

# **Installation Procedures**



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The Ziza Premium Interior Lighting package for BMW E70 X5 adds crisp, white interior illumination at all interior lighting locations.

The LEDs in the kit are direct fit replacements for the stock incandescent bulbs.

This tutorial explains how to access and replace bulbs all interior light locations.



#### What are LEDs?

LEDs are Light Emitting Diodes, solid state devices that emit light when connected to electrical current. They have no moving parts or wire filaments to burn out. They emit a whiter light, run cooler, and last longer that the incandescent (filament style bulbs) we are replacing in this tutorial.

Unlike filament bulbs, LEDs are polarity sensitive. They have plus and minus (positive and negative) electrical terminals that must match the polarity of the applied voltage. Installing the bulbs "backwards" in the light bulb sockets (with reversed polarity) will not harm them, but they will not light. Flipping the bulb 180 degrees in the electrical connector cures this problem.

#### **Bulb Types**

This kit includes two bulb types, classified by their general shape.

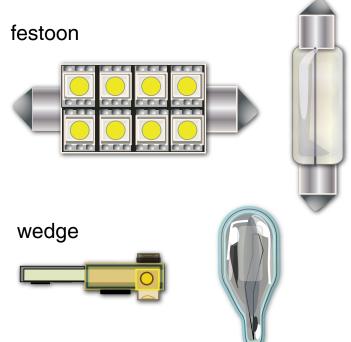
**FESTOON -** Conventional incandescent **festoon** bulbs have a shape and general appearance that is similar to a glass fuse.

Metal caps attached to both ends of a glass tube are sealed to the tube and attached to the bulb filament. End caps mount the bulb in its holder and also conduct electrical current.

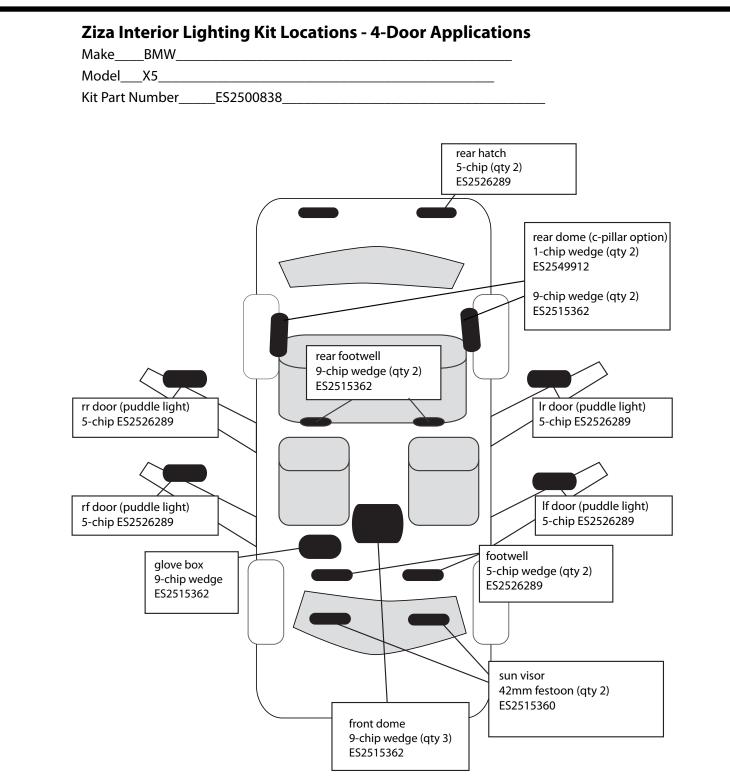
LED festoon lights have the same pointed end caps, but are attached to a bank of LEDs instead of a filament tube.

**WEDGE -** Wedge style bulbs get their name from the shape of the bulb base. The tapered end of the bulb "wedges" into the bulb socket.

LED wedge lights fit the bulb socket like a filament bulb, but are commonly polarity sensitive.



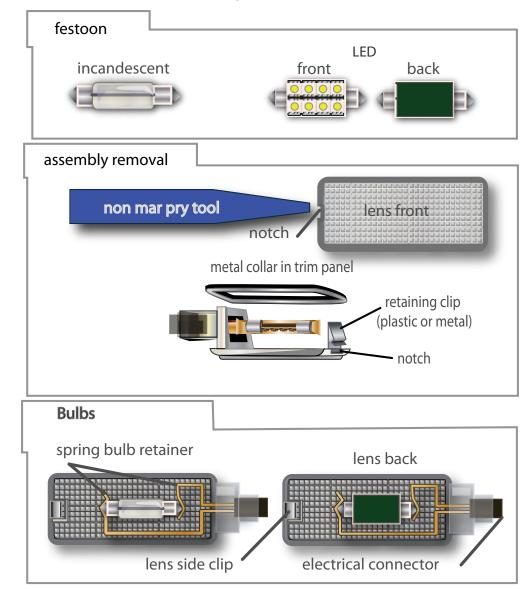






#### **General Tips**

- When prying down on the assemblies to remove them, pry on the notched end of the lens. Insert the narrow tool tip **between** the lens plastic and any metal collar used to reinforce the lens mounting hole. Push in on the retaining clip first to compress and release it. Then pry down.
- The spring bulb retainer is also the circuit conductor. If necessary, gently bend the metal retainer so it holds the bulb tight. This will help prevent intermittent or flickering LED operation caused by a loose connection.



• Install the bulbs with the LEDs facing toward the lens.





# Front Dome and Vanity LED Installation



## Front Dome - Step 1

The front dome light console is secured in the headliner by plastic tabs at the rear and by a pair of metal spring clips at the front. The metal clips snap against the front edge of the headliner to hold the console in place.

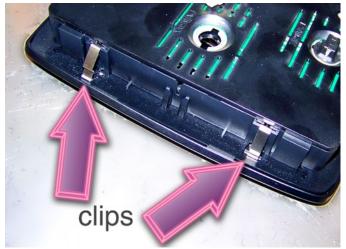
Working from the front, use a trim removal tool to reach up between the front edge of the console and the headliner. Press against the clips just enough to compress them and release the console so it can drop down.

# Front Dome - Step 2

To give you a better idea what the metal spring clips look like, and where they are located, here is a shot of the console after it has been removed.

The spring clips (arrows) must be compressed to release the console.







### Fits BMW E70 X5

#### Front Dome - Step 3

There are three bulb holders in the front dome light console.



#### Front Dome - Step 4

Twist and pull each bulb holder to remove it from its socket.

Remove the original bulbs and insert a new 9-chip wedge base LED array in each bulb holder.

These are polarity sensitive. If they do not work when initially installed, remove and rotate the bulb holders 180 degrees.

# Front Dome - Step 5

Insert the rear of the console into the headliner opening until the plastic tabs catch at the rear of the hole, then lift the front of the console upward until the clips snap to hold it in place.









## Vanity Mirror Lights - Step 1

Using your fingertips or a non-marring trim removal tool, pry down on the light assembly as shown to release it from the headliner.



# Vanity Mirror Lights - Step 2

Replace the original filament bulb with a 42mm festoon array. The light chips should be installed facing the lens.

The LED array is polarity sensitive. If it does not light when first installed, flip the array end-for-end, and retest.

Snap the assembly back into the headliner and repeat the process at the other vanity light.



## **Glove Box**

Using a trim removal tool, pry down the glove box light assembly.

Insert a new 9-chip wedge base LED array into the bulb holder. Test operation and flip it over to reverse the polarity if the bulb does not work initially.

Reinstall the light assembly.







# **Rear Dome - Step 1**

There are two rear dome light assemblies, located in the headliner at the top of each C-pillar.



# **Rear Dome - Step 2**

Using a trim removal tool, carefully pry between the rear edge of the light assembly and headliner until you compress the metal retainer clip (arrow).

Lower the light assembly from the headliner, as shown.







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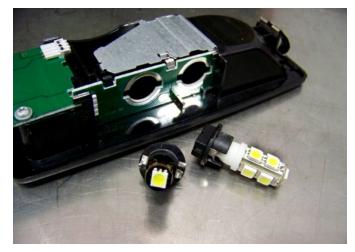
#### **Rear Dome - Step 3**

The rear dome light assembly has two wedge base bulb holders.

Install a 9-chip LED array in the rear bulb holder and a single chip wedge base LED in the front.

Test the LEDs. If an LED does not work when tested, its polarity is reversed. Remove and rotate the bulb holder 180 degrees, then reinstall it in its socket.

Repeat this process at the opposite rear dome light.



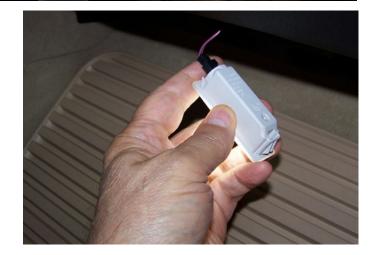
# footwells rear hatch puddle LED Installations



# Footwell Lighting Front - Step 1

Front footwell lights are located in the panels beneath the dashboard.

Using a trim removal tool, pry the light assemblies out and drop them down.







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### **Footwell Lighting Front - Step 2**

Twist the bulb holder to remove it from the light housing.

Replace the original filament bulb with a 5-chip wedge base LED array.

Test the LED. If it does not work initially, its polarity is reversed. Remove and rotate the bulb 180 degrees in the holder and retest.

Repeat these procedures at the opposite side front footwell.

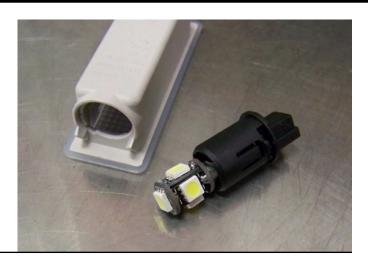
#### **Footwell Lighting Rear**

Rear footwell light are located in the vertical kick panel beneath the rear seats.

Use the trim removal tool to pry the light assemblies from the surrounding trim bezel.

Replace the original incandescent bulbs with 9-chip wedge LED arrays.

Test the LED. If it does not work initially, its polarity is reversed. Remove it, flip it 180 degrees, and reinstall it in the bulb holder.





## **Puddle Lamps**

Each of the four doors has its own puddle lamp.

Using the trim tool, pry down on the notched end of the light. Remove it from the door, and replace the original wedge filament bulb with a 9-chip wedge array.

Test the LED. If it does not work initially, its polarity is reversed. Remove it, flip it 180 degrees, and reinstall it in the bulb holder.

Repeat this process at each of the four doors.





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#### **Trunk Lamps**

The two rear hatch lights are the same design as the ones used in the puddle lamps. Pry down the assemblies. Twist the bulb holder to remove it from the light housing, and replace the original filament bulbs with 5-chip LED arrays.

Test each LED. If either does not work initially, its polarity is reversed. Remove it, flip it 180 degrees, and reinstall it in the bulb holder.





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