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Interior Ambient Lighting Installation

Disclaimer:

This is a general installation guide - the best practices regarding the installation process for this lighting bundle including placements, powering, and concealment will vary based on vehicle model/make and personal preference. The following guide will display a typical installation procedure, along with instructional tips which can be taken and adapted to meet the needs of many different interiors.

Additional Disclaimers & Terms of Use:

LED Outlet is not responsible for any damages caused as a result of an improper installation performed by a customer, professional, or recommended auto shop. LED Outlet is not responsible for the installation of the product, and assumes no liability for the installation of the product. Lighting units which are functional upon arrival and are damaged in the course of installation can not be replaced. Improper installations can result in electrical damage to vehicle or self, exercise extreme caution when hardwiring using the "DC 12V Hardwire Power Adapter" powering method. This powering method is optional, two powering methods are included. LED Outlet's liability will not, under any circumstance, exceed the price of the products purchased. Before operating, ensure all local and state laws regarding interior vehicle lighting permit the use of interior ambient lighting.

Lighting Bundle Contents:



Testing the Bundle

1. As demonstrated in the diagram below, ensure all lighting sources which may have loosened during shipment are firmly screwed together by twisting the front portion of the source in a clockwise direction, while holding the back of the lighting source steady.



2. Test the lighting sources using the 12V cigarette lighter powering method. Plug the 12V Cigarette Lighter power adapter into the signal receiver box, and insert the plug into any 12V cigarette lighter port in your vehicle.



- 3. Press the red "on/off" button on the plug to toggle power to the lighting sources. All five lighting sources should illuminate.
- 4. Test the RGB color functionality by downloading the mobile application this can be done by scanning the QR code attached on the signal receiver box. Once downloaded, you can connect the lighting bundle to your application via bluetooth, provided the lighting bundle is currently receiving power, and bluetooth is enabled on your mobile device.

Planning Placements

 Look for gaps in interior trim where the lighting tubing can be inserted. The sections of lighting tubing are intended to be tightly inserted within these gaps, eliminating the need for adhesive. (Adhesive may be used in circumstances involving special placements within specific interiors). To test a specific placement/gap, try inserting a small section of the outer tubing into the specified area.

Common Placement Locations:

- Door Seams
- Along Front Dash
- Center Console

*Multiple lighting sources can be used for placements with longer lengths and more tight curves/bends in order to illuminate the fiber optic cable more evenly. For example, front dash placements commonly involve a longer stretch of wire which might not be fully illuminated by a single lighting source on one end. Placing a lighting source on each end of the tubing can resolve this issue.

Powering

Before installing placements, choose which powering method you will use and connect the bundle to power:

12V Cigarette Lighter:

- Simple plug and play powering
- Physical on and off button + Virtual on/off switch (mobile app)

Just like the testing phase, simply insert the plug into any 12v cigarette lighter port in your vehicle, and press the red on/off button on top of the plug to toggle power. It is possible to modify this plug to work with a USB port, all you'll need is a USB A male to 12V Cigarette Lighter female converting cable. These can be easily purchased online, or in local auto/electronic stores.

12V Hardwire:

- Added flexibility for concealment
- When the car receives power, the lighting bundle will turn on automatically
- Virtual on/off switch (mobile app)

Caution: Do not attempt an installation with this powering method unless you are comfortable hardwiring accessories directly to fuse locations within your interior.

Installing Placements

- 1. Begin by measuring the lengths of the seams/gaps in your interior where you have planned to insert each placement of lighting wire.
- 2. Start trimming both coils of wire (Outer tubing & inner fiber optic cable) into individual sections based on the measurements collected for each placement in the previous step. For each placement location, you will have a section of outer tubing, and inner fiber optic tubing. Pair the two strands together based on their placements to avoid confusion. *always overestimate the length when trimming, the tubing can be trimmed to exact fit when in place.

*Note: Because the fiber optic cable is inserted into the outer tubing, the fiber optic cable length will likely be slightly longer for each section (see diagram below). This is because the fiber optic cable needs to reach all the way to the lighting source to receive light (meaning it might have to wrap around a panel to reach a concealed lighting source) while the outer tubing only needs to fit the exact length of the interior trim placement. Keep this in mind when trimming the lengths for each placement area.



3. Insert the inner fiber optic cable sections into their corresponding outer tubing sections, as demonstrated in the diagram below.



4. Insert the combined tubing sections into the designated gaps you have chosen for each placement.

5. Connect each tubing placement to a lighting source - see diagram below.



Optional tips for concealing the lighting source heads once the tubing sections have been inserted:

- For door placements, some customers prefer to remove a section of the door panel in order to conceal the lighting source behind the panel. A hole can be drilled (slightly larger than 2mm in diameter) to route the fiber optic cable from the source behind the panel to the front, or depending on your panel, the fiber optic cable can simply wrap around the panel to reach the source in the back.
- Lighting sources can also be stored in compartments within your interior, such as a glove compartment, or a center console compartment. As mentioned previously, additional fiber optic cable length (inner tubing length) would be especially useful for concealing the lighting sources in these compartment locations.

Excess Wire Concealment

Concealing the excess wiring should be one of the last steps of your installation, once all lighting sources are in place, and the powering method is secured. All remaining hanging wiring can now be tucked away.

- Wires hanging near the footwell of your vehicle can be taped, or zip tied to areas along the top and sides of the footwell. Excess cable slack can also be concealed under floor mats.
- Wires being routed from the front half of the interior to the back can be tucked along the floor in the spaces between the seats to be kept out of sight.

If you have any additional questions or concerns, please contact support@ledoutlet.co.