-25050. The high output LED's shall not exceed six (6) in number and shall be the latest technology providing uniform light output over the range three (3) to twenty (20) degrees vertical and in 360 degrees horizontal. 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.

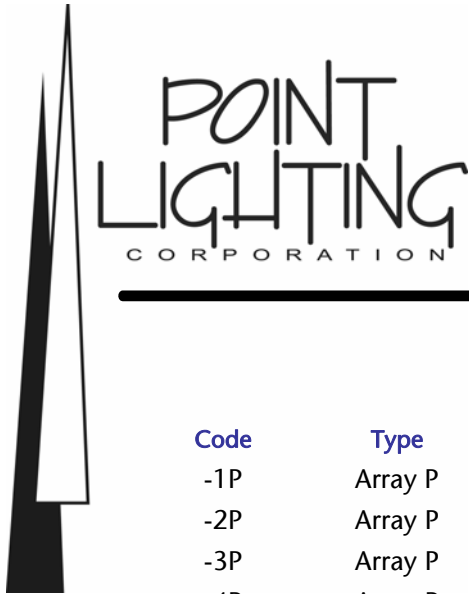
The power supply board shall include short circuit and open circuit protection and the unit shall be protected from line surges by metal oxide varistors (MOVs). There shall be a clear design element for the dissipation of LED heat to insure the LEDs do not fail prematurely. Note: It is strongly recommended that the circuit also be directly protected by a Point Lighting Corporation surge suppression device such as a PHC, SPU or PRC unit.

The cast aluminum mounting base shall be PLB-40300 (option -PLB) with two (2) 1-inch NPT hubs located at 0 & 180 degrees near the bottom of the 10-inch deep base. The PRL shall be secured by three (3) socket head stainless steel screws supplied by the manufacturer. There shall be a disposable plywood cover to set the base at the proper depth to recess the light. PL10701-X spacer rings may be required to adjust the height of the light to match grade.

The LED heliport inset light shall be POINTSPEC Series PRL-97002 manufactured by Point Lighting Corporation.

"LED signals can be expected to provide an additional margin of conspicuity over incandescent light sources with the same luminous intensity."

--- Transport Canada 2003 Study TP14043E



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POWER CONSUMPTION

Code	Type	Voltage	Frequency	Watts*	mA	VA*
-1P	Array P	120 AC	50/60 Hz	5.7	58	7.0
-2P	Array P	220 AC	50/60 Hz	5.6	33	7.2
-3P	Array P	12 DC	---	5.6	470	---
-4P	Array P	24 DC	---	5.5	230	---
-1H	Array H	120 AC	50/60 Hz	7.7	80	9.6
-2H	Array H	220 AC	50/60 Hz	7.6	43	9.5
-3H	Array H	12 DC	---	8.4	700	---
-4H	Array H	24 DC	---	8.3	340	---
-1F	Array F	120 AC	50/60 Hz	9.7	91	10.8
-2F	Array F	220 AC	50/60 Hz	9.7	49	10.8
-3F	Array F	12 DC	---	13.0	960	13.0
-4F	Array F	24 DC	---	13.0	540	13.0

*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.

RECOMMENDED TOOLS

Point Lighting Corporation recommends return for factory repair and refurbishment of LED PRL lights. In the event of field service, the PL10839 preset torque wrench kit use with the instruction manual is recommended to assure proper resealing of the fixture.



PL10860
Tool, T-handle Wrench
For the three socket head screws fixing the PRL fixture to the PLB mounting base.

PL10839
Tool, Preset Torque Wrench Kit
For the socket head screws fixing the PRL lens clamp ring and for fixing the power supply subassembly.
Consult the factory and the manual before attempting field repair.



POINT ROLLOVER LIGHTS PRL LED HELIPORT INSET LIGHT



Night Vision Goggles (NVG)

Point Lighting Corporation offers several options for combining infrared and color LEDs to render our lights visible with and without NVG. Please contact us with your specific application requirements.

Instruction Sheet: IS97002
 LED Life (hours): 100,000
 Projection: 0.7 (18)
 Base Diameter: 8.0 (203)
 PLB Depth: 10.0 (254)
 PLS Depth: 4.0 (102)
 Weight: 12 lbs 5.5 kg
 Volume: 0.37 ft³ .013 m³

Replacement Parts

PL10523-G Lens, Green
 PL10523-Y Lens, Yellow
 PL10630-H-6G LED Array H, Green
 PL10630-F-8G LED Array F, Green
 PL10630-P-4G LED Array P, Green
 PL10630-P-4Y LED Array P, Yellow
 PL10530 Gasket, Lens Upper
 PL10531 Gasket, Lens Lower
 PL10532 Gasket, Lamp Housing
 PL10049-4 Gasket, Base
 PL10524-118 Screw, Socket Head
 PL10701-X Spacer Ring x/8-inch
 PL10655 Tool, option -TRH
 PL10839 Tool, preset torque wrench kit
 PL10860 Tool, T-handle wrench



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