

SPI **WARRIOR**

High Power Luminaire Range - Installation Guide

This installation guide provides instructions for installing the WARRIOR HP Highbay / Flood-light series of floodlights.

Overview



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- 2 Installation
- 3 Maintenance
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Important information

The WARRIOR HP series of floodlights/highbay are specialist devices, certified for use in specific operating environments.

The units must be installed in accordance with these instructions, must be correctly certified for the specific operating environment and must be installed by suitably qualified personnel.

If you have any queries about the installation or the certification of the unit – please contact Raytec for immediate assistance and advice.

1. Safety instructions

1. Read this leaflet carefully before commencing to install the WARRIOR unit and retain it for future use. Installation can only be carried out by suitably qualified personnel.
2. Check the certification to ensure that the mains supply and ambient temperature present are suitable for the environment the unit is being installed in.
3. DO NOT open when energised.
4. If the WARRIOR unit is to be installed in areas of high vibration, please consult with Raytec.
5. WARRIOR units are designed to withstand marine environments and are tested in accordance with Cx to ISO12944. However, if the WARRIOR unit is to be installed in a very high corrosive environment such as **coastal** and **offshore** the following good practice should be followed:

During installing ensure there are no scratches, chips or defects in external paint surface that would allow ingress of water to bare aluminium. If so touch up with suitable paint.

During installation apply an anti corrosive jointing compound to screw threads such as PSU cover and external earth points.

During installation ensure exterior surface of the product is not in direct contact with a dissimilar metal such as galvanised steel. If so, fit a nylon barrier to prevent galvanic corrosion.

During maintenance regularly wash down external surface of fitting with clean, fresh water to remove any deposits of mineral salts on the exterior surface.

6. The WARRIOR unit housing is constructed from marine grade aluminium and toughened glass, gaskets are silicone sponge, black encapsulant and o rings are silicone rubber, internally some components are non-metallic. The end user must ensure that these materials are suitable for the environment the WARRIOR unit will be installed in.
7. Check certification nameplate on side of floodlight/highbay to ascertain type of threaded cable entry on the luminaire. Select suitably certified cable glands and stopper plugs, these must be parallel thread, have a minimum of 5 full thread engagement and be of a medium/fine tolerance to ISO965-1 and ISO965-3. The cable entry devices selected must maintain the IP rating of the luminaire.
8. The incoming mains cable should not exceed a temperature rise of 16°C above the ambient conditions; select suitable cable.
9. Maximum effective projected area 0.2m².
10. Replace any cracked or broken protective screens



Isolate mains before
removing cover



Install in a well
ventilated area



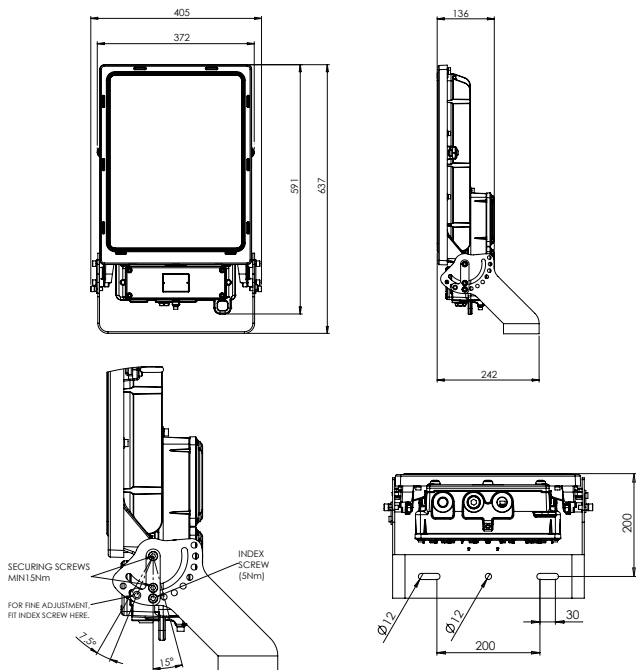
Eye Safety - Risk group
1 to IEC 62778

2. Installation

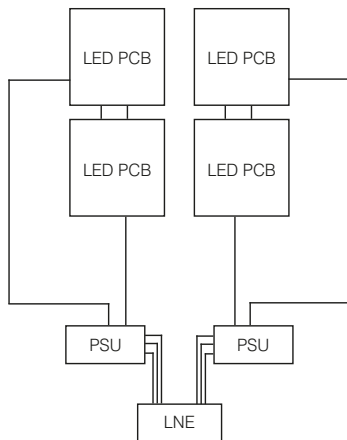
Mounting WARRIOR Unit

1. To meet the requirements of certification a **MINIMUM** of 2 fixing points must be used, the fixing points must be suitable for the conditions of use. Raytec recommend using M10 Marine Grade fixings (not supplied).
2. The line diagrams below are for guidance only – units may be mounted in any orientation.

Mounting HP WARRIOR Unit – Floodlight Application



Typical wiring diagram



Wire the Mains cable into the terminal block. Provision has been made for this and identified as the E (Earth), L1 (Switched Live), L2 (permanent live) and N (Neutral) terminals. There are two pairs of contacts for each of these to facilitate a mains cable that can be looped in and out of the unit. The L2 terminals on a standard unit are not electrically connected but allows them to be used on the same circuits as *emergency bulkheads*.

3. Open terminal block enclosure.
4. Installer should earth the unit separately – an internal and external earth point are provided as standard.
5. Connect wires to mains supply.
6. If the unit is opened for any reason, disconnect mains.
7. All WARRIOR floodlights/highbay have terminal blocks suitable for looping 4mm² cable, only one cable should be connected to each terminal block connection – when incoming cables are installed a creepage and clearance of 5mm and 4mm respectively.
8. To use DALI/Dimming interface, connect the DALI terminals on the terminal block. (Min conductor size 1.5mm²; min wiring insulation class: BASIC).
9. Ensure no cables are trapped and gasket is seated correctly and replace terminal block cover. Tighten to 4Nm.
10. If carrying out Insulation Resistance tests the normal method of insulation testing is to connect Live and Neutral together and test between this point and Earth to prevent the risk of damage to the electronic control gear.

3. Maintenance

1. It is essential that all WARRIOR units are maintained by qualified personnel: (The Power supply; Light source are not user serviceable items and shall only be replaced by the manufacturers service agent or a similar qualified person).

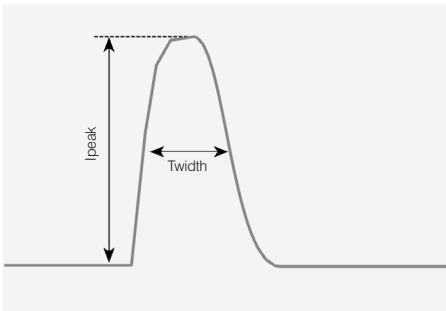
IMPORTANT. No modifications are permitted to the unit, all spare parts must be purchased from the manufacturer, unauthorized modifications or spare parts will invalidate certification.

2. Isolate the WARRIOR unit from the mains supply and allow to cool before carrying out any maintenance work.
3. The unit has 2 independent power supplies; in the event that a power supply needs to be replaced remove the 4 screws to gain access to the power supply. Remove the power supply from the mains terminals then remove LED red and black wires. Refitting is the reverse of removal.
4. Disposal of packaging, WARRIOR units and old LED assemblies/power supplies should be carried out in accordance with national regulations.

4. Technical Specification

Input Voltage		150-264V AC		
Variant	HP400	HP300	HP200	HP100
Consumption	290W	240W	200W	167W
Input Current (230Vac, full load)	1.26A	1.04A	0.87A	0.72A
Temperature Range	-40°C to +50°C	-40°C to +60°C	-40°C to +65°C	-40°C to +70°C
Power Factor (230Vac, full load)		>0.97		
Mains Frequency		50/60Hz		
Inrush Current (I _{peak} @50%)		77A, $\Delta t < 150\mu s$		
Total Harmonic Distortion (230Vac, full load)		$\leq 10\%$		
IP Rating		IP66 / 67		
Weight (std)		18.5kg		
Dimensions		See previous pages for line diagrams		

Inrush Current Typical Curve



Max number of fittings allowed per MCB / Max Loop In

MCB Type	Rating	HPFL400	HPFL300	HPFL200	HPFL100
B	10A	3	3	3	3
B	16A	4	4	4	4
B	20A	6	6	6	6
B	25A	7	7	7	7
C	10A	3	4	4	4
C	16A	5	6	7	7
C	20A	6	8	10	10
C	25A	8	10	12	12

4.1 DALI Wiring Instructions

Cross section in mm ²	Maximum cable length L in m		
	25°C	50°C	75°C
1.50	300	300	281
2.00	300	300	300
2.50	300	300	300

5. Troubleshooting

1. Ensure the 4 LED boards are correctly wired to terminal block. Red to Red : Black to Black – paired cables.
2. Ensure Mains input is correctly connected.
3. Ensure Mains Input is turned on at the source.
4. If LED panel fails to light is it possible to identify if problem is with LED panel or power supply by swapping LED cables to opposite power supply to help identify problem.

DISCLAIMER: The information provided in this document was accurate at the time of its creation. However, due to the evolving nature of our products and continuous improvements, there may be changes or updates that occur after its publication. For the most current and detailed information about our products, please contact our sales team at sales@raytecled.com



Raytec Global (excluding Americas)

Tel: +44 (0) 1670 520055
sales@raytecled.com

Raytec Ltd.
Unit 15 Wansbeck Business Park, Rotary Parkway
Ashington, Northumberland, NE63 8QW, United Kingdom

Raytec Americas

Tel: +1 613 270 9990
sales@raytecled.com

Raytec Systems Inc.
800-300 Terry Fox Drive, Ottawa, Ontario
2K 0E3, Canada

raytecled.com