

25500357 Rev. A1 0120

Safety Messages to Installers and Users of Warning Light Equipment

⚠ WARNING

People's lives depend on your proper installation and operation of Federal Signal products. It is important to read and follow all instructions shipped with this product and the original product. Listed below are some other important safety instructions and precautions you should follow:

- To properly install this light, you must have a good understanding of automotive electrical procedures and systems, along with proficiency in the installation and service of safety warning equipment. Always refer to the vehicle's service manuals when installing equipment on a vehicle.
- DO NOT install equipment or route wiring in the deployment path of an airbag.
- When drilling into a vehicle structure, be sure that both sides of the surface are clear of anything that could be damaged.
- For the light to function properly, a separate ground connection must be made. If practical, it should be connected to the negative battery terminal. At a minimum, it may be attached to a solid metal body or chassis part that provides an effective ground path.
- Locate the light control so the VEHICLE and CONTROL can be operated safely under all driving conditions.
- The effectiveness of an interior mounted warning light depends on the clarity, the tinting, and the angle of the glass it is placed behind. Tinting, dirt, defects, and steeply-angled glass reduce the light output of the warning light. This may reduce the effectiveness of the light as a warning signal. If your vehicle has dirty, tinted, or steeply-angled glass, use extra caution when driving your vehicle or blocking the right of way with your vehicle.
- Do not attempt to activate or deactivate the light control while driving in a hazardous situation.
- Frequently inspect the light to ensure that it is operating properly and that it is securely attached to the vehicle.
- This product contains high intensity LED devices. To prevent eye damage, DO NOT stare into the light beam at close range.
- After installation, test the lights to ensure that they are operating properly.
- If a vehicle seat is temporarily removed, verify with the vehicle manufacturer if the seat needs to be recalibrated for proper airbag deployment.
- After testing is complete, provide a copy of these instructions to the instructional staff and all operating personnel.
- File these instructions in a safe place and refer to them when maintaining and/or reinstalling the product.

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death.

Product Overview

The 416900/416910 Corner LEDs are made to stand the most punishing conditions while providing an impressive light output. Each light head is completely sealed to prevent any water ingress, and the system comes with a built-in flasher that is detachable with a weatherproof connector.

The 416900/416910 corner LEDs come with 19 selectable flash patterns and can be programmed to operate independently or sync with multiple light heads.

Unpacking the Product

After unpacking the product, inspect it for damage that may have occurred in transit. If it has been damaged, do not attempt to install or operate it. File a claim immediately with the carrier, stating the extent of damage. Carefully check all envelopes, shipping labels, and tags before removing or destroying them. Ensure that the parts in the Kit Contents list are included in the package. If you are missing any parts, contact Customer Support at 1-800-264-3578, 7 a.m. to 5 p.m., Monday through Friday (Central Time).

Table 1 Kit Contents

Qty.	Description
1	Light Head
1	Flasher and Cable
1	Bezel and Foam
1	Gasket and Screws

Light Head



Flasher and Cable



Bezel and Foam



Gasket and Screws



Installing the Light Heads

⚠ WARNING

AIRBAG DEPLOYMENT: Do not install equipment or route wiring in the deployment path of an airbag. Failure to observe this warning will reduce the effectiveness of the airbag or potentially dislodge the equipment, causing serious injury or death.

⚠ WARNING

LIGHT OUTPUT COMPLIANCE: This product is intended for supplemental warning in conjunction with an approved primary warning light system. Consult local codes and regulations to determine if the power supply/lighthead combination complies with the horizontal or vertical mount position required in your application. Failure to follow this warning could result in reducing the light output and its effectiveness as a warning system.

⚠ WARNING

LIGHT HAZARD: To be an effective warning device, this product produces bright light that can be hazardous to your eyesight when viewed at a close range. Do not stare directly into this lighting product at a close range or permanent damage to your eyesight may occur.

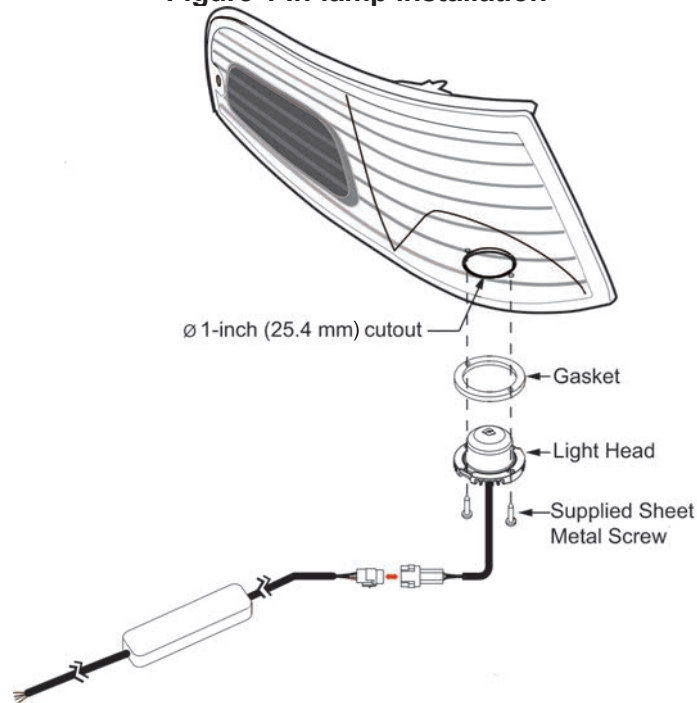
Installing the Light in a Vehicle Lamp

Before installing the lights, read all instructions and plan all wiring and cable routing. To secure and protect the wiring, use grommets, wire ties, looms, and cable mounts (installer-supplied) as needed.

To install the light head in the vehicle lamp:

1. Remove the Corner/Head/Tail lamp assembly from the vehicle.
2. Select a location to mount the LED light head and drill a 1-inch (diameter) cut-out onto the lamp assembly.
3. Insert the LED light head through the gasket and the cut-out then secure with supplied screws. See Figure 1.

Figure 1 In-lamp installation



4. Apply silicone around the cut-out (user-supplied) for better sealing and fit.

NOTICE

OVERHEATING HAZARD: Covering the LED heat sink with silicone may cause LED overheating.

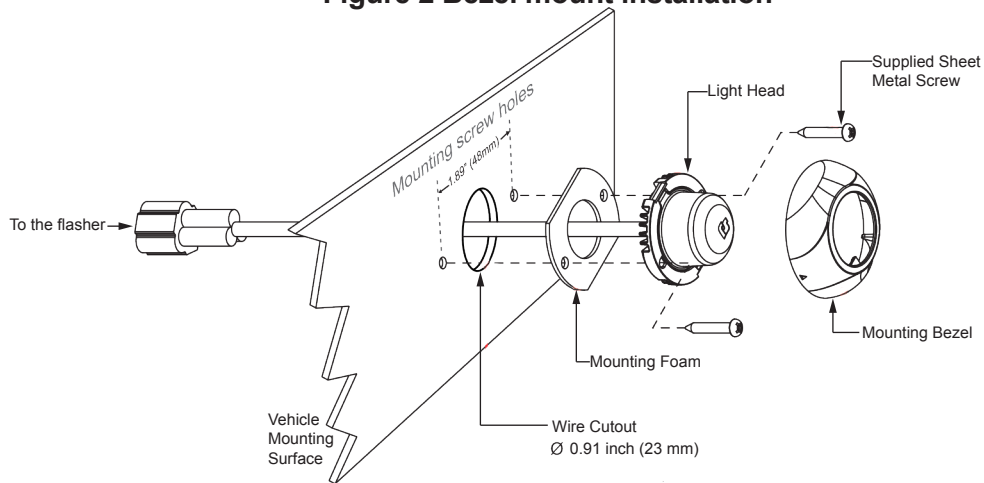
Installing the Light with a Bezel Mount

These steps apply only to kits that include a bezel.

To install the lamp head with a bezel mount:

1. Select a location to mount the LED light head and use the mounting foam to mark and drill the mounting cut out.
2. Insert the LED light head through the gasket and the cut-out then secure with supplied screws. See Figure 2.

Figure 2 Bezel mount installation

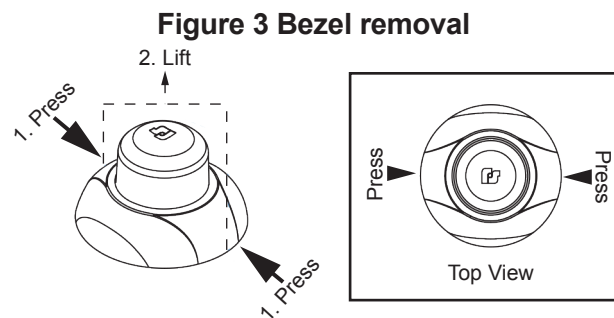


3. Mount the snap-on bezel onto the light head.

Removing the Bezel

To remove the bezel:

1. Apply pressure on both sides marked with arrows shown in Figure 3. Note the bezel surface pattern to press the correct area.



2. Lift the bezel to remove.

NOTE: Avoid multiple mount and removal of the bezel to prevent loose-fit.

Wiring and Programming the Light

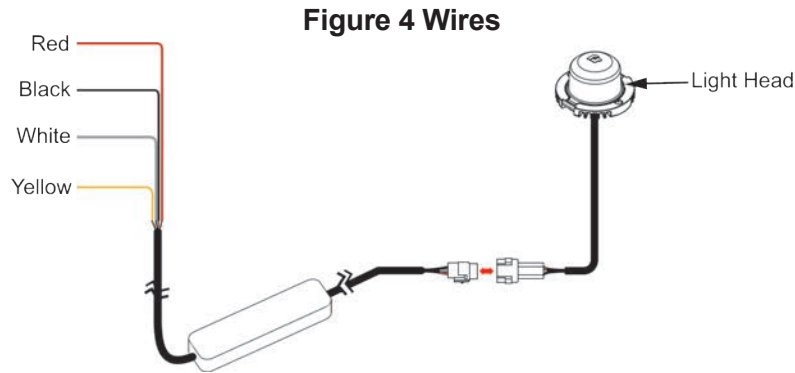
Wire Functions

- Red wire to +VDC (fuse@1A) for Flash Memory 1.
- Black wire to the chassis ground.
- White wire to +VDC (fuse@1A) for Flash Memory 2.

NOTE: Memory 2 has a higher priority than Memory 1.

- Yellow wires of multiple units connect together for synchronization.

NOTE: All units should be set up correctly and have the same pattern upon power-up.



Enabling Color Mode

Each Memory may flash in one of the four different color modes.

Color 1 (Memory1 default), Color 2 (Memory2 default), Color 1 Alternating with Color 2, Color 1 and Color 2.

To set the color mode:

1. Select the desired setting memory then apply +VDC to the red or white wires (depending on the desired setting memory), and then apply +VDC to the yellow wire for at least four seconds.
2. Once in Color Selection mode, the unit pulses in low-power in Color 1, Color 2, Color 1 alternating with Color 2, or Colors 1 and 2.
3. Remove the yellow wire from +VDC and momentarily apply to +VDC to change the Color Mode: Color 1 >> Color 2 >> Color 1 alternating with Color 2 >> Colors 1 and 2.
4. Exit Color Selection by applying +VDC to the yellow wire for four seconds or longer or by disconnecting all power.

Synchronizing Multiple Units

Set each unit to one of these groups:

- Master (default)
- Slave-Sync
- Slave-Alt

If synchronized flashing is not required, select the desired flash pattern. For synchronized flashing, set one unit to the Master group and all other units to Slave-Sync or Slave-Alt.

To synchronize the units:

1. To enter Group Selection mode, apply +VDC to the red and white wires simultaneously and then apply +VDC to the yellow wire for over four seconds or longer.
2. Once in Group Selection mode, the unit steady burns in low power and pulses in high power:
 - Single pulse = Master (default)
 - Double pulse = Slave-Sync
 - Triple pulse = Slave-Alt
3. Remove the yellow wire from +VDC and momentarily apply it to +VDC to change the mode:
 - Slave-Sync units flash simultaneously with the Master unit.
 - Slave-Alt units flash alternately with the Master unit and all other Slave-Sync units.

Installation Instructions for 416900 and 416910 Corner LED Lights

- Exit Group Selection by applying +VDC to the yellow wire for at least four seconds or by disconnecting all power

NOTE: If no Master unit were present, all Slave units will flash initially and steady burn for 2 seconds to detect any synchronization signal. The installer/user may also use this to easily pick out SLAVE vs. Master units.

Flash Patterns

For Flash Pattern, momentarily apply +VDC to the yellow wire

- once for next pattern
- three times quickly to reset

NOTE: The Memory1 Flash Pattern default is FP#1. The Memory2 Flash Pattern default is FP#10.

Table 2 Flash patterns

#	Pattern	#	Pattern
1	Single 122	11	Single 73
2	Single 90	12	Mega
3	Single 113	13	Double 73
4	Triple 92.3	14	Quad 73
5	Triple 122	15	Quint 73
6	Triple 73	16	Ultra 73
7	Double 122	17	Single-Quad
8	Quad 122	8	Single H/L
9	Random	19	Single-Triple-Quint
10	Steady		

Getting Technical Support

For technical support, please contact:
Federal Signal Corporation
Phone: 1-800-443-9132
Email: empserviceinfo@fedsig.com

Getting Repair Service

The Federal Signal factory provides technical assistance with any problems that cannot be handled locally. Any product returned to Federal Signal for service, inspection, or repair must be accompanied by a Return Material Authorization (RMA). Obtain a RMA from a local Distributor or Manufacturer's Representative. Provide a brief explanation of the service requested, or the nature of the malfunction.

Address all communications and shipments to the following:

Federal Signal Corporation
Service Department
2645 Federal Signal Dr.
University Park, IL 60484-3167

Limited Warranty

This product is subject to and covered by a limited warranty, a copy of which can be found at www.fedsig.com/SSG-Warranty. A copy of this limited warranty can also be obtained by written request to Federal Signal Corporation, 2645 Federal Signal Drive, University Park, IL 60484, email to info@fedsig.com or call +1 708-534-3400.

This limited warranty is in lieu of all other warranties, express or implied, contractual or statutory, including, but not limited to the warranty of merchantability, warranty of fitness for a particular purpose and any warranty against failure of its essential purpose.



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