

#### Ziza® Interior Lighting Package Installation Procedures



Part Number FS2580290 for BMW E53 X5 (2000-2006)

Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

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ES2580290



Fits BMW E53 X5 (2000-2006)



This tutorial explains how to access and replace bulbs with the LEDs in your Ziza kit.



Prevent damage to interior panels, the headliner, and trim.

Use a plastic, non-marring trim removal tool.

Two complete kits are available.

Make the job easier and prevent damage to headliners and other interior trim with ECS Tuning Trim and Molding Removal Tool Sets: <u>ES2500877</u> and <u>ES517779</u>.

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#### 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**

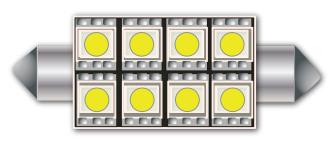
This kit includes two bulb types, classified by their general shape.

**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.

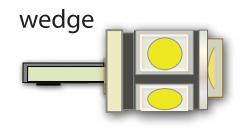
#### festoon





**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 polarity sensitive.





Address: 1000 Seville Road, Wadsworth, OH 44281

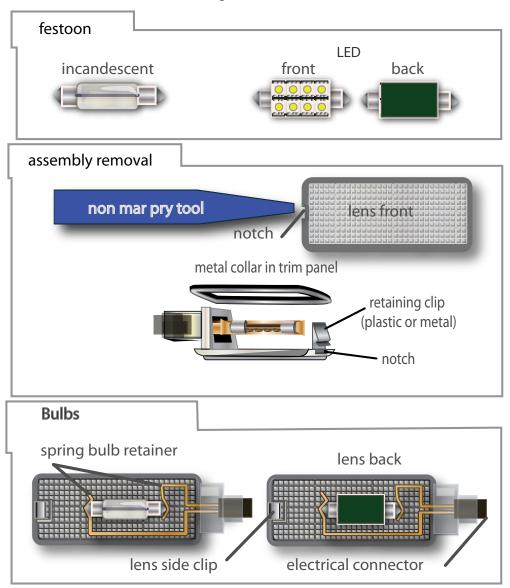
Phone: 1.800.924.5172



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#### **General Tips**

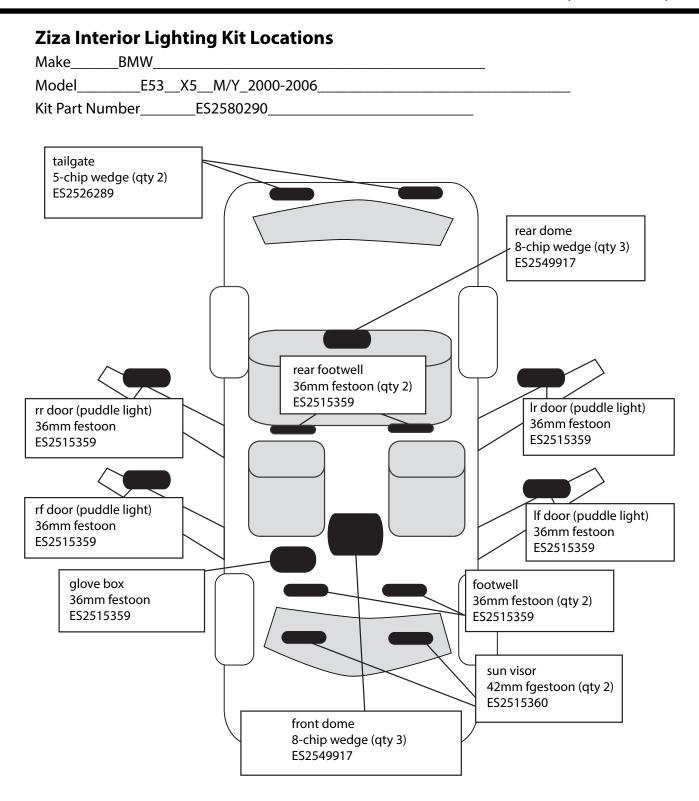
- When prying down on the assemblies to remove them, pry on the notched end of the lens. Insert the narrow tool tip **between** the lens plastic and any metal collar used to reinforce the lens mounting hole. Push in on the retaining clip first to compress and release it. Then pry down.
- The spring bulb 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.



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# Front Dome and Vanity LED Installation



#### Front Dome - Step 1

Insert the flat tip of the trim removal tool between the rear edge of the dome light fixture and the surrounding dome light console.

There are two metal spring clips in the light assembly that must be compressed (arrows) before you can pry the light down and remove it.

(See the next image for a better view of the clips.)

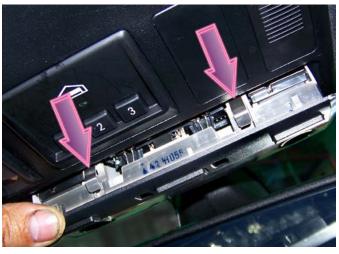


#### Front Dome - Step 2

With the assembly dropped down slightly, we can see the exact location of the spring clips at the rear of the light (arrows).

When the springs are released, pivot the rear of the light downward.

Lower the light from the headliner and unplug it.



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#### Front Dome - Step 3

The front dome light fixture has three wedge base bulb holders.

Twist the bulb holders one quarter turn counterclockwise and pull them from their sockets.

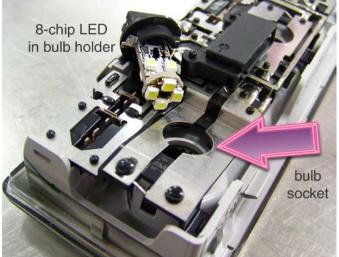


#### Front Dome - Step 4

Pull the old glass bulbs from the bulb holders and install 8-chip LEDs in the **two outer** bulb holders.

Insert each LED and holder into its socket, and turn clockwise until it locks in place.

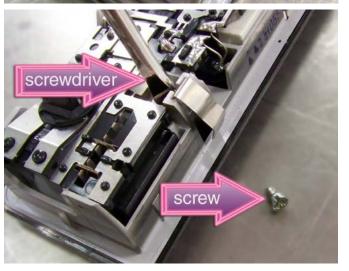
**Note:** The diameter of the 8-chip LED is too large to install in the center socket from the rear. For now, just install an empty bulb holder in the center socket.



#### Front Dome - Step 5

Use a small common head screwdriver to remove the two lens retainer screws. The screws are located on the back of the light assembly in the recesses next to the spring clips.

With the screws removed, separate the lens from the light housing.



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#### Front Dome - Step 6

With the lens removed, insert the third 8-chip LED into the center wedge base socket, working from the front of the light assembly, as shown.

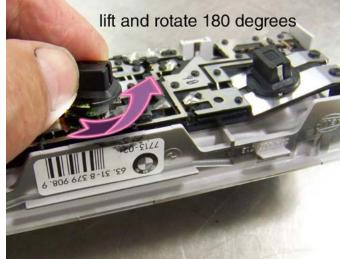


#### Front Dome - Step 7

Plug in the electrical connector and test LED operation.

If any LED does not work when initially tested, twist to unlock it, lift it slightly, and rotate it 180 degrees in its socket.

(Even the center bulb holder can be lifted just far enough to rotate it without removing the LED again.)



#### Front Dome - Step 8

Replace the lens and the two screws removed back in Step 5.

Reinstall the light assembly.

- Insert the front of the assembly into the headliner opening.
- When the front tabs are engaged in the console, lift up on the rear of the light assembly until the spring clips snap in place.



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#### Vanity Lights - Step 1

Lower the sun visors to expose the vanity mirror lights.

Using a trim removal tool (or your fingers), pull down on the long edge of the vanity light.

Drop the light fixture down from the headliner.



#### Vanity Lights - Step 2

Remove the original glass festoon bulb and replace it with a 42mm festoon LED array.

The LED array is polarity sensitive. If it does not work when initially installed, flip it end-for-end in the bulb holder to get it working.

Pop the light back into the headliner and repeat the process at the opposite side of the vehicle to complete the vanity light LED installation.



#### **Glove Box**

Open the glove box. Using the trim removal tool, reach up and pry at the notched end of the glove box light to remove the light assembly from the glove box liner.

Remove the glass festoon bulb and replace it with a 36mm LED festoon LED array.

The LED chips should face the lens.

Reconnect and reinstall the light in the glove box liner to complete the glove box LED installation.



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# Rear Dome Light LEDs



#### **Rear Dome Lights - Step 1**

The rear dome light LED installation is very similar to the front dome light installation. Both dome light assemblies use the same number of bulbs and the same bulb types.

Insert the flat tip of the trim removal tool into the gap between the light fixture and dome light console.

Press up and in to compress the spring clips (arrows), then pry down the rear edge of the light fixture to remove it.

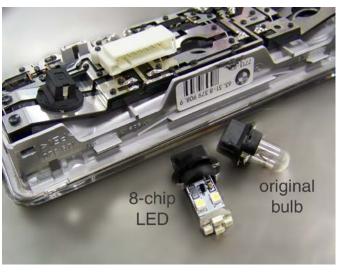
#### Rear Dome Lights - Step 2

Turn all three bulb holders one quarter turn to remove them from their sockets.

Replace the **two outer** wedge base filament bulbs with wedge base 8-chip LEDs.

Remove the original bulb from the center bulb holder. Then reinstall the bulb holder in the center bulb socket, **without a bulb**.





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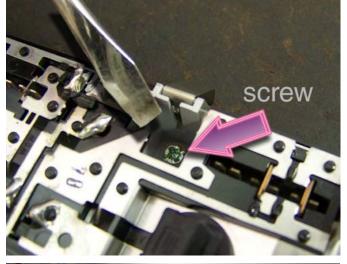


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#### **Rear Dome Lights - Step 3**

Using a common screwdriver, remove the two dome lens retainer screws. (They are located in the recesses at the rear of the light assembly, next to the spring clips.)

Remove the lens cover from the light assembly.

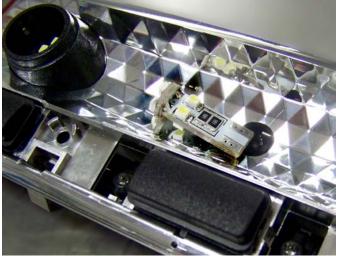


#### **Rear Dome Lights - Step 4**

Insert a new 8-chip LED into the empty center bulb holder, working from the front.

Test LED operation. If any LED does not work, rotate the bulb holder 180 degrees in its socket to get the LED working.

Replace the lens cover and replace the two cover attachment screws removed in Step 3.



#### **Rear Dome Lights - Step 5**

Insert the front edge of the dome light assembly into the dome light console, then pivot the rear of the assembly upward until the spring clips snap in place.



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### Puddle Lights, Footwells, and Rear Hatch LEDs

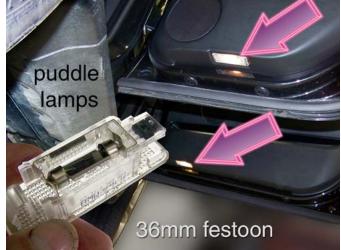


#### **Puddle Lights**

The X5 has puddle lights at all four door bottoms.

Use the flat tip of your trim removal tool to pry down at the notched end of the puddle lamp fixtures, and remove them.

Replace the original festoon glass bulbs with 36mm LED arrays.



#### **Rear Footwells - Step 1**

The rear footwell lights are located in the rear seat base, facing forward, toward the backs of the front seats (large arrow).

**Do not try to pry out the entire light assemblies.** They are bolted in place.

Instead, use the flat tip of the trim removal tool to pry off the translucent plastic lens cover. Pry at the notch (arrow) in the lens.



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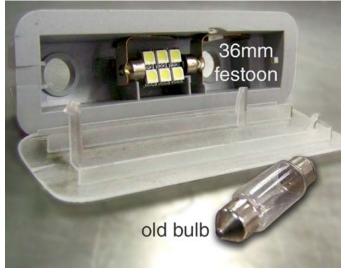


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#### **Rear Footwells - Step 2**

With the lens removed, reach in and replace the original festoon bulb with a 36mm festoon LED array.

(Light assembly shown here removed from vehicle for photography.)



#### **Rear Footwells - Step 3**

Sometimes, the bulb holder contact spring may fall out of the fixture as you remove the old bulb (arrow).

If this happens, get your flashlight and locate the two plastic nuts holding the light fixture in place.

Remove the nuts and pull out the fixture. Unplug the electrical connector.

#### **Rear Footwells - Step 4**

This photo shows the black plastic retainer nuts.

- With the assembly removed, it is much easier to reinstall the spring clip and install the LED.
- Then reinstall the electrical fixture, install and tighten the nuts, and snap on the lens.

Repeat this process at the opposite side footwell light to complete the rear footwell LED installation.



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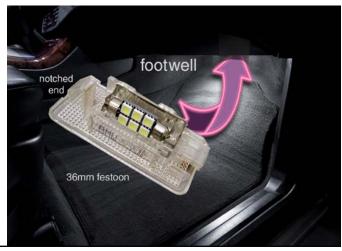
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#### **Front Footwells**

Using the flat edge of the trim removal tool, pry down at the notched end of the front footwell lights, located in the underdash panel above the passenger side footwells.

Replace the original bulb with a 36mm festoon LED.

Snap the assembly back in place and repeat these steps at the opposite side footwell to complete the front footwell LED installation.



#### **Rear Hatch**

Using the flat edge of the trim removal tool, pry down at the notched end of the two light assemblies inside the rear hatch.

Slide off the metal heat shield. (**Careful:** The metal may be very hot, and sharp enough to cut you.)

Replace the original bulb with a 5-chip LED. If either LED fails to light when tested, remove and rotate it 180 degrees in its socket to get it working.





Prevent damage to interior panels, the headliner, and trim.

Use a plastic, non-marring trim removal tool.

Two complete kits are available.

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This concludes the installation of the Ziza Interior Light Kit.