

POINT HELIDECK LIGHTS PRL-EX-LSM LED v4 CLASS I, DIVISION 2 & ZONE 2

Compliances: ETL Listed Class I, Division 2, Groups A B C D, T6 at -40 deg C to +55 deg C
 ETL Listed Class I, Zone 2, Groups IIA, IIB+H2, IIC T6 at -40 deg C to +55 deg C
 ETL Listed to UL 844 & UL 1598
 ETL Listed to UL 1598A Marine Vessels at -40 deg C to +55 deg C, IP66 & IP67
 ETL Listed to CSA C22.2 No. 137-M1981 & No. 250.0-08 Canada
 FAA AC 150/5390-2B Heliport Design Guide & ICAO Annex 14, Volume II
 Registered ISO 9001:2015
 UK CAA CAP 437 ed. 8 (2016), Chapter 4 & Appendix C
 Transport Canada TP14371, AGA 7.17
 IMO 2009 MODU Code (2010) paragraph 13.5.20
 American Bureau of Shipping (ABS) Type Approved Product
 ABS Green Passport per MEPC179(59)



The PRL-EX-LSM is an 8-inch diameter surface mounted light *only 146mm high* used for metal helidecks or existing pavement heliports on the FATO perimeter. Only 2.2 watts and 3.5 VA at 120V.

- The castings are copper-free (< 0.25%) aluminum.
- The hardware is 316 (A4) stainless steel.
- Switchable color option available.
- Standard with the exclusive Point Lighting Marine Treatment finish that is bonded to the metal and far exceeds the corrosion resistance of the standard FAA approved finish. See below.
- Six (6) years limited warranty subject to Point Lighting "Terms & Conditions of Sale".
- The lens is glass.
- The LED's are rated for 100,000 hours.
- IP66 & IP67 tested and listed.

| Point Type | Voltage | Array | Color | EX | Mounting & Options |
|------------|-----------|-------------|------------------|-------------|--------------------------|
| PRL-97004 | 1: 120v | C: Helideck | G: Green | EX: Class I | VB: Variable Brightness |
| | 2: 220v | N: NVG * | Y: Yellow | Division 2 | LSM: Low Surface Mount |
| | 3: 12v DC | | W: White | Zone 2 | M20: Metric M20 |
| | 4: 24v DC | | B: Blue | | M25: Metric M25 |
| | | | R: Red | | NC: NVG compatibility** |
| | | | IR: Infrared NVG | | SC: Switchable Color *** |
| | | | | | TB: Terminal Blocks |
| | | | | | EG: External Ground Lug |



Note: Array C brightness exceeds ICAO Annex 14 & CAP 437

- * For NVG tactical use only: PRL-97004-1N-IR-EX-LSM
- ** For use with visible (non-IR) array; adds infrared LED.
- *** See page 2

Our Marine Treatment tolerates marine, high salt content air and other corrosive environments. The FAA specified finish used by competitors flakes and fails in a short time under such conditions.

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.

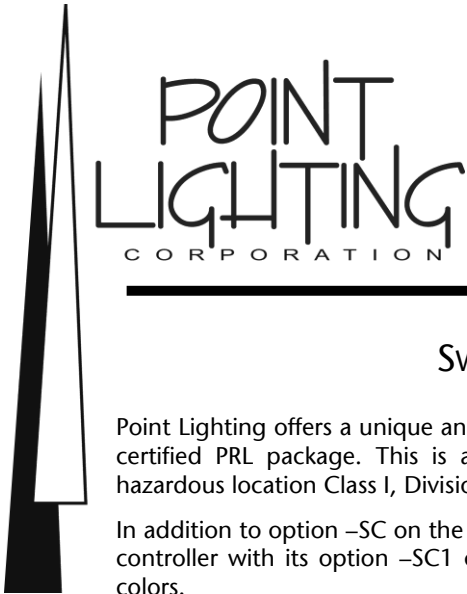
PRL-97004-1C-G-EX-LSM



CLEAR LENS BUT GREEN LIGHT PRODUCED
COLOR CODED LED BOARD

Intertek Control Number: 3030033





POINT HELIDECK LIGHTS PRL-EX-LSM LED v4 CLASS I, DIVISION 2 & ZONE 2

SWITCHABLE COLOR OPTION -SC

Point Lighting offers a unique and proprietary designed option for two color switching within the highly certified PRL package. This is applicable to all mounting forms of the PRL in both safe area and hazardous location Class I, Division 2 and Class I, Zone 2.

In addition to option -SC on the PRL, this system requires use of the color switching PHC-61001 heliport controller with its option -SC1 or -SC2. This permits switching the perimeter lights between two (2) colors.

Application Examples

Example 1: To mark a helipad as available to land (green) or as closed to landing (red). This could be for an emergency or to designate one pad for landing among two or more.

Each PRL light is switchable from green to red:

PRL-97004-1C-G+R-EX-PLB-SC

The required controller can manually switch the color of all perimeter lights:

PHC-61001-1-SC1 with a rotary switch "GREEN – OFF – RED"

Example 2: An offshore marine helideck has alternating yellow and blue perimeter lights, but the owner wants the option to change all the lights to green when the rig is re-tasked.

Each PRL light is switchable from either blue or yellow to green.

PRL-97004-1C-B+G-EX-LSM-SC

PRL-97004-1C-Y+G-EX-LSM-SC

The required controller can manually switch the color of all perimeter lights:

PHC-61001-1-M-SC1 with a rotary switch "BLUE/YELLOW – OFF – GREEN"

Example 3: An offshore marine helideck has green perimeter lights and a CAP 437 helideck status light system. Upon manual or automatic activation of the Point PSL status light system, the PRL perimeter lights change to red and flash in sync warning pilots not to land.

Each PRL light is switchable from green to red.

PRL-97004-1C-G+R-EX-LSM-SC

The PSL status light system is ordered with PHC combination helideck lighting controller that includes the integral PSL control unit. In the AUTO position the default color for the lights is green, but upon activation of the PSL the perimeter lights switch to flashing red, but may be manually switched to steady-burning red:

PHC-61001-1-M-SCSL-SL with a rotary switch "GREEN – OFF – AUTO – RED"

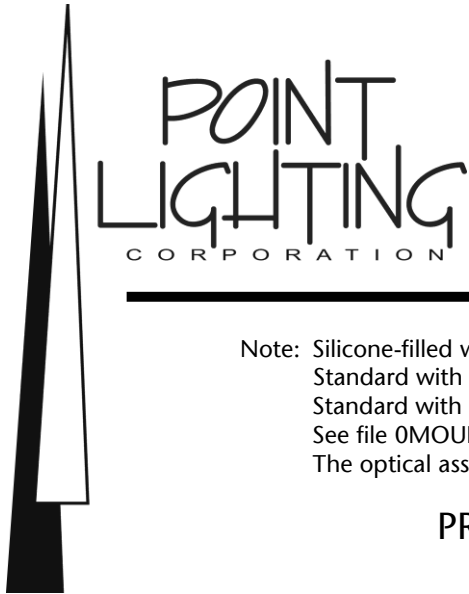
Note: Infrared (IR) cannot be one of the two colors. Both colors must be visible light. Option -NC is available in all cases where the IR LED operates with the visible color.

HELIPORT LIGHTING CONTROLLER
PHC-61001-1-SC1



MARINE HELIDECK LIGHTING CONTROLLER
PHC-61001-1-M-SCSL-SL
Integral PSL Control Unit





POINT HELIDECK LIGHTS PRL-EX-LSM LED v4 CLASS I, DIVISION 2 & ZONE 2

Note: Silicone-filled wire connectors are included.
Standard with our marine treatment finish and internal ground lug.
Standard with 2 x 1-inch NPT entries at 0 & 180-degrees.
See file 0MOUNTINGS for details.
The optical assembly is sealed mechanically without the use of chemical sealants.

PRL-EX-LSM LED SPECIFICATIONS

The PRL-EX-LSM (specify: color), (specify: voltage) 50/60 Hz surface mounted LED light shall not exceed 150mm in height. The unit shall operate properly within an input voltage supply range of 93V to 144V for 120V units and for 176V to 250V for 220V units. Within the preceding ranges, the output to the LED board shall be a controlled, stabilized constant current.

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

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 and IP67 ingress protection.

The light shall be compliant and tested to UK CAA CAP 437 ed. 8, Chapter 4 and Appendix C including IP66 & IP67.

The light shall be cast aluminum copper-free, heat treated 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 cable gland(s) (by others). The manufacturer shall include silicone-filled wire nut 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 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 exceed (see chart next page).

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.

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.

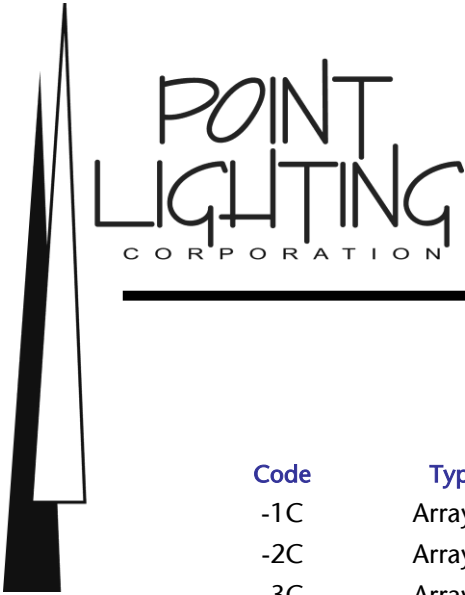
The unit shall be warrantied to withstand an ambient temperature range of: +130 deg F (+55 deg C) to -67 deg F (-55 deg C).

The color emitting LEDs shall meet the chromaticity requirements of US MIL-C-25050. The high output LED's be the latest technology providing uniform light output 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.

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

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



POINT HELIDECK LIGHTS PRL-EX-LSM LED v4 CLASS I, DIVISION 2 & ZONE 2

POWER CONSUMPTION

| Code | Type | Voltage | Frequency | Watts* | VA* |
|------|---------|---------|-----------|--------|-----|
| -1C | Array C | 120 AC | 50/60 Hz | 2.2 | 3.5 |
| -2C | Array C | 220 AC | 50/60 Hz | 2.5 | 5.8 |
| -3C | Array C | 12 DC | --- | 2.1 | --- |
| -4C | Array C | 24 DC | --- | 2.5 | --- |

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-EX 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.



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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. Select option -NC.

Instruction Sheet: IS97004-EX-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 |
| PL10926-G-C | LED Array C, Green with -NC |
| PL10530 | Gasket, Lens Upper |
| PL10531 | Gasket, Lens Lower |
| PL10532 | Gasket, Lamp Housing |
| PL10049-4-6 | Gasket, Base |
| PL10524-125 | Screw, Socket Head |
| PL10839 | Tool, preset torque wrench kit |
| PL10860 | Tool, T-handle wrench |

* All PRL v4 lights use a clear outer lens.



POINT LIGHTING CORPORATION

Mail: P.O. Box 686, Simsbury, CT 06070
Tel 01 860.243.0600
email: Info@PointLighting.com

Plant: 61-65 W. Dudley Town Rd, Bloomfield, CT
USA
Fax 01 860.243.0665
website: www.PointLighting.com