

INSTRUCTION SHEET PRL-97x04 AC VOLTAGES

The PRL LED Point Rollover Light is used for heliport TLOF and FATO applications where an inset light is required. The thick soda lime glass dome lens will withstand high rollover loads. The lens and optical assembly are sealed mechanically without the use of chemical sealants. The PRL LED version uses high output LED's providing uniform light output and long life.

CATALOG NUMBERING SYSTEM

| Point Type- | Voltage- | Array- | Color- | Options |
|---|----------------------|------------|---------------|----------------------------|
| PRL - 97004: 8" Fixture, 7" Bolt Circle | 1: 120V ¹ | H: H Array | B: Blue | MT: Marine Treatment |
| 97704: 12" Fixture, 10 1/4" Bolt Circle | 2: 220V ² | C: C Array | G: Green | PLB: Base & Gasket |
| 97804: 12" Fixture, 11 1/4" Bolt Circle | | N: NVG* | IR: Infrared* | PLS: Shallow Base & Gasket |
| | | V: V Array | R: Red | NC: NVG Compatibility** |
| | | F: F Array | Y: Yellow | GR: Ground Lug in Base |
| | | | W: White | |

Note 1: 120 VAC 50/60 Hz (+/- 20%)
Note 2: 220 VAC 50/60 Hz (176-250V)

* For NVG tactical use only: PRL-97004-1N-IR-MT-PLB
** For use with visible (non-IR) arrays H, C, V, of F; adds IR LEDs



CONFORMS TO:
UL STD 1598
UL STD 1598A
CERTIFIED TO:
CSA STD C22.2 No. 250.0

PRL-97004-1H-G-PLS-VB-GR
WITH PLS RECESSED BASE, GASKET & GROUND



IMPORTANT NOTICE

The installer assumes full responsibility for the proper application and safe installation of this unit in accordance with these instructions, the National Electric Code, and all other state and local codes and practices. POINT LIGHTING CORPORATION accepts no responsibility for damages to property or injury to personnel for the improper use of this product or its failure under any circumstances. POINT LIGHTING CORPORATION's warranty is limited to the replacement of the defective unit only if the failure is the result of a manufacturing defect.

WARNINGS

THERE ARE NO SERVICEABLE PARTS INSIDE THE FIXTURE. DO NOT OPEN THE FIXTURE. OPENING THE FIXTURE WILL VOID THE WARRANTY UNLESS APPROVED BY POINT LIGHTING. IN THE EVENT OF A FAILURE CONTACT POINT LIGHTING FOR SUPPORT.

FOR THE POINT LIGHTING LIMITED WARRANTY TO BE IN EFFECT, AN LED HELIPORT LIGHTING SYSTEM MUST BE CONNECTED TO A PHC HELIPORT LIGHTING CONTROLLER WITH INTEGRAL SURGE PROTECTION. THE LIGHTS ARE WARRANTED AGAINST FAILURE FROM ALL CAUSES FOR ONE YEAR FROM DATE OF SHIPMENT WHEN PROPERLY INSTALLED WITH A PHC HELIPORT LIGHTING CONTROLLER.

AN LED LIGHT INCORPORATES AN ELECTRONIC POWER SUPPLY AND NEEDS TO BE PROTECTED FROM TRANSIENT VOLTAGE SPIKES AND OTHER SURGES. SURGES MUST BE CLAMPED AND SHUNTED TO GROUND TO PREVENT EQUIPMENT DAMAGE. SURGES CAN ORIGINATE FROM EXTERNAL SOURCES SUCH AS LIGHTNING STRIKES AS WELL AS SOURCES INTERNAL TO THE SITE ELECTRICAL SYSTEM SUCH AS AIR CONDITIONERS, ELEVATORS, AND SWITCHING POWER SUPPLIES. THESE INTERNAL TRANSIENTS WILL AFFECT ANY LOAD CONNECTED TO THE SAME DISTRIBUTION PANEL.

SNOW REMOVAL: ALL INSET LIGHTS ARE SUBJECT TO SNOWPLOW DAMAGE. THE PRL IS DESIGNED FOR CONTROLLED IMPACT DURING LANDING AND TIRE ROLLOVER, BUT NOT THE SHEARING FORCES OF A PLOW. THE SYSTEM SHOULD BE TURNED ON DURING SNOW REMOVAL SO THE LIGHTS CAN BE AVOIDED AND TO AID MELTING. INSET LIGHTS ARE SEMI-FLUSH, NOT FULLY FLUSH, AND WILL BE DAMAGED OR DESTROYED BY A METAL BLADE SNOWPLOW. EDUCATE THE SNOW REMOVAL CONTRACTOR TO PLOW AROUND THE LIGHTS AND THEN REMOVE THE SNOW FROM THE LIGHTS BY HAND.

TURN OFF THE ELECTRICITY AT THE SOURCE BEFORE INSTALLING.

WHEN INSTALLED WITH A BASE, IT IS POSSIBLE THAT WATER MAY ACCUMULATE IN THE CONDUIT AND POOL IN THE BOTTOM OF THE BASE. FOR THIS REASON, WIRE NUTS MUST BE KEPT OFF THE BOTTOM OF THE BASE TO AVOID CONTACT WITH WATER.

DO NOT ATTEMPT TO MEASURE THE OUTPUT OF THE LED POWER SUPPLY. DOING SO MAY DAMAGE THE POWER SUPPLY AND VOID ANY WARRANTY.

DO NOT attempt to perform any type of Hi potential (HI-POT) or insulation resistance testing on the fixture. You will damage the fixture and void your warranty.

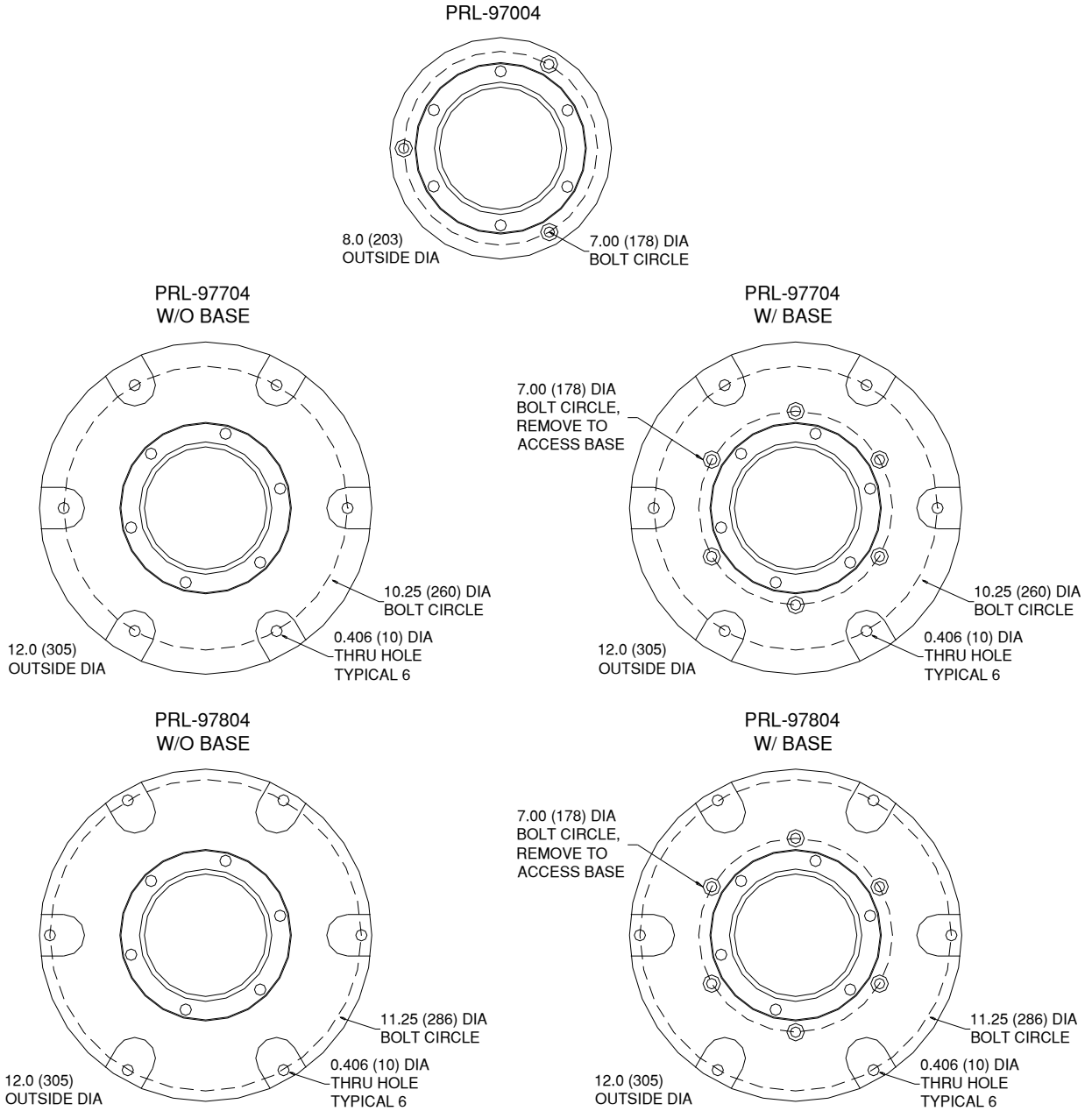
NOTE: This product contains metal oxide varistor type surge protection. Due to the leakage current inherent in this surge protection, Point Lighting does not recommend using ground fault interrupter or similar type circuit breakers. Circuit breakers such as GFI (Ground Fault Interrupter), ELCB (Earth Leakage Circuit Breaker) or similar type circuit breakers may experience nuisance tripping.

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FIGURE 1
OUTLINE DRAWINGS
TOP VIEW
DIMENSIONS: INCHES (MM)



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INSTRUCTIONS

PRL Fixture Without Base

When ordered without a Point Lighting base, the PRL fixture comes with a 3/4-inch NPT hub on the bottom side of the PRL power supply housing. See **Figure 2**. After securing the fixture to the deck/surface, conduit must be threaded into this hub and properly sealed. The PRL should be secured to the deck using stainless steel hardware. Deck mounting hardware is provided by others.

PRL fixtures without a base are supplied with approximately 3-ft long power input wires. Electrical connections can be made inside a user supplied junction box or the PRL power supply housing. The PRL power supply housing includes a small wiring area. A junction box is the preferred method due to the small size of the PRL power supply housing wiring area.

PRL power supply housing connections may be made by removing the PRL power supply housing. Remove the six (6) screws that secure the power supply housing to the upper lighting assembly. See **Figure 3**. Take great care not to pull on the LED array wires that run from the power supply housing to the upper lighting assembly. See wiring instruction for further wiring details. Once wiring connections are complete, secure the power supply housing to the upper assembly using the six (6) screws. These screws MUST torque to 25-in-lbs. A torque wrench kit can be purchased from Point Lighting (see Optional Tools on the last page of this manual). See wiring section for further details.

FIGURE 2
HELIDECK MOUNT
PRL-97704 & PRL-97804
DIMENSIONS: INCHES (MM)

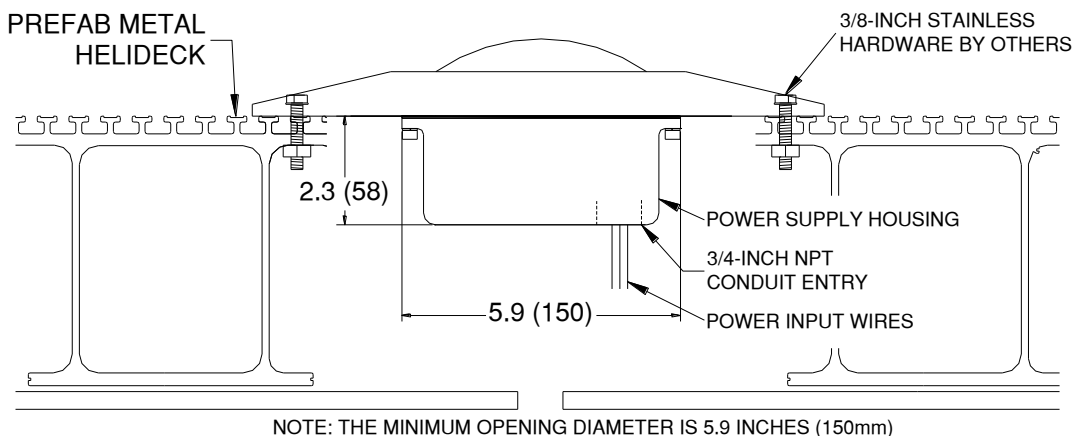
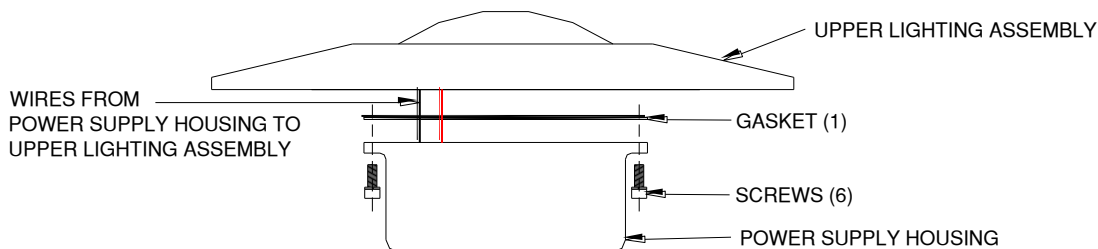


FIGURE 3



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INSTRUCTIONS

PRL Fixture With Base

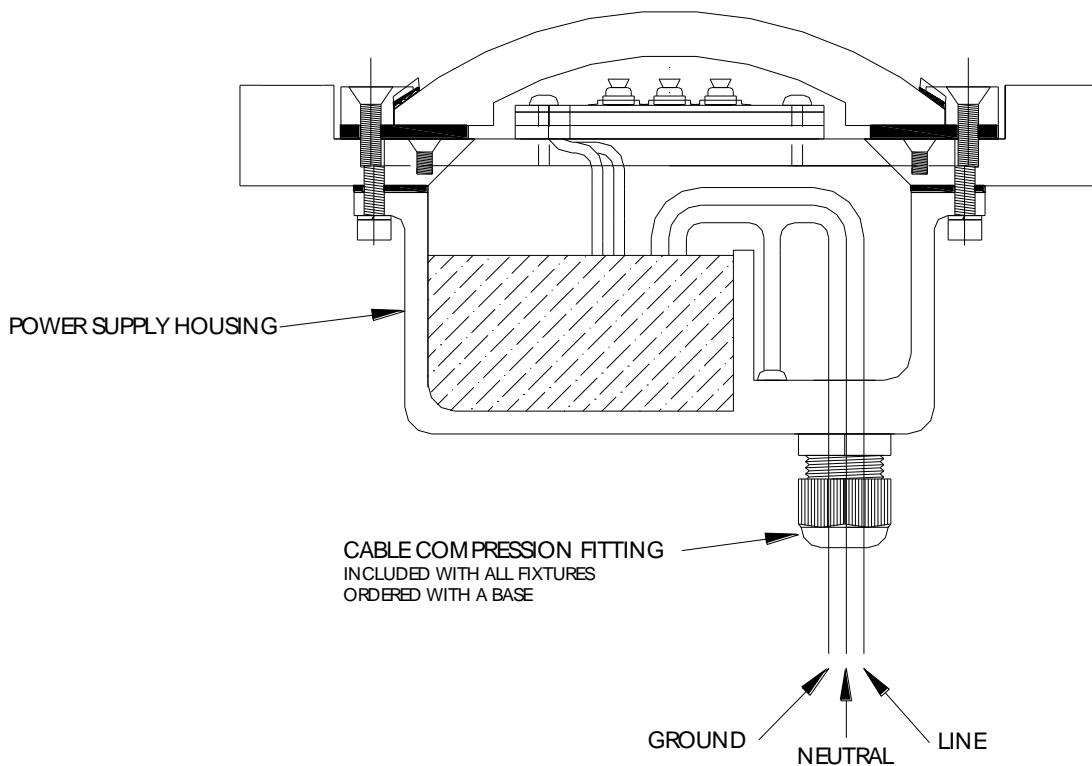
When ordered with a Point Lighting mounting base, the PRL fixture comes with a cable compression fitting (item 10) installed on the bottom side of the PRL Power supply housing. See **Figure 4**. In some cases, the PRL is shipped with the base. In order to perform wiring, the PRL must be removed from its base. The PRL itself is pre-wired; do not open the PRL fixture without approval from Point Lighting. All electrical connections will be made in the mounting base (See **Figure 6**). See wiring instructions below.

Although the gaskets will limit water seepage into the base from the surface, it is advised to place a bead of flexible sealer in the gap between the recessed inset light and the pavement. This may be any high quality flexible pavement sealer.

Further installation details can be found in the PLS or PLB Base instruction manual.

NOTE: A T-handle wrench (PL10860) may be purchased to tighten the socket head screws that secure the PRL fixture to the mounting base.

FIGURE 4
PRL-97004



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FIGURE 5
OUTLINE DRAWINGS
SIDE VIEW
DIMENSIONS: INCHES (MM)

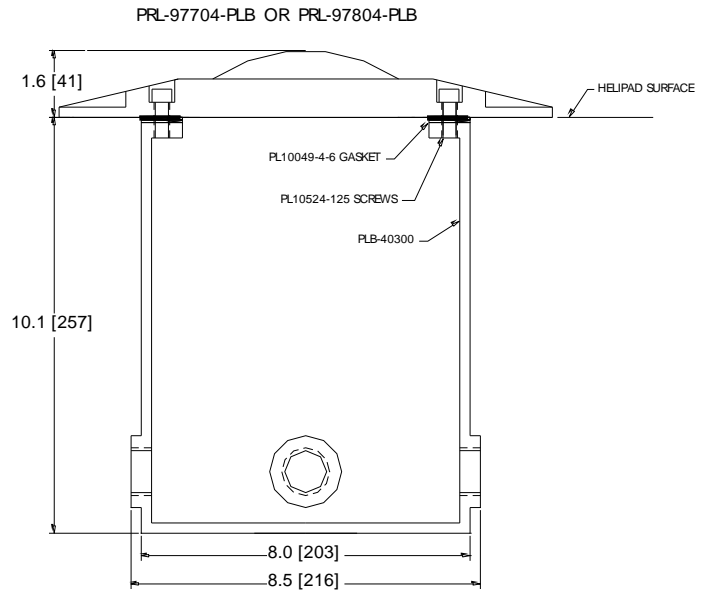
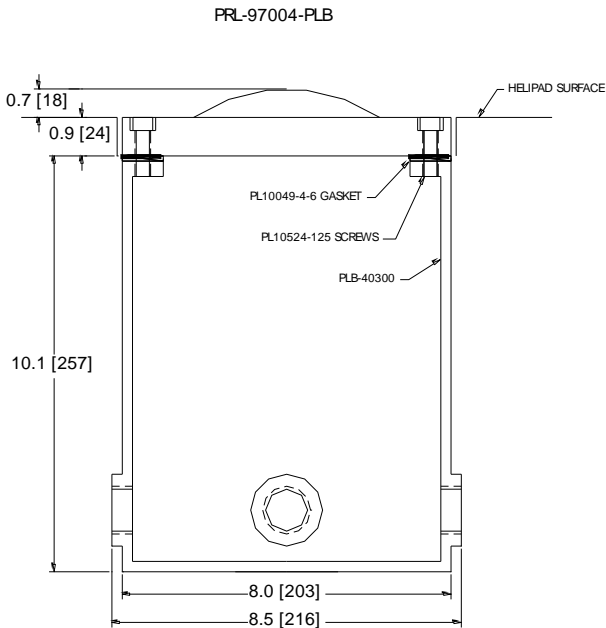
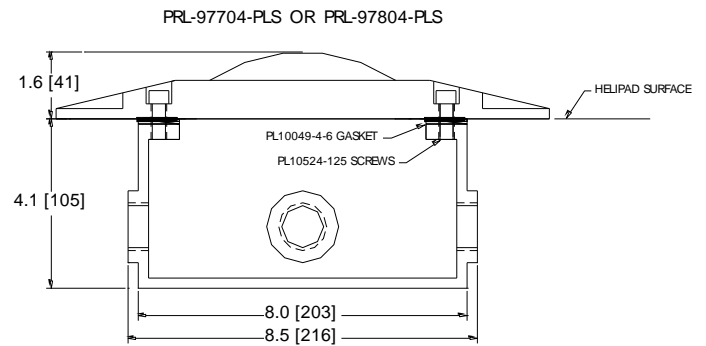
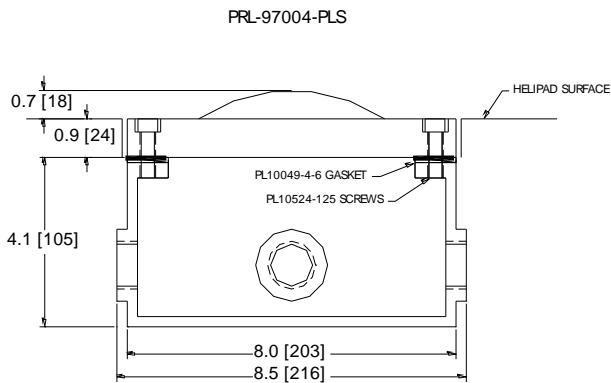
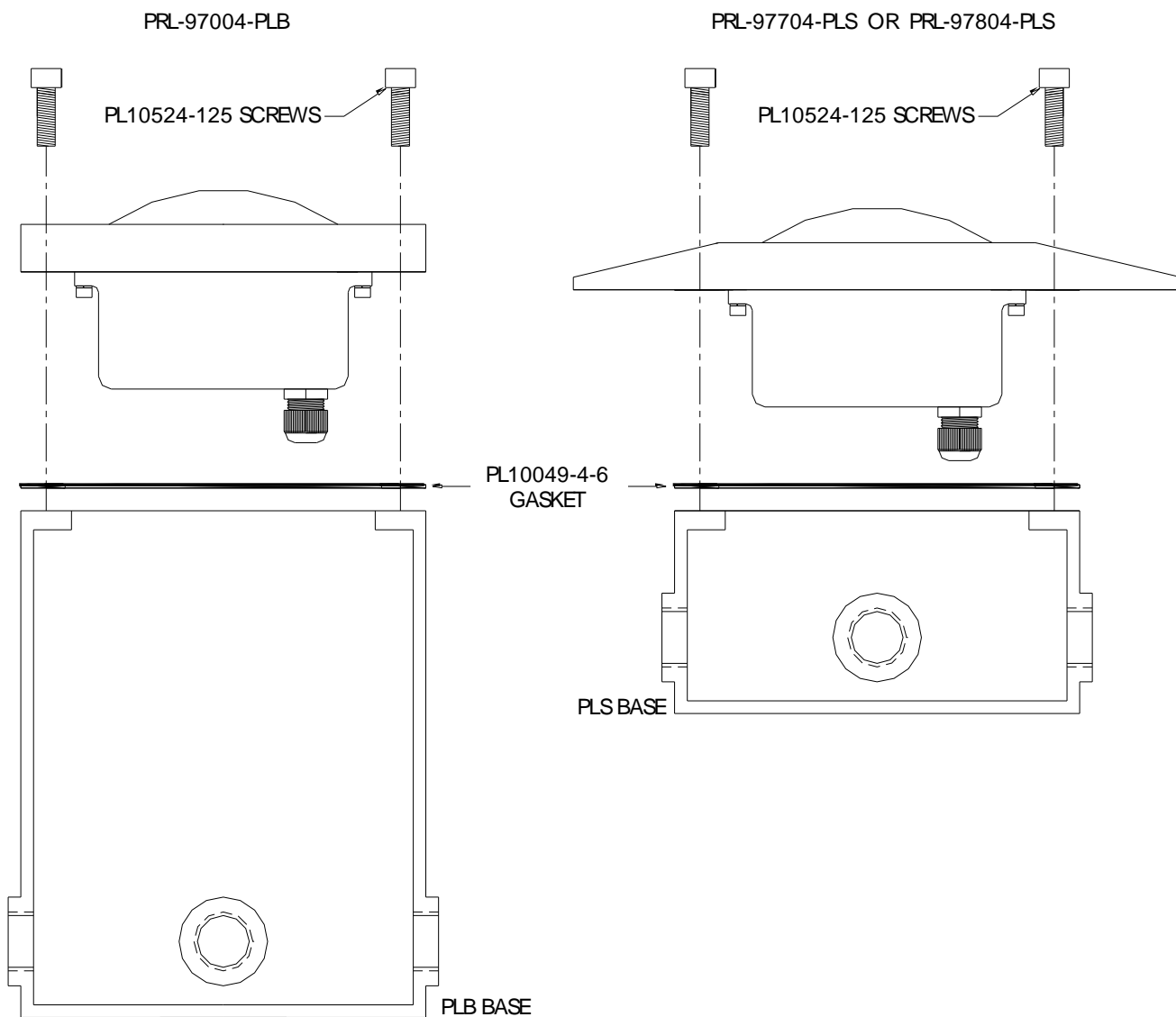


FIGURE 6
REMOVING FIXTURE FROM BASE



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WIRING INSTRUCTIONS

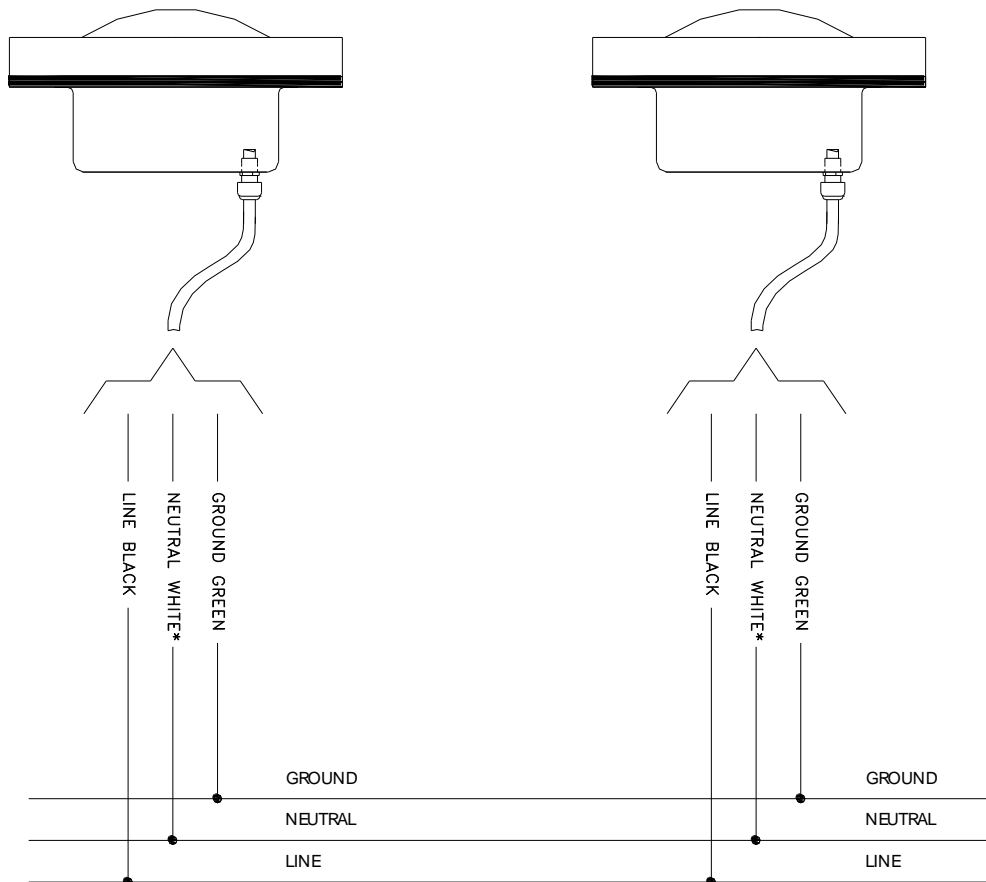
WARNING: TURN OFF THE ELECTRICITY AT THE SOURCE BEFORE INSTALLING.

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The fixture is shipped fully assembled. The fixture has three (3) 16-AWG wires: Line, Neutral and Ground (Earth). Splice the white (Blue for nominal 220V) wire to the system neutral (zero potential). Splice the black wire to the system line voltage. Connect the green ground wire to the system ground (earth).

Make splices using proper electrical practices according to all applicable NEC and local codes. PL10227-E-6 Epoxy Filled Wire Nuts (DryConn Aqua/Red) are provided for all electrical connections. Strip wires 5/8" and insert into the Wire Nuts. Twist the Wire nut onto wires pushing firmly until hand tight. Remove excess sealant in and around conductors.

FIGURE 7
WIRING EXAMPLE



* 220VAC NOMINAL FIXTURES HAVE BLUE NEUTRAL WIRES

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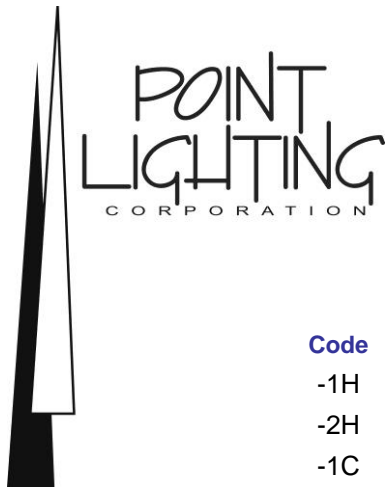
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POWER CONSUMPTION

| 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 |
| -1C | Array C | 120 AC | 50/60 Hz | 7.4 | 8.4 |
| -2C | Array C | 220 AC | 50/60 Hz | 7.4 | 8.0 |

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.

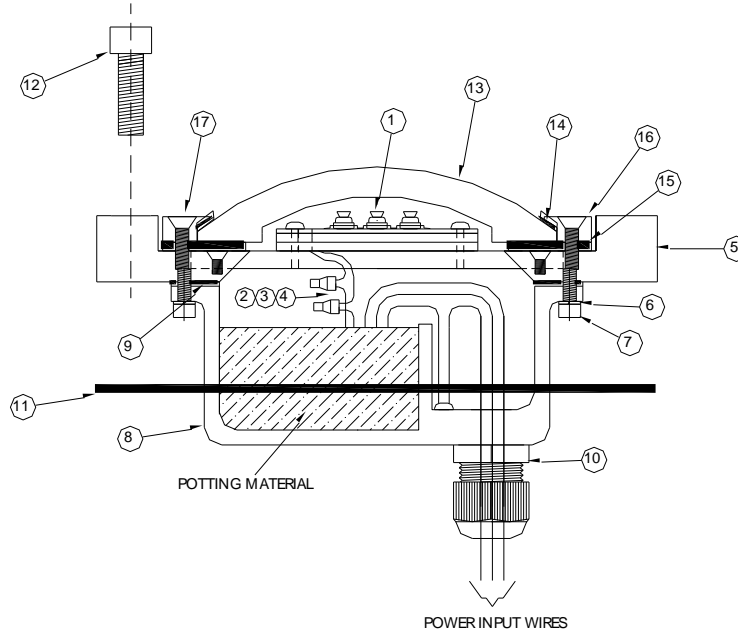
**WARNING: DO NOT ATTEMPT TO MEASURE THE OUTPUT OF THE LED POWER SUPPLY.
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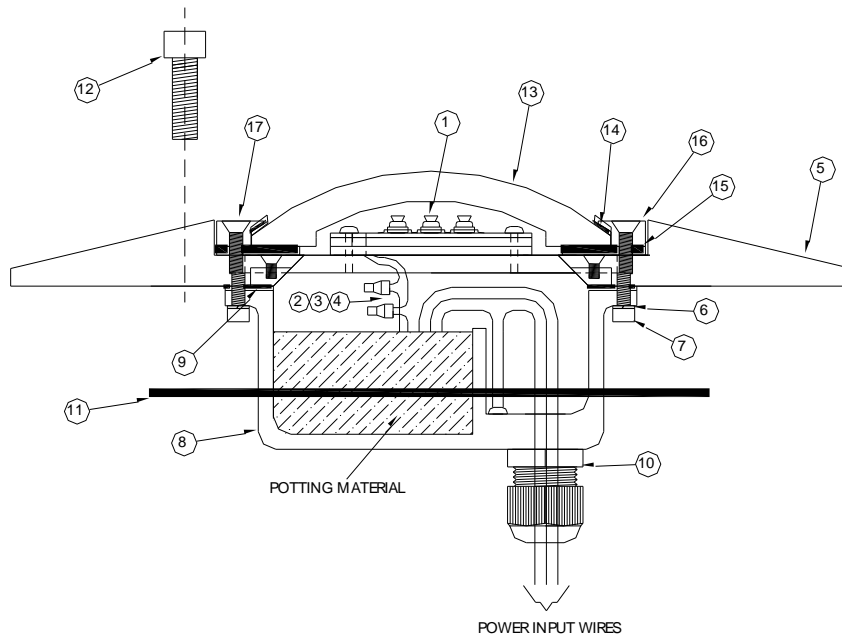
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FIGURE 8
ASSEMBLY DRAWING
REFERENCE PART LISTS

PRL-97004



PRL-97704 OR PRL-97804



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PARTS LIST 1
PRL-97x04

| ITEM | PART NUMBER | QTY | DESCRIPTION |
|------|--------------------------|-----|---|
| 1 | See "LED Array Charts" | 1 | LED Array |
| 2 | PL10628-20-B | 1 | LED Array Black Wire |
| 3 | PL10628-20-R | 1 | LED Array Red Wire |
| 4 | PL10351 | 2 | Pigtail Connectors |
| 5 | See "Part List 2" | 1 | Supporting Ring |
| 6 | PL10190 | 6 | Washer Lock #10 Med Split |
| 7 | PL10528-58 | 6 | Screw 10-32 x 5/8 Socket Head |
| 8 | See "Power Supply Chart" | 1 | Power Supply Assembly |
| 9 | PL10532 | 1 | Gasket Lamp Housing |
| 10* | PL10450-38-P | 1 | Cable Fitting 3/8-inch |
| 11 | PL10049-4-6 | 1 | Gasket Base |
| 12 | PL10524-125 | 1 | Screw 3/8-16 x 1.25 Socket HD Cap |
| 13 | PL10523-C | 1 | Lens Clear |
| 14 | PL10530 | 1 | Gasket Upper Lens |
| 15 | PL10531 | 1 | Gasket Lower Lens |
| 16 | PL90100 | 1 | Retaining Ring Lens PRL (Yellow Paint) |
| 16 | PL90100-MT | 1 | Retaining Ring Lens PRL (-MT Green Paint) |
| 17 | PL10525-34-H | 6 | Screw 10-32 x 3/4 Hex/Flat HD MS |

*Cable fitting included only when PRL is used with a mounting base.

LED ARRAY CHARTS
(ITEM 1)

PL10901 - x - x

STANDARD ARRAYS

COLOR CODE

B: BLUE
G: GREEN
IR: INFRARED
R: RED
Y: YELLOW
W: WHITE

ARRAY TYPE

H: HELIPORT ARRAY
C: CAP437 ARRAY
V: VERTICLE
F: FAA / ICAO A
N: INFRARED ONLY

PL10926 - x - x

-NC NVG COMPATIBLE ARRAYS

COLOR CODE

B: BLUE
G: GREEN
R: RED
Y: YELLOW
W: WHITE

ARRAY TYPE

H: HELIPORT ARRAY
C: CAP437 ARRAY
V: VERTICLE
F: FAA / ICAO A

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PARTS LIST 2
SUPPORT RING (ITEM 5)

| ITEM | PART NUMBER | QTY | DESCRIPTION |
|------|---------------|-----|--|
| 5 | PL90102 | 1 | Support Ring PRL 8" Dia (Yellow Paint) |
| 5 | PL90102-MT | 1 | Support Ring PRL 8" Dia (-MT Green Paint) |
| 5 | PL90105-7 | 1 | Support Ring PRL 12" Dia 10.25" BC (Yellow Paint) |
| 5 | PL90105-7-MT | 1 | Support Ring PRL 12" Dia 10.25" BC (-MT Green Paint) |
| 5 | PL90105-8 | 1 | Support Ring PRL 12" Dia 11.25" BC (Yellow Paint) |
| 5 | PL90105-8-MT | 1 | Support Ring PRL 12" Dia 11.25" BC (-MT Green Paint) |
| 5 | PL90105-76 | 1 | Support Ring PRL 12" Dia 10.25" BC + 8" BC (Yellow Paint) |
| 5 | PL90105-76-MT | 1 | Support Ring PRL 12" Dia 10.25" BC + 8" BC (-MT Green Paint) |
| 5 | PL90105-86 | 1 | Support Ring PRL 12" Dia 11.25" BC + 8" BC (Yellow Paint) |
| 5 | PL90105-86-MT | 1 | Support Ring PRL 12" Dia 11.25" BC + 8" BC (-MT Green Paint) |

POWER SUPPLY CHART
(ITEM 8)

PL10713 - x - x - xx - xx

FIXTURE VOLTAGE

1: 120 VAC
2: 220 VAC
3: 12 VDC
4: 24 VDC
5: 48 VDC
6: 277 VAC

ARRAY

H: HELIPOINT
C: CAP 437
N: NVG
V: VERTICAL
F: FAA & ICAO A
B: ICAO B & TRANSPORT CANADA

OPTIONS

MT: MARINE TREATMENT
VB: VARIABLE BRIGHTNESS

ENTRY

"BLANK": CABLE COMPRESSION¹
34: 3/4-INCH NPT HUB²

1)FOR FIXTURES USED WITH A
MOUNTING BASE (LSM, PLS, PLB)
2)FOR FIXTURES USED WITHOUT A
MOUNTING BASE. HUB IS BOTTOM
ENTRY

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OPTIONAL TOOLS
SOLD SEPARATELY

| ITEM | PART NUMBER | QTY | DESCRIPTION |
|------|-------------|-----|-------------------------|
| -- | PL10839 | 1 | Tool, Torque Wrench Kit |
| -- | PL10860 | 1 | Tool, T-handle Wrench |

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 affixing
the PRL lens clamp ring and for affix-
ing the power supply subassembly.

Consult the factory and the manual
before attempting field repair.

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REPAIR LENS REPLACEMENT

NOTE: Anytime the Lens is removed, you **MUST** replace the Upper and Lower Lens Gaskets (Items 14 & 15).

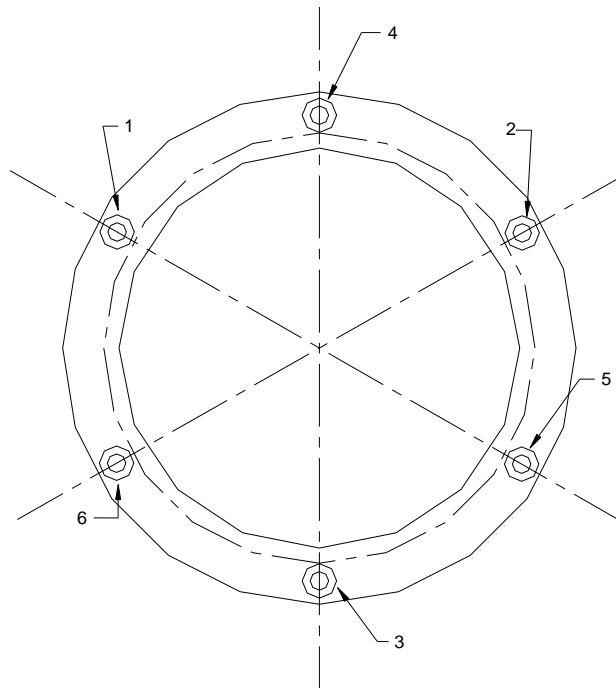
- Loosen the six (6) flat head screws (Item 17) holding the Lens Retaining Ring (Item 16).
- Remove the Lens Retaining Ring (Item 16).
- Remove the Lens (Item 13) and the Upper Lens Gasket (item 14).
- Remove the Lower Lens Gasket (Item 15)

New gaskets MUST be used.

- Clean and inspect the Support Ring (Item 5) mounting surface. Dirt on the surface will cause the fixture to leak. If any corrosion or paint damage exists, you must replace the Support Ring.
- Install the Lower Lens Gasket (Item 15)
- Install the Lens (Item 13)
- Install the Upper Lens Gasket (item 14)
- Install Lens Retaining Ring (Item 16).
- Secure the Lens Retaining Ring (Item 16) using the six (6) flat head screws (Item 17).
- Torque the six (6) flat head screws (Item 17) to 25 in-lbs. See Torque Pattern 1 for torque sequence.

NOTE: When the Lens removed, the Lens Retaining Ring (Item 16) screws (Item 17) **MUST** be torque to 25 in-lbs. Point Lighting recommends using a Torque Wrench Kit. See Tool List

TORQUE PATTERN 1 LENS RETAINING RING



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