**Flight Light Inc.**
**2708 47th Ave.**
**Sacramento, California, U.S.A.**
**95822-3806**

**+1.800.806.3548**     **www.flightlight.com**
**+1.916.394.2800**     **sales@flightlight.com**

## Compliances

- FAA AC 150/5390-2D Heliport Design Guide
- Exceeds FAA AC 150/5390-2D Appendix G Specifications
- ICAO Annex 14, Volume II for TLOF
- UL 1598 Standard (only "ACUL" lamp is UL listed)
- Transport Canada TP14371, AGA 7.16
- IP67 Compliant
- Buy American Act Compliant

## Applications

Semi-flush stainless steel perimeter light helps mark helipad touchdown and lift-off area (TLOF) and/or final approach and takeoff area (FATO) for metal helidecks and pavement heliports.
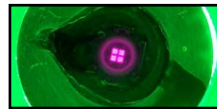
## Why Our HL-490L is Better

- Stainless steel construction better resists salt, chemicals, and weather exposure.
- Nitric acid passivated to maximize the essential corrosion resistance.
- Small 6" [15.24 cm] fixture easily drops into metal helideck, fastens with 4 bolts.
- Recessed, semi-flush mounted, allows for obstruction-free movement of equipment and personnel.
- Fixture sealed to bottom cover to prevent moisture intrusion.
- Prism removal and replacement achieved without need for adhesives or sealants.
- Pre-focused optics simplify maintenance.
- Cost-saving, energy-efficient LEDs.
- Power adapter included.
- Low maintenance - LED light source has 50,000 hour lifetime (50X longer than halogen).
- Monochromatic output of LEDs is more conspicuous than halogen.
- Available in 10-30VDC, 120-240VAC or 277VAC versions.
- With our Dimming Controller option, the lights can be dimmed at night to reduce glare - select from three brightness levels.
- Available for non-heliport applications such as architectural lighting.

## Specifications

- Construction: 304 stainless steel passivated with nitric acid.
- 316 stainless steel hardware.
- Low profile: .86" [2.18 cm] (base can mounted), 1.11" [2.82 cm] (helideck mounted).
- Diameter: 6" [15.24 cm]
- Bolt circle: 5.25" [13.34 cm]
- Power consumption: AC input = 7.2VA; DC input = 4W; IR AC input = 10.8VA; IR DC input = 7.2W
- Light channel within .2" (.51 cm) of grade.
- Fixture grounding: internal.
- Includes 48" [122 cm] of UL SO Cable 16AWG (UL Version).
- Weight: 7.5 lb. (3.4 kg). Carton size: .3 cu. ft. (.008 cu. meters); 8" (d) x 8" (w) x 8" (h) (20.3 cm (w) x 20.3 cm (d) x 20.3 cm (h))
- Temperature range: -4°F/+131°F (-20°C/+55°C).

## Visible/Infrared LED Option

- Night Vision Goggle (NVG) compatible.
- Infrared Output:
  - Exceeds SAE Aerospace recommendations for Landing/Taxi Lights.
  - Usable beam width: 55° to 125° vertical, 360° horizontal.
  - Output wavelength: 850nm.
  - Infrared does not dim with the "DCD" dimming option.
- Visible Output:
  - Exceeds ICAO TLOF requirements for green LEDs (see photometric chart).
  - Usable beam width: 30° vertical, 360° horizontal.
  - Output wavelength: 530nm.

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**HL-490L**
**Stainless Steel**
**6" Helideck/Helipad Semi-Flush**
**Perimeter Inset Light**

## Common Replacement Parts

| | | |
|---|---|---|
| 1........ | HL-490L Top Casting ........................ | 16-490MN |
| 2........ | Prism Gasket ..................................... | 65-033090 |
| 3........ | Clear Prism Dome .............................. | 20-016080 |
| 4........ | Prism Clamp Teflon Gasket................. | 27-492CG |
| 5........ | O-ring................................................ | 27-9396K175 |
| 6........ | HL-490L Prism Clamp........................ | 16-490PLTMN |
| 7........ | 8-32 316SS 0.75" Long Screws............ | NS-91500A197 |
| 8........ | AC LED Driver Board ........................ | HL-GL9KIT-AC |
| ALT ... | AC LED Replacement Kit .................. | HL-XL490KITB-AC* |
| ALT ... | DC LED Replacement Kit .................. | HL-XL490KITB-DC* |
| ALT ... | UL LED Replacement Kit .................. | HL-XL490KITB-UL* |
| ALT ... | Dimming LED Replacement Kit........ | HL-XL490KITB-D* |
| 9........ | No. 6 304SS Screws ........................... | NS-S0632X025PPMSP |
| 10....... | HL-490L Bottom Casting ................... | 16-490-BOTTOM2 5/8M |
| 11....... | 6-32 316SS 0.5" Long Screw ............... | NS-91500A148 |
| 12....... | Pipe Fitting ....................................... | HA-PP000001 |
| 13....... | UL Cable Assembly............................ | 20-CABLE-ASSY-UL |
| 14....... | 2-Pin Male Connector ........................ | TRC-10518-117D002** |
| 15....... | 3-Pin Male Connector (DC Dimming only) .... | 80-013031** |
| 16....... | 2-Conductor Female Connector.......... | TRC-10519-07-021** |
| 17....... | 3-Conductor Female Connector (DC Dimming only) .... | 80-012022** |

\* LED Replacement Kits include: LED Driver Board, Bottom Casting, Cable ; X = Color
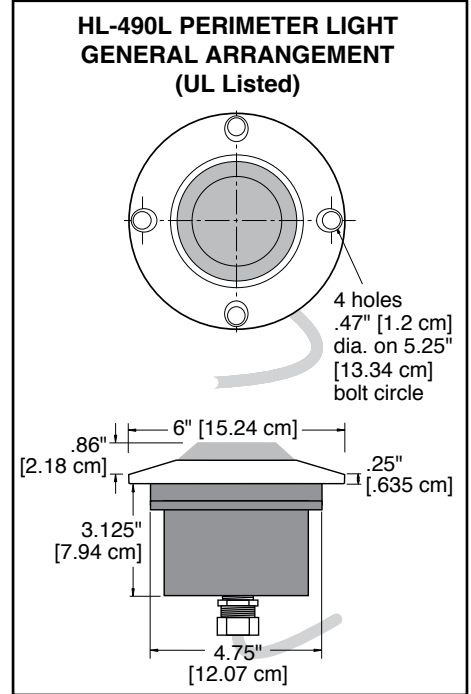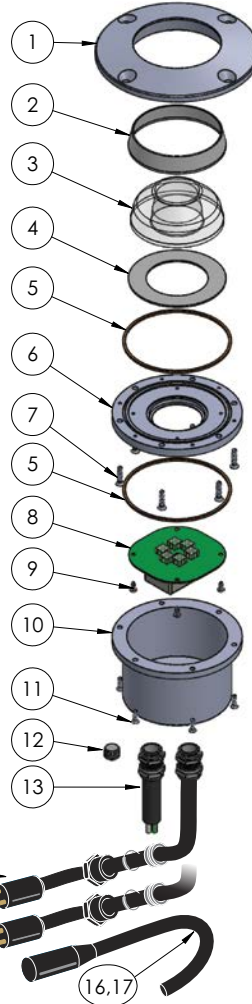\*\* Not UL listed.

### Base Can
A 6" [15.24 cm] deep base can is required for pavement installations. Part #: BA-525-6

## Ordering Codes

| Fixture | LED Color | | Power/Compliance | |
|---|---|---|---|---|
| **HL-490L** | **G:** Green (std)[1] | **AC:** | 120-240VAC[4] |
| | **B:** Blue | **AC3:** | 277VAC[4] |
| | **R:** Red | **ACUL:** | 120-240VAC[3] |
| | **W:** White | **DC:** | 10-30VDC[4] |
| | **Y:** Yellow | **DCD:** | 10-30VDC Dimming[4] |
| | **IR:** Infrared[2] | | |

| HL-490L | | |
|---|---|---|
| | | |

[1] Green is currently the recommended color for heliport perimeter lights.
[2] Infrared must be used in conjunction with visible LEDs. Infrared does not dim with the "DCD" dimming option.
[3] Only "ACUL" lamp option can be UL listed. Connector not included. UL labeled fixtures only available for shipment to U.S. and Canada.
[4] Lamp option is not UL listed.



### HL-490L PERIMETER LIGHT GENERAL ARRANGEMENT (UL Listed)

4 holes .47" [1.2 cm] dia. on 5.25" [13.34 cm] bolt circle

.86" [2.18 cm]
6" [15.24 cm]
.25" [.635 cm]
3.125" [7.94 cm]
4.75" [12.07 cm]

## Photometric Comparison with ICAO Requirements for TLOF

| Vertical Angle (Deg) | Avg. Intensity (Cd) | ICAO Spec (Cd) |
|---|---|---|
| 2 | 70.8 | 15 |
| 5 | 66.5 | 30 |
| 10 | 48.3 | 15 |
| 13 | 36.6 | 8 |
| 20 | 23.9 | 3 |

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**HL-490L**
**Stainless Steel**
**6" Helideck/Helipad Semi-Flush**
**Perimeter Inset Light**

## How to Specify the HL-490L LED Helideck Semi-Flush Perimeter Light

The fixture shall be model HL-490L-(LED color)-(voltage) as marked by Flight Light Inc.

**Construction:**
- The fixture shall be 6" [15.24 cm] diameter, 5.25" [13.34 cm] bolt circle.
- The fixture shall be omnidirectional.
- The fixture shall be 304 stainless steel with nitric acid passivation.
- The fixture shall have a modular design comprised of 2 major parts: Bottom Casting and Top Casting. The Bottom and Top Casting are sealed by means of a Prism Clamp and O-ring.
- Hardware shall be 316 stainless steel.
- Fixture shall ground internally.
- The fixture shall include 48" [122 cm] of UL SO Cable 16AWG (UL Version).

**LED/Light Cavity:**
- LED lifetime expectancy: 50,000 hours.
- Power consumption shall not exceed 7.2VA for AC lights, 4W for DC lights, 10.8VA for IR AC lights and 7.2W for IR DC lights.
- Infrared output wavelength: 850nm
- Infrared output usable beam width: 55° to 125° vertical, 360° horizontal
- Visible output wavelength: 530nm
- Visible output beam width: 30° vertical, 360° horizontal

**Compliances:**
- IP67 Compliant
- Buy American Act Compliant
- FAA AC 150/5390-2D Heliport Design Guide
- ICAO Annex 14, Volume II for TLOF
- Optical performance exceeds FAA AC 150/5390-2D Appendix G Specifications
- Transport Canada TP14371, AGA 7.16

**Options (to be specified per each project):**
- Infrared (must be used in conjunction with visible LEDs)
- Dimming (only available with the Flight Light controller)
- UL Listed fixture
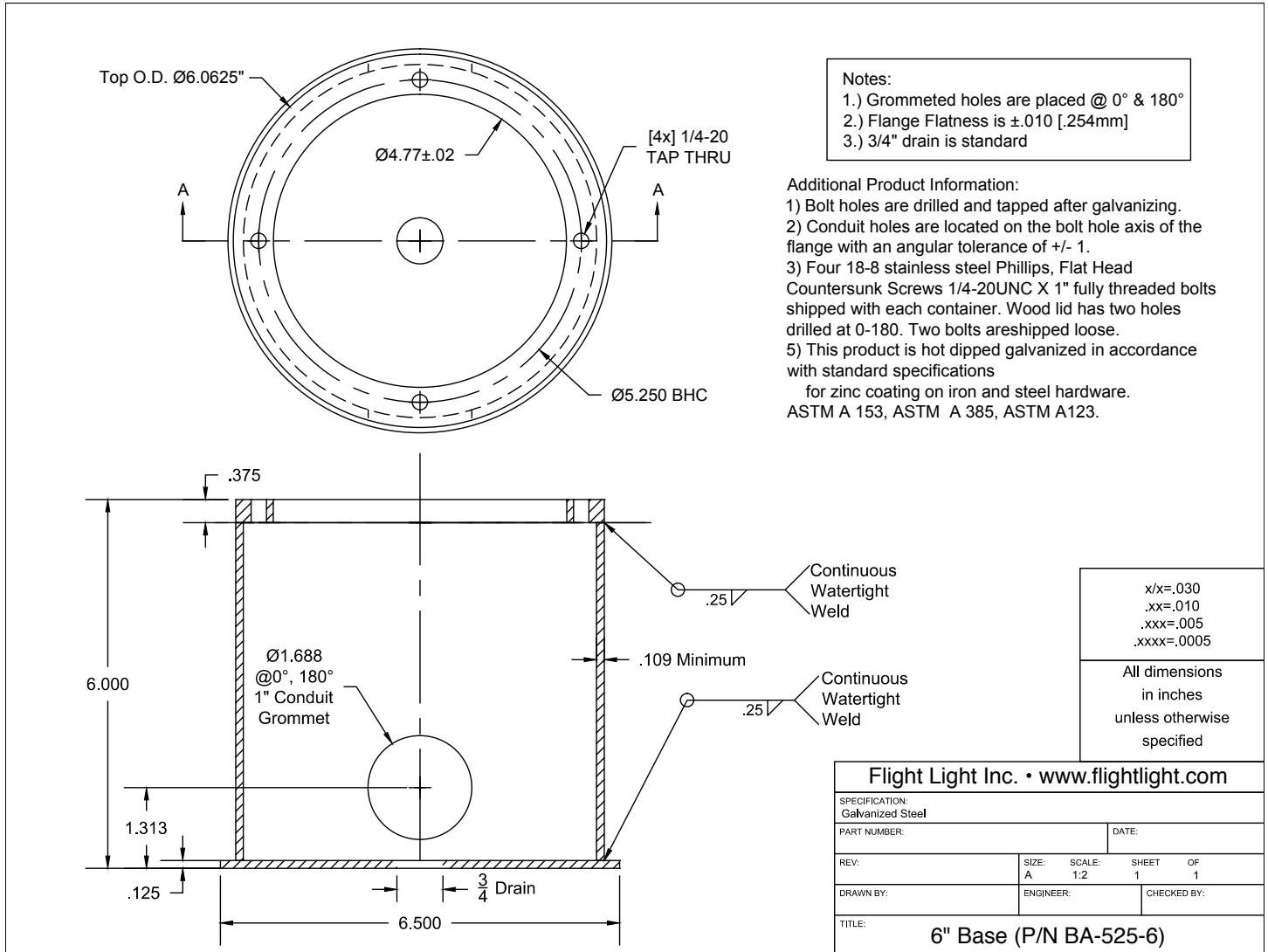- 6" [15.24 cm] Deep Base Can for ground installation.

Top O.D. Ø6.0625"

Ø4.77±.02

[4x] 1/4-20 TAP THRU

Ø5.250 BHC

Notes:
1.) Grommeted holes are placed @ 0° & 180°
2.) Flange Flatness is ±.010 [.254mm]
3.) 3/4" drain is standard

Additional Product Information:
1) Bolt holes are drilled and tapped after galvanizing.
2) Conduit holes are located on the bolt hole axis of the flange with an angular tolerance of +/- 1.
3) Four 18-8 stainless steel Phillips, Flat Head Countersunk Screws 1/4-20UNC X 1" fully threaded bolts shipped with each container. Wood lid has two holes drilled at 0-180. Two bolts areshipped loose.
5) This product is hot dipped galvanized in accordance with standard specifications
   for zinc coating on iron and steel hardware.
ASTM A 153, ASTM  A 385, ASTM A123.

.375

Continuous Watertight Weld
.25

.109 Minimum

Ø1.688 @0°, 180° 1" Conduit Grommet

Continuous Watertight Weld
.25

6.000

1.313

.125

3/4 Drain

6.500

x/x=.030
.xx=.010
.xxx=.005
.xxxx=.0005

All dimensions
in inches
unless otherwise
specified

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| SPECIFICATION: Galvanized Steel | | | |
|---|---|---|---|
| PART NUMBER: | | DATE: | |
| REV: | SIZE: A | SCALE: 1:2 | SHEET 1  OF  1 |
| DRAWN BY: | ENGINEER: | | CHECKED BY: |
| TITLE: 6" Base (P/N BA-525-6) | | | |

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