



# POINT HELIDECK LIGHTS PRL-LSM LED v4 LOW SURFACE MOUNT LIGHT

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  
 IMO 2009 MODU Code (2010) paragraph 13.5.20  
 FAA AC 150/5390-2B Heliport Design Guide  
 ICAO Annex 14, Volume II  
 Registered ISO 9001:2008  
 UK CAA CAP 437, Chapter 4, paragraph 3.1  
 Transport Canada TP14371, AGA 7.17  
 American Bureau of Shipping (ABS) Type Approved Product  
 ABS Green Passport per MEPC179 (59)



The PRL-LSM is an 8-inch diameter surface mounted light *less than 6-inches high* used for metal helidecks or existing pavement heliports on the FATO perimeter. All external hardware is grade 316 (A4) stainless steel. The lens and optical assembly are sealed mechanically without the use of chemical sealants. The cable may enter via conduit or a watertight compression fitting. Silicone-filled wire connectors and ground lug are included for installer use. For offshore helidecks, use option -MT Marine Treatment.

See specifications page 2.

Standard with 2 x 1-inch NPT entries at 0 & 180-degrees

Point Type	— Voltage	Array	— Color	— Mounting & Options
PRL-97004	1: 120v 2: 220v 3: 12v DC 4: 24v DC	H: Helideck C: CAP 437 N: NVG *	G: Green Y: Yellow W: White R: Red B: Blue IR: Infrared NVG	VB: Variable Brightness LSM: Low Surface Mount Base MT: Marine Treatment CF: Cable Gland (NPT only) M2x: Metric Thread (M20 or M25) NC: NVG compatibility** TB: Terminal Blocks

Note: Array H brightness exceeds ICAO Annex 14  
 \* For NVG tactical use only: PRL-97704-1N-IR-LSM-MT  
 \*\* For use with visible (non-IR) array; adds IR LEDs.

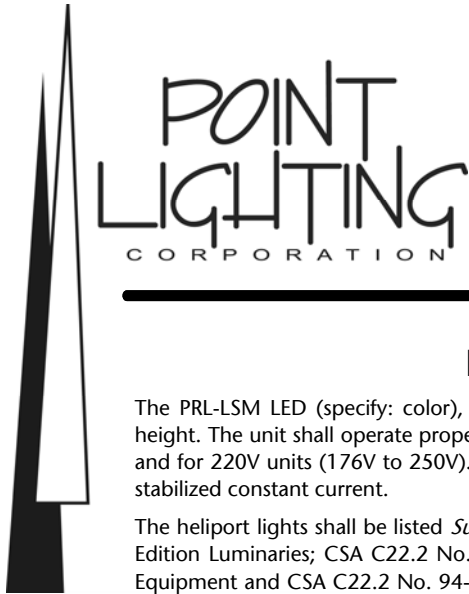
The PRL v4 H array is 4.5 watts at 120-220V  
 The PRL v4 C array is 7.4 watts at 120-220V

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

*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-97004-1C-G-LSM-MT**  
WITH MARINE TREATMENT





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## PRL-LSM LED SPECIFICATIONS

The PRL-LSM LED (specify: color), (specify: voltage) 50/60 Hz surface mounted light shall not exceed 150mm in height. The unit 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 *Suitable for Use in Wet Locations* to UL1598A Marine Vessels (for AC), UL1598 2nd Edition Luminaries; CSA C22.2 No. 250.0-08, 2nd Edition; UL50 11th Edition Standard for Enclosures for Electrical Equipment and CSA C22.2 No. 94-M91 Special Purpose Enclosures for use at -40 deg C to +55 deg C and sealed to IP66 ingress protection.

Per ICAO Annex 14, Volume II, Figure 5-9, Array H complies with a minimum of 15 candelas in green under 5-degrees vertical and a minimum of 30 candelas at the peak beam range. Array C complies with CAP 437 which is brighter in certain areas up to a maximum of 60 candelas.

The light shall be cast aluminum and assembled with all external hardware grade 316 (A4) stainless steel. The lens and lamp housing (optical assembly) shall be sealed mechanically without the use of chemical sealants. Entry to the light housing shall be by means of conduit or watertight cable compression fitting(s). The manufacturer shall include silicone-filled wire connectors for use by the installer 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 LED light shall have a tested and verified power consumption not to exceed (see chart next page). 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).

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-810F, Method 509.4, Procedure I, paragraph 4.5.2. All hardware shall be stainless steel. The outer glass lens shall be smooth and rounded to reduce the adhesion of dirt, ice and snow. The glass shall be clear to maximize light transmissivity.

\* 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 be the latest technology providing uniform light output. 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.

PRL shall be secured to the LSM mounting base by three (3) socket head stainless steel screws supplied by the manufacturer. A ground lug shall be included as standard.

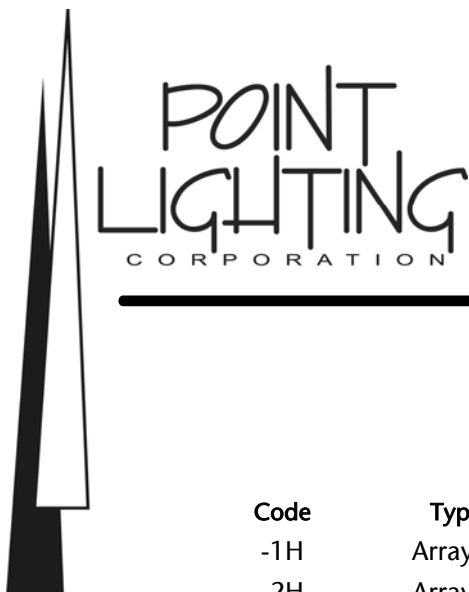
The LED aviation inset light shall be POINTSPEC Series PRL-97004-LSM manufactured by Point Lighting Corporation.

### **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 PRL LED array design incorporates an aluminum heat sink to dissipate the heat. Some competitors' lights—by design—cannot handle the heat.



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## POWER CONSUMPTION

Code	Type	Voltage	Frequency	Watts*	VA*
-1H	Array H	120 AC	50/60 Hz	4.5	5.24
-2H	Array H	220 AC	50/60 Hz	4.5	5.47
-3H	Array H	12 DC	---	4.0	---
-4H	Array H	24 DC	---	4.0	---
-1C	Array C	120 AC	50/60 Hz	7.4	8.4
-2C	Array C	220 AC	50/60 Hz	7.4	8.0
-3C	Array C	12 DC	---	6.2	---
-4C	Array C	24 DC	---	6.0	---

Option -NC Add 1.0 watt and 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 is 93 - 144v. The operating range for 220v units is 176 - 250v.

Point Lighting Corporation recommends return for factory repair and refurbishment of LED PRL lights

## 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 optical subassembly to the LSM 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 HELIDECK LIGHTS PRL-LSM LED v4 LOW SURFACE MOUNT LIGHT



### Night Vision Goggles (NVG)

Point Lighting Corporation offers options for combining infrared and color LEDs to render our lights visible with and without NVG. Select option -NC.

Instruction Sheet: IS97004-LSM

LED Life (hours): 100,000

Housing Dia: 8.0 (203)

Height: 5.75 (146)

Bolt Circle (4): 9.75 (248)

Bolt Hole diam: 0.406-inch  
10.3 mm

Weight: 12.0 lbs 5.5 kg

### Replacement Parts

PL10523-C	Lens, Clear*
PL10901-G-C	LED Array C, Green
PL10901-G-H	LED Array H, Green
PL10926-G-C	LED Array C, Green with -NC
PL10926-G-H	LED Array H, Green with -NC
PL10530	Gasket, Lens Upper
PL10531	Gasket, Lens Lower
PL10532	Gasket, Lamp Housing
PL10049-4	Gasket, Base
PL10524-118	Screw, Socket Head
PL10839	Tool, preset torque wrench kit
PL10860	Tool, T-handle wrench

\* All PRL v4 lights use a clear outer lens.



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