



**HTX**

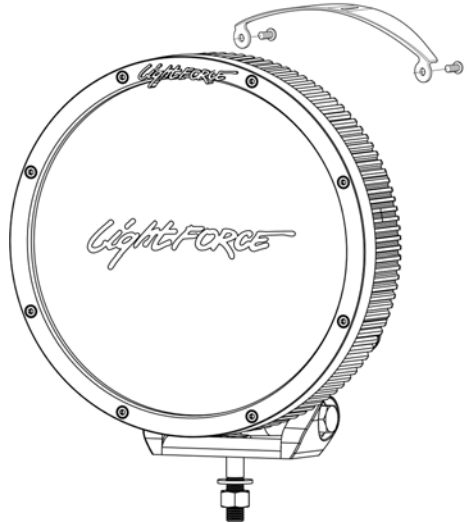
**USER INSTRUCTIONS**

# DL230 HTX INSTALLATION INSTRUCTIONS

## KIT CONTENTS

- 1 x DL230 HTX light
- 1 x Bottom mounting bracket (fitted to light)
- 2 x M10 x 25mm stainless steel hex bolts with washers (fitted to light)
- 1 x M10 x 35mm stainless steel hex bolt with washer and nyloc nut (fitted to light)
- 1 x 4 pin high current waterproof harness adaptor
- 2 x 1/4" x 1 1/4" long UNC stainless steel hex bolt with washer and nut (in bag)
- 1 x User instructions

DL230TSB (Optional Top Stay Bracket)



## TOOLS REQUIRED

- 17mm socket on ratchet
- Torque wrench

### GENERAL CARE AND SAFETY TIPS

To wash your lights, use plenty of warm soapy water and a soft cloth only (this prevents surfaces from marking). Never use any solvent based cleaners or industrial detergents when cleaning these lights.

Handle the base of the bulb only, if glass gets dirty then clean with Isopropyl Alcohol or Methylated Spirits.

### WARNING

High intensity light source. Do not look directly into the Light during operation, eye injury may result.

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## IMPORTANT NOTES

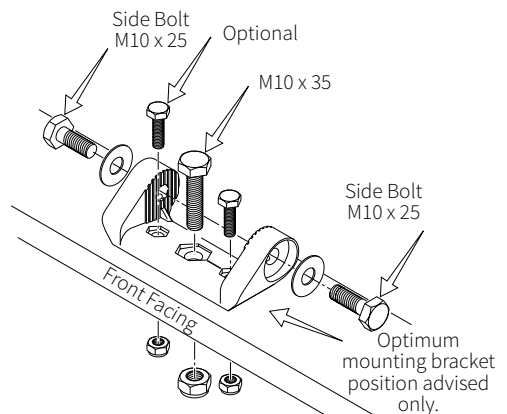
1. Before fitting the stainless steel hardware apply a small amount of anti-seize to the thread of 35mm mounting bolt only.
2. Mounting points vary in design and load capacity, ensure the light is within manufacturers recommended weight specifications before fitment.
3. The M10 x 25mm side bolts have a factory applied thread locking patch for added retention. If replaced reapply a suitbale thread locker. These bolts cannot exceed 25mm in length otherwise damage to the housing can occur.
4. Optional DL230TSB top stay bracket provides additional stability during extreme driving conditions.

## MOUNTING BRACKET

- Remove nyloc nut and M10 washer.
- The mounting bracket is assembled to the light when purchased. This ensures that the light will be installed to the optimum centre of gravity. (Use the M10 x 35mm bolt)
- Fit the washer and M10 nyloc nut until finger tight.
- Complete the remainder using a 17mm socket & ratchet to specified torque - do not use rattle guns.
- Align light to preferred driving position and tighten 2 x M10 x 25mm side bolts to recommended torque.

### NOTE

Additional mounting bolts - If extra mounting security is required or you have a problem with your light rotating, there are two mounting holes either side of the main M10 mounting bolt that can be utilised. Also the optional top stay bracket provides additional stability during tough terrain.



# DL230 HTX INSTALLATION INSTRUCTIONS

## ELECTRICAL CONNECTIONS

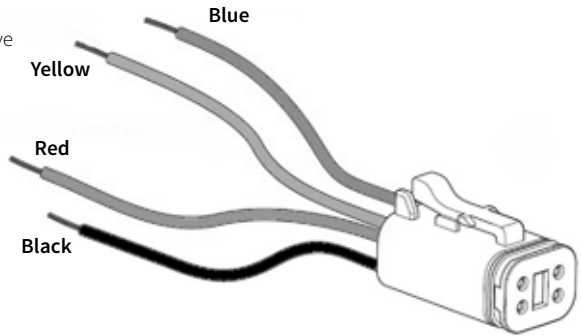
The DL230 HTX is fitted with a high current waterproof 4 pin electrical connector.

Included in the kit is the mating connector fitted with short lengths of cable for integration with an appropriate wiring harness. i.e. Harness must be capable of 15A per Light

If existing wiring harness is suitable the included connector needs to be fitted directly to your existing driving light circuit.

## CONNECTOR WIRE COLOUR IDENTIFICATION

1. **Red:** Positive for HID – connect to positive wire on relay
2. **Black:** Negative for HID - connect to negative (earth)
3. **Yellow:** Positive for LED - connect to positive wire on relay
4. **Blue:** Negative for LED - connect to negative (earth)



### NOTE

For maximum performance, three mode operation and safety we recommend the use of optional wiring harness (part number LFDLHDS) – for fitment follow the installation instructions included with the harness.

Once all the electrical connections have been made, align the light to the desired position and tighten all bolts as per recommended torque specifications (see specifications section).

### CAUTION

Improper installation of the connector will affect the reliability and operation of your lights. Do not remove the waterproof connector from the driving light cable; this will lead to water ingress and void warranty.

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## TECHNICAL SPECIFICATIONS

- LED power: 80 W
- HID power: 70 W
- Effective lumens: 8400
- Input voltage range: 10-16V DC
- Current draw: 11A @ 13.2V
- LED colour temperature: 5000K
- LED lifespan: Up to 50,000 hours
- Input cable length: 450mm (17.72")
- Operating temperature: -40°C to 63°C (-40°F to 145°F)
- Dimensions: 230mm (9.06") W x 245mm (9.65") H x 111mm (4.37") D
- Weight including bracket: 2.3kg (5.07lb)

## RECOMMENDED WIRE SIZE

0.82mm<sup>2</sup> (AWG 18) Minimum per circuit

## FASTENER TORQUE SPECIFICATIONS

M10 x 35mm bottom mount bolt - 35Nm (26lb-ft)

M10 x 25mm side bolt - 35Nm (26lb-ft)

M5 x 16mm Housing – 4.5Nm (3.3lb-ft)

## ACCESSORIES

ORDER CODE	DESCRIPTION
LFDLHDS	DL230HTX dual switching dual relay harness
DL230TSB	DL230HTX stabiliser bracket
ATNSGHTX	Anti-theft nut kit
GL29	DL230HTX 70W replacement bulb
DL230MB	DL230HTX replacement mounting kit

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# DL230 HTX INSTALLATION INSTRUCTIONS



**High voltage**

## WARNING

ALWAYS disconnect power before disassembly of light

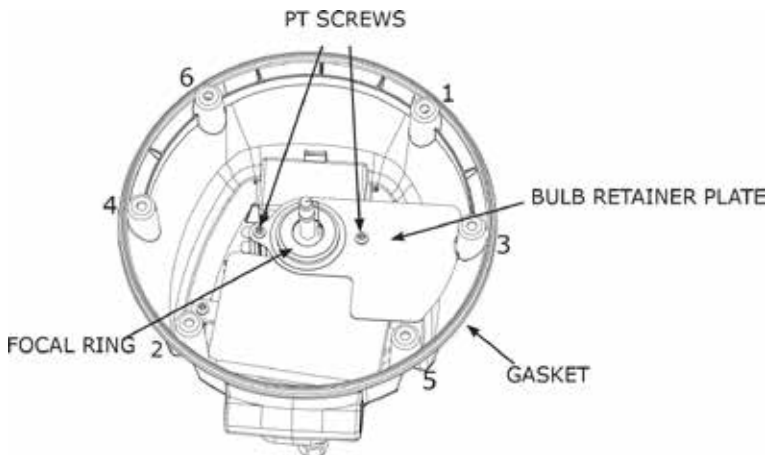
ALWAYS wear safety glasses when handling any bulb

DO NOT handle the glass section of the bulb

NOTE: Wearing clean cotton gloves is recommended while handling internal components

## BULB REPLACEMENT

1. Disconnect power and remove the light from vehicle.
2. Evenly remove the six button head screws (using a 4 mm allen key) from the rear housing.
3. Remove the housing, disconnect cable from PCB and lay on flat surface.
4. Carefully remove focal ring.
5. Using Philips head screw driver remove 2 x PT screws and bulb retainer plate.



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6. Disconnect 2 x bulb harness connectors.
  7. Gently grasp the bulb holder (not glass section) and withdraw from the housing.
  8. DO NOT TOUCH NEW BULB WITH BARE FINGERS. Connect 2 x connectors and position bulb on spring.
  9. Place bulb retainer plate over bulb and reinsert PT screws.
  10. Position focal ring on central hole of reflector and re-assemble housing by carefully guiding bulb through hole.

IMPORTANT

11. Ensure gasket is in place and correctly fitted.
12. Re-tighten the six button head screws evenly in alternating pattern (as above) to specified torque.

**PLEASE NOTE**

Lightforce driving lights are designed to be mounted in the horizontal/forward facing position only.

Pointing the light upwards can cause heat damage to the lens. Failure to comply with this requirement may void warranty.

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# DRIVING LIGHT DUAL HARNESS INSTRUCTIONS

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1. Remove the main ground wire from the negative battery terminal  
WARNING: This may result in loss of radio security code and clock settings. Please consult your owners manual before disconnecting
2. Install driving lights onto a suitable mounting surface
3. Find a suitable place within the engine bay (example - inner guard) to mount the relays and fuse holder. Ensure that the RED (+) and BLACK (-) ring terminals reach the appropriate battery terminals
4. Secure thin black wire fitted with tongue terminal (A) (see fig. 1) to body frame obtaining a good earth (can use same screws used to secure the relays). Ensure orange / black wire is connected (B) for positive switching. See note 1 for negative switching.
5. Unplug the switches and mount them in a suitable position inside the cab
6. Locate a grommet through the firewall, pierce grommet and pass the switch wires through to the switch location within the dash
7. Reconnect the wires to the switches (with LED at the bottom):
  - Top Tab: Red
  - Middle Tab: Blue or Green
  - Bottom Brass Tab: Black
8. Connect the driving lights and route the insulated sleeved wires to each of your installed Lightforce driving lights. Ensure cables do not touch the radiator or come in contact with any sharp edges
9. Secure all excess wire to the vehicle
10. Connect the high beam control wire:
  - Using a multi-meter or test light find the active high beam switching wire located on the back of the head light. Connect “Tee Tap” connector onto this wire, refer to figure 2
  - Two sizes of “Tee Taps” are supplied in the kit, the purple one suits small gauge wires 0.5-1.0mm<sup>2</sup>, the blue one is for heavy gauge wires 1.5-2.5mm<sup>2</sup>
  - Fit the switch wire to the “Tee Tap”, strip 5mm of the insulation from the red wire (D) and crimp pink blade terminal to the end. Plug it into the “Tee Tap”



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11. Connect the RED ring terminal to the positive battery terminal
  12. Connect the black-wired ring terminal to the negative battery terminal then reconnect main ground (negative) wire to the negative battery terminal
  13. Test

NOTE: Some automotive manufacturers use the negative circuit to activate the high beam. In this situation, unplug B (orange wire) and connect to C (short red wire)

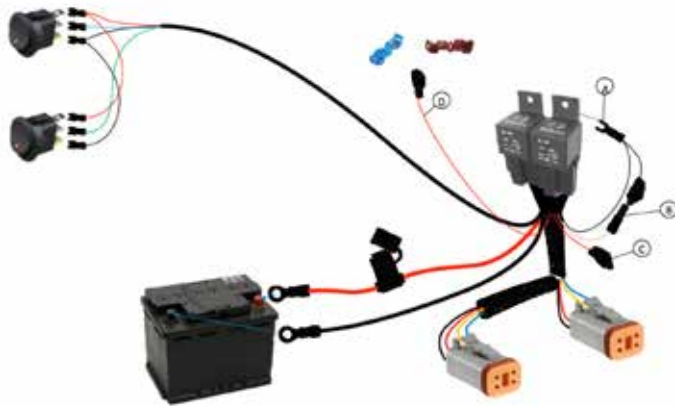


Figure 1: Dual Switch Harness Installation

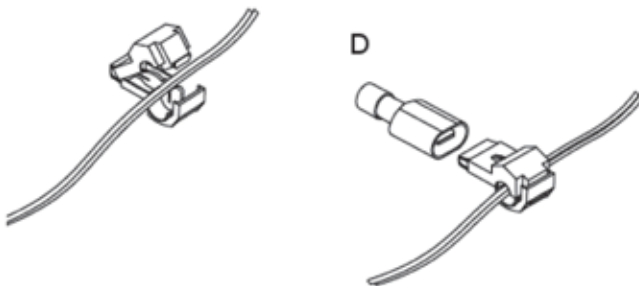


Figure 2: T-Tap Connection to Trigger Wire

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# WARRANTY

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## AUSTRALIA

“Lightforce” means Lightforce Australia Pty Ltd ABN 54 069 439 774 Address: 11 Manton Street, Hindmarsh, SA, 5007. Telephone:+61 8 8440 0888. Email Address: sales@lightforce.net.au

“Lightforce Affiliates” means Lightforce, Lightforce’s related bodies corporate (within the meaning of the Corporations Act 2001), and their respective employees, officers, agents and contractors.

“Warranty Period” means:

(a) For Lightforce products (excluding bulbs and batteries, Custom Built products and mounts and Ace Precision Rifle Systems products) manufactured in Australia and sold either in Australia or overseas, three (3) years from the date of purchase specified on your sales receipt or invoice unless otherwise notified by Lightforce in writing prior to or at the date of purchase;

(b) For

1. Lightforce products and accessories manufactured outside, but imported into, Australia; and
2. Custom Built products and mounts (wherever manufactured);
3. Sold in Australia or overseas (but in each case excluding bulbs and batteries, and Ace Precision Rifle Systems products), one (1) year from the date of purchase specified on your sales receipt or invoice unless otherwise notified by Lightforce in writing prior to or at the date of purchase.

## WHAT THIS WARRANTY COVERS

Lightforce warrants that it will, at its option, replace or repair each product that you purchase which, during the warranty period, has a defect in materials or workmanship under normal use and conditions

## STATUTORY RIGHTS

Our products come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the products repaired or replaced if the products fail to be of acceptable quality and the failure does not amount to a major failure.

In addition, the benefits given by this warranty are in addition to your rights and remedies under a law in relation to the products.

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## **REPLACEMENT OF A PRODUCT OR PARTS**

When warranty service involves the replacement of a product or a part, the replaced product or part becomes Lightforce's property. Only unaltered Lightforce products and parts are eligible for replacement. The replacement product or part is warranted for the balance of the period remaining on the original product. Products and parts presented for repair may be replaced by refurbished product or parts of the same type rather than being repaired or replaced with new parts.

## **PROCEDURE FOR CLAIMING**

Australia: Make contact with the Lightforce sales office at the above address. We will attempt to resolve the issue over the phone, or we may issue a warranty case notice to arrange return of the product for assessment. Lightforce will not be able to perform our service under this warranty if you refuse to return the product to us for inspection.

Claims in respect of defects covered by this warranty must be made as soon as possible after such defect becomes apparent and, in any event, not later than thirty (30) days after the end of the Warranty Period.

International: Contact the point of purchase for warranty service

## **COST OF CLAIMING**

Under this warranty and, unless Lightforce otherwise agrees in writing, you bear the cost of claiming under this warranty including the cost of returning the product to Lightforce.

Under this warranty, Lightforce is responsible for loss or damage to your product only while it is in the possession of Lightforce Affiliates.

## **USE OF PERSONAL INFORMATION**

This warranty will not apply if you do not supply to us or to our Lightforce Affiliates information that we reasonably request to enable us to perform our obligations under this warranty. You have the right to access your personal contact information and request correction of any errors in it pursuant to the Privacy Act 1988 by contacting Lightforce.

## **WARNING**

Road conditioning and road winterising chemicals may damage powder coating. Only connect positioning lights in locations where legal to use. Please check local laws. For maximum performance please inspect wiring loom, mounts and retighten bolts every 10,000 Km.

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**Lightforce Australia Pty Ltd**

11 Manton Street, Hindmarsh SA 5007 AUSTRALIA

**P:** +61 8 8440 0888

**F:** +61 8 8346 0504

**[www.lightforce.com](http://www.lightforce.com)**