

5" x 7" LED Sealed Beam Headlight

Manual ID: PIM-00000192-V003

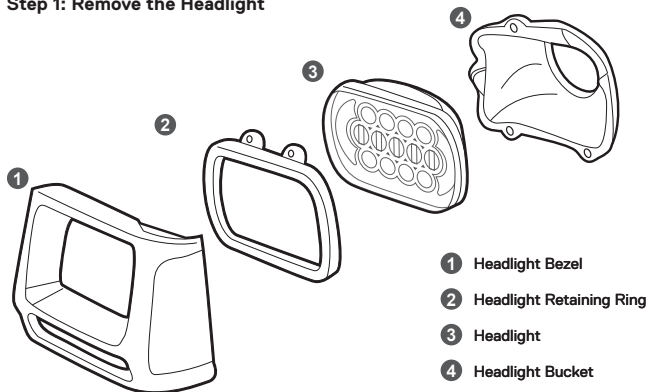
IMPORTANT: READ CAREFULLY BEFORE ASSEMBLY AND USE.

- Installer of this product must have a good understanding of automotive electronics, systems, and procedures.
- **WARNING!** Whether it is replacing the headlight low beam, headlight high beam, or fog lights, always refer to the vehicle's owner's manual for detailed instruction on how such lights can be replaced. The instructions listed in this guide serves as a general reference and the steps detailed may not apply to your specific vehicle's make and model. Seek professional assistance when in doubt.

- **WARNING:** When working with electricity make sure all relevant safety procedures are followed. Always turn the key off and disconnect the battery before working on vehicle electronics, neglecting to do so may result in bodily harm and damage to sensitive electronic components. Never cut or splice a wire without first consulting a vehicle specific manual and using a digital multimeter (DMM) to verify the identity and purpose of the wire.
- This product contains strobe light(s), halogen light(s), high-intensity LEDs, or a combination of these components. Do not look directly into the lights. Momentary blindness and/or injury to the eyes could result.

Installation:

Step 1: Remove the Headlight



- 1.1 Remove the headlight bezel to expose the fasteners securing the retaining ring holding the headlight unit in the headlight bucket.
- 1.2 With one hand applying pressure to the headlight to prevent it from falling forward, loosen and remove the fasteners holding the headlight retaining ring in place.
- 1.3 Remove the retaining ring and set it aside with its fasteners.
- 1.4 Carefully pull the headlight out of the headlight housing.
- 1.5 Disconnect the headlight harness connector from the old headlight unit.

NOTE: Take a moment to inspect the headlamp bucket. There should be two screws/nuts present on the headlamp bucket with one usually located on the top and the other located on the outside of the headlamp bucket. These two screws/nuts are used to adjust the tilt angle of the headlamp vertically and horizontally.

NOTE: As an optional step, the connections of the wiring harness can be cleaned with contact cleaners. Conductive grease can also be added to the terminals of the headlight prior to connecting it to the vehicle harness.

Step 2: Install the New Headlight

TIP: At this point it would be a good idea to temporarily plug in the new headlight and test it for correct operation.

- 2.1 Plug the new light into the factory harness.
- 2.2 Carefully insert the new headlight into the headlight bucket making sure the orientation of the light is correct with the DOT/SAE stamp on the lens located at the top of the unit.

NOTE: Correctly seating the headlight may be difficult due to the extra wiring and plug from the new LED light. When installing the new light always make sure no wires are pinched and that the light is fully seated before attempting to install the headlight retaining ring and bezel. New and longer screws are included if the factory screws are too short to fasten the retaining ring to the bucket.

- 2.3 Proceed with re-installing the retaining ring and bezel which were removed in the previous steps. Be sure to apply constant pressure to the headlight unit while tightening the fasteners of the retaining ring to prevent it from falling forward.
- 2.4 Test the headlight for proper operation.
- 2.5 Enjoy!

Suggestions for Electrical Installation (Applicable Models Only):

Splicing Location

- The RED daytime running light (DRL) wire will need power supplied from a ACC switched power source (power is on when the car is on but off when the car is turned off).
- If the vehicle already has DRLs then the RED wire can be spliced into the power wire of the stock DRLs.
- If the vehicle does not already have DRLs then the fuse box is the best place to borrow power from. The best way to do this is to use a DMM to find an empty fuse slot that is supplied with ACC power and use a fuse tap with a 2.5 amp fuse.
- The GREEN turn signal wire will need power supplied from the power side of the turn signal switch or a turn signal lamp.
- Always use a multimeter to verify power is present on each wire only at the appropriate times.

Wire Routing

- Always route wiring away from moving parts and pinch points.
- Never leave wires hanging. Use zip ties or another method to secure wires to a nonmoving part of the vehicle or an existing wiring harness.
- If possible, use wire loom to protect wires from chafing.
- Any exposed metal connectors should be protected with heat shrink tubing or electrical tape.

Wiring Suggestions for Non-H4 Two and Four Headlight Systems:

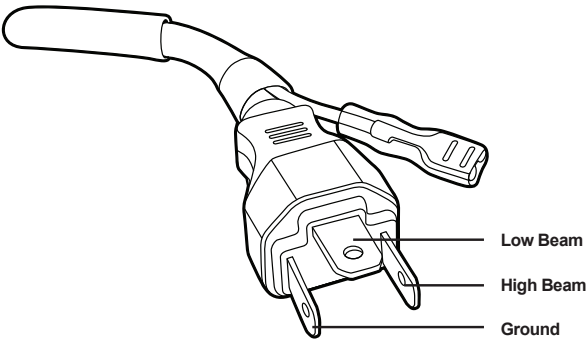
WARNING: Some vehicle models, such as ones made by Toyota and Subaru, utilizes a negative switched headlight circuit. These LED retrofit headlights will not work directly off the factory harness and will require an adapter harness or utilization of relays to convert the negative input from the vehicle into a positive one to the lights.

Testing for a Negative Switched Circuit:

- 1. Unplug the headlight harness from the back of the light.
- 2. Turn the ignition ON.
- 3. Turn the headlights OFF.
- 4. Test the three terminals of the headlight harness for power and continuity to ground.
- 5. A negative switched vehicle will have one 12v power wire and no wires showing continuity to ground.
- 6. A positive switched vehicle will have one wire with continuity to ground and no wires reading voltage.

How to Verify Terminal Location and Function:

- 1. Locate and unplug the three prong connector on the back of the headlight.
- 2. Locate the ground wire, in most cases this is the black wire.
- 3. Verify the ground wire by using a DMM to check continuity to a known good ground; such as the negative terminal of the battery or a clean, noncoated part of the chassis or engine.
- 4. Once confirmed, label the ground wire.
- 5. Turn on the low beams and probe each terminal on the plug with the DMM. The low beam plug terminal will show a ~12 V reading.
- 6. Label the low beam wire.
- 7. Test the third and last wire for a ~12 V reading when the high beams are turned on.
- 8. Label the high beam wire.
- 9. Compare vehicle wiring to the following terminal layout of the LED retrofit headlight.



- 10. Reposition the terminals on the connector if necessary.

Common Wire Colors by Make:

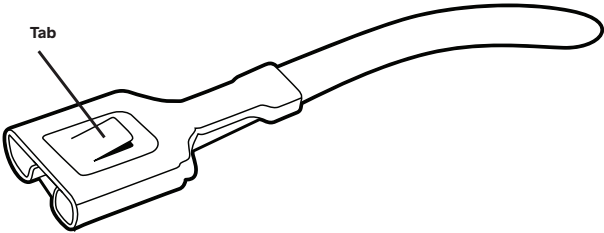
NOTE: This is not an exhaustive list of all possible wire color combinations. Always refer to a vehicle specific manual and verify wire location and function with a DMM.

Make	GM	Ford	Mazda	Jeep
Low Beam	TAN	GREEN/BLACK	RED/WHITE	RED/ORANGE or GREY (Solid)
High Beam	GREEN	RED/BLACK	RED/YELLOW or RED/BLACK	VIOLET/WHITE or GREY (Striped)
Ground	BLACK	BLACK	BLACK	BLACK

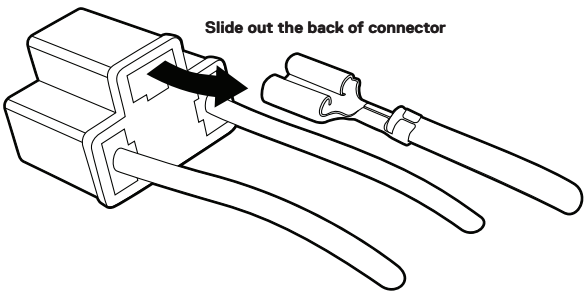
Adjusting Terminal Locations Once the Wires Have Been Verified:

Removing the Terminals from the Vehicle's Headlight Connector

- In most cases, terminals are inserted into the socket from the backside.
- Terminals are held in by a small tab that locks the terminals into the body of the connector.



- Terminals can be removed by inserting a screwdriver or small pin into the front side of the plug to depress the locking tab, which allows the removal of the terminals from the back of the connector.



- Before reinserting, the terminal the locking tab may need to be bent back into place so that the terminal can lock into the connector.

Specifications:

Input Voltage: 12V DC
Input Current: 3A MAX @ 12V DC