

2562523A REV. A 311

Safety Message to Installers

⚠ WARNING

People's lives depend on your safe installation of our products. It is important to read, understand, and follow all instructions shipped with this product and the related add-on products. In addition, listed below are some other important safety instructions and precautions you should follow:

- To properly install this product you must have a good understanding of automotive electrical procedures and systems, along with proficiency in the installation and use of safety warning equipment.
- When drilling or cutting into a vehicle structure be sure that both sides of the surface are clear of anything that could be damaged.
- Do not install equipment or route wiring in the deployment path of an airbag.
- If a vehicle seat is temporarily removed, verify with the vehicle manufacturer if the seat needs to be recalibrated for proper airbag deployment.
- Refer to the instructions included with related products for additional precautions and information.
- You should frequently inspect the Opticom to ensure that it is operating according to the original manufacturer's specifications and that it is securely attached to the vehicle.
- 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.

Installation Precautions

⚠ WARNING

READ AND UNDERSTAND INSTRUCTIONS

Included with Opticom™ Model 795H-EXT is the Installation Instruction Manual, part number 79-1000-0316 (Federal Signal part number 2562457) for the GTT Opticom Infrared System Model 795H Low Profile LED Emitter. Before installing the equipment, read, understand, and follow all directions in the manual. Failure to follow the instructions may result in property damage, serious injury, or death and/or void the warranty.

⚠ WARNING

INSTALLATION PRECAUTION

The Opticom External Model 795H-EXT must NOT be installed on any lightbar other than the Arjent S2, Legend, Vision, and Valor. The Opticom must be physically attached to these lightbars according to the instructions in this publication. All associated mounting brackets and hardware must be used with the lightbar as provided from the factory. Failure to follow this warning may result in property damage, serious injury, or death, and/or void the warranty.

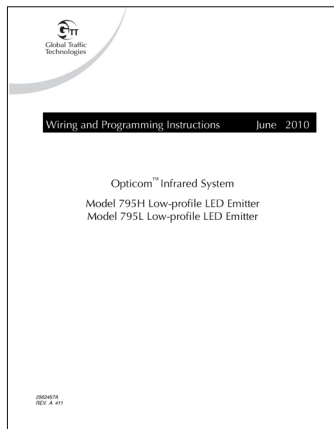
The Opticom Model 795-EXT LED Emitter must be installed only on the following Federal Signal lightbars:

- Arjent S2, Legend, Vision, or Valor on either the passenger- or driver-side mounting platform

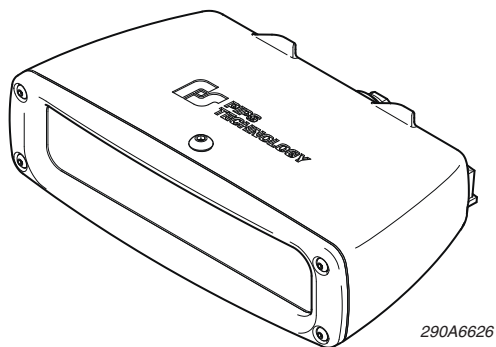
Parts Included with Model 795H-EXT

The Model 795H-EXT is shipped with the following parts:

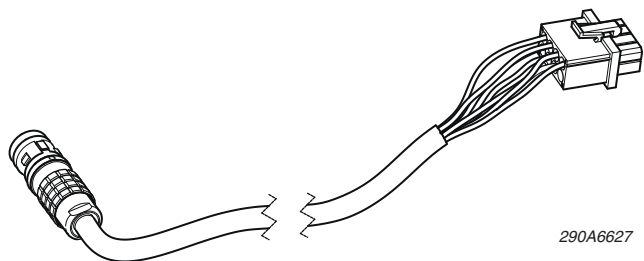
- Installation Instructions for the Opticom Infrared System Model 795H Low-Profile LED Emitter, part number 79-1000-0316 (Federal Signal part number 2562457)



- Opticom Infrared LED External Emitter



- 25-foot control cable for the Opticom Infrared LED External Emitter with connector compatible with the GTT programmable Interface Cable Assembly. (The Interface Cable Assembly is purchased separately.)



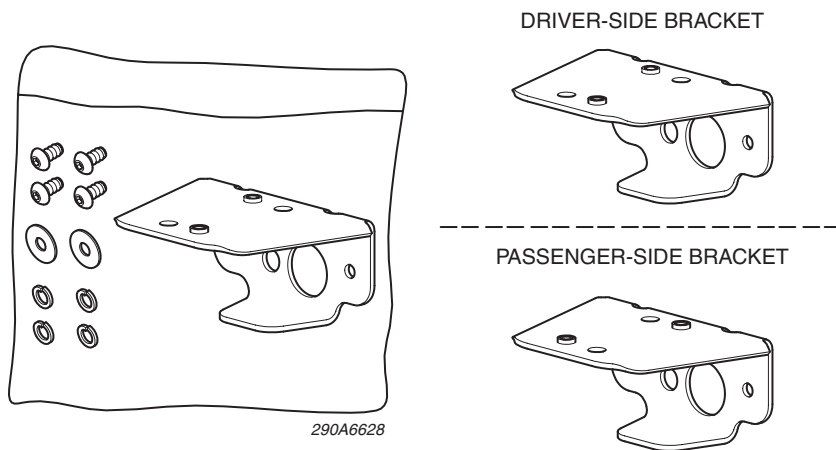
- 1-foot inline programming cable with a connector compatible with the GTT Interface Cable Assembly



Parts Included with 795H Opticom Lightbar Platforms

The parts listed in this section are available for platforms 795H-EXT-ARJD, 795H-EXT-ARJP (Arjent S2); 795H-EXT-LGDD, 795H-EXT-LGDP (Legend); 795H-EXT-VD, 795H-EXT-VP (Vision); and 795H-EXT-VALRD, 795H-EXT-VALRP (Valor).

- Model 795H-EXT Opticom
- Installation hardware kit, part number 8010017-D (driver-side) or 8010017-P (passenger-side), which includes:
 - ✓ Four M5 socket-head screws
 - ✓ Four lockwashers
 - ✓ Two flat washers
 - ✓ One driver-side or passenger-side mounting bracket



- Mounting platform and platform hardware kit for the Federal Signal lightbar

Tools Required

- Drill with 9/16" drill bit
- Allen wrench for the M5 socket-head screws
- Level
- Outdoor rated (UV-stabilized) cable ties
- Outdoor rated (UV-stabilized) RTV

Installing the Model 795H-EXT on the Mounting Platform

The Federal Signal Arjent S2 or Legend lightbar must be equipped with the proper mounting platform, which is attached to each side of the lightbar over the mounting feet to accommodate the externally mounted Opticom. The platform may already be installed on the lightbar if it has an ALPR camera from PIPS Technology, a Federal Signal company. If the platform is installed, only the 795H-EXT is required with either the 8010017D or 8010017-P installation hardware kit. If the platform is not installed, the Opticom

With the Arjent S2, Legend, Vision, and Valor Mounting Platforms

platform kit 795H-EXT-ARJD (driver side) or Model 795H-EXT-ARJP (passenger side) is required for the Arjent S2. The Model 795H-EXT-LGDD (driver side) or Model 795H-EXT-LGDP (passenger side) is required for the Legend.

For the Vision lightbar Model, 795H-EXT-VD (driver side) or Model 795H-EXT-VP (passenger side) is required. For the Valor lightbar, Model 795H-EXT-VALRD (driver side) or Model 795H-EXT-VALRP (passenger side) is required.

⚠ 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

SEAT REMOVAL PRECAUTION

If a vehicle seat is temporarily removed, verify with the vehicle manufacturer if the seat needs to be recalibrated for proper airbag deployment.

NOTICE

REFER TO THE FEDERAL SIGNAL MOUNTING PLATFORM INSTRUCTIONS

The driver-side or passenger-side mounting platform must be installed before you add the external Opticom.

For the Arjent S2 or the Legend, refer to manuals #AQ255230000001 (Arjent S2 mount) or #AQ255220000001 (Legend mount) from PIPS Technology for the proper installation procedures for adding the ALPR / Opticom mounting platform to your Federal Signal Arjent S2 or Legend lightbar. The manual is included in the platform kits. If it is not, contact PIPS Technology at 865-392-5540 for the latest copy.

For the Valor or Vision, refer to the instructions provided with the driver-side or passenger-side mounting platforms.

NOTICE

DRILLING PRECAUTIONS

When drilling holes, check the area you are drilling into to be sure you do not damage vehicle components. All drilled holes should be de-burred and all sharp edges should be smoothed. All wire routings going through drilled holes should be protected by a grommet or convolute/split loom tubing.

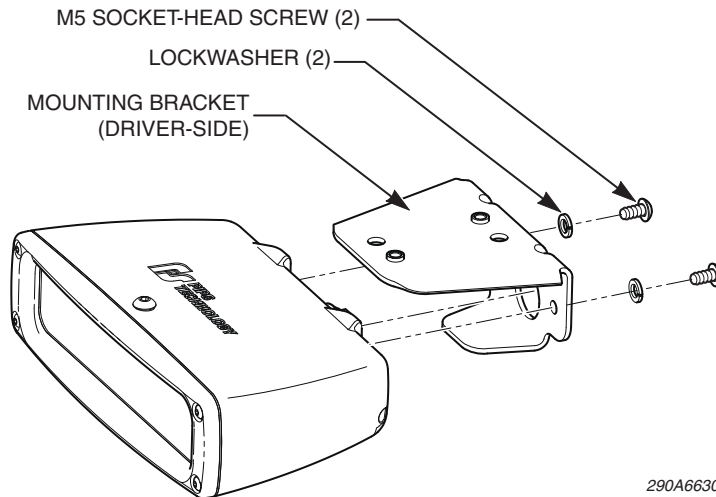
To install the external Opticom on the Arjent S2, Legend, Valor, or Vision lightbar:

1. Note that the mounting location of the external Opticom can be either on the passenger-side or driver-side platform attached to the lightbar. Ensure that the model of your external Opticom platform kit matches the intended mounting location. The platform kits are the driver-side models 795H-EXT-ARJD, 795H-EXT-LGDD, 795H-EXT-VD, and 795H-EXT-VALRD. The passenger-side models are 795H-EXT-ARJP, 795H-EXT-LGDP, 795H-EXT-VP, and 795H-EXT-VALRP.
2. Determine the routing path of the external 25-foot cable to the mounting platform on the lightbar.

NOTE: To program the Vehicle ID code into the Opticom emitter, the 25-foot cable is connected through the 1-foot programming cable to a PC. **DO NOT REMOVE THE WHITE END CONNECTOR.**

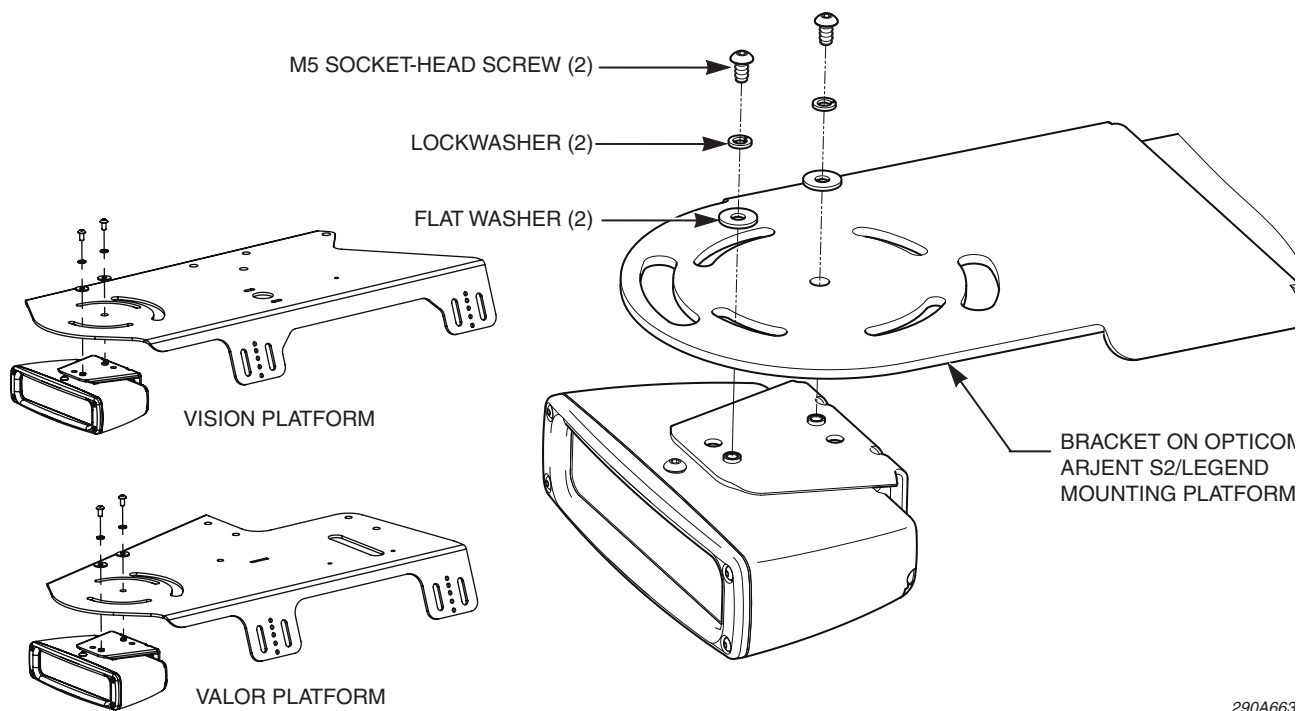
3. Route the cable from the termination area for the power and control inputs to the mounting platform of the lightbar. Use a 9/16" drill bit to drill the routing holes for the cable connector to reach the driver or passenger mounting side of the lightbar platform.
4. Place the Opticom into the mounting bracket and secure the bracket to the rear of the Opticom with two lockwashers and two M5 screws (Figure 1).

Figure 1 Bracket attached to Opticom (all lightbar platforms)



5. Attach the Opticom with the bracket to the mounting platform with two flat washers, two lockwashers, and two M5 socket-head screws. (Figure 2). Ensure the Opticom is facing straight forward is parallel with the road surface.

Figure 2 Opticom attached to Federal Signal mounting platforms



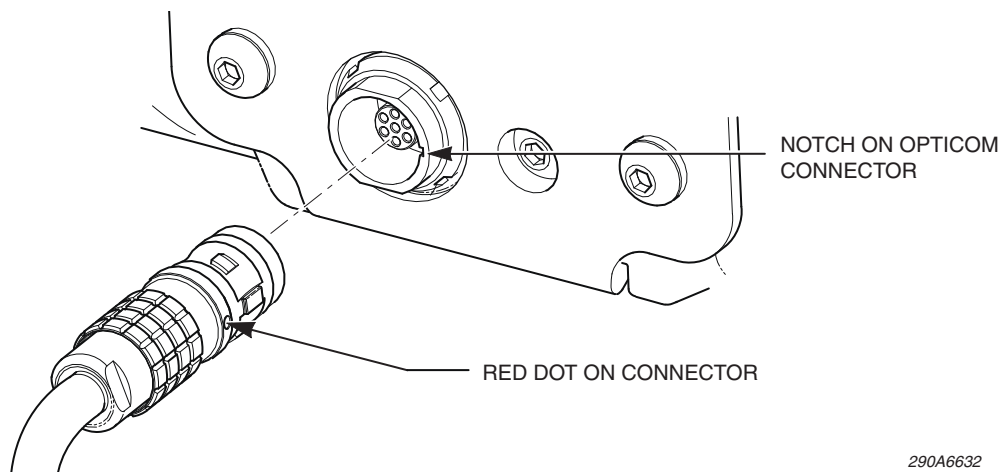
⚠ WARNING

MAINTAIN PROPER OPTICOM ALIGNMENT

Failure to maintain the proper alignment of the Opticom may cause it to malfunction, resulting in property damage, serious injury, or death.

6. Use a level to ensure that the Opticom does not tilt up or down and is parallel to the road surface. If it is tilted, refer to the instruction manuals included with the mounting feet or platform kit to adjust the lightbar mounting feet and the camera platform to horizontally level the Opticom.
7. Connect the 25-foot control cable to the back of the Opticom. Align the red dot on the cable connector to the notch on the mating connector of the Opticom, which may also have a red dot (Figure 3). Ensure the connector is fully seated with the mating connector.

Figure 3 Control cable connected to Opticom



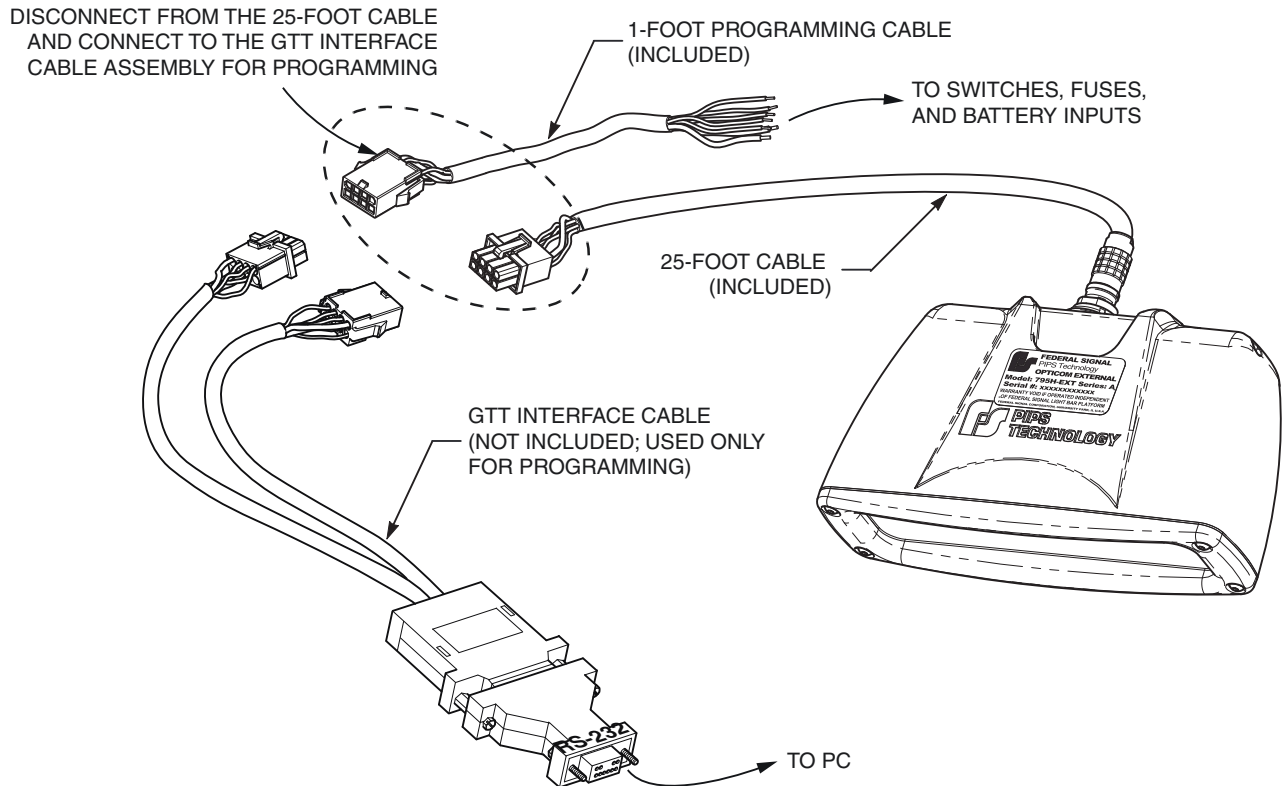
⚠ WARNING

DO NOT RE-TERMINATE CABLE CONNECTOR

If there is excess slack in the cable length, DO NOT shorten the cable length by re-terminating the end connector. Failure to follow this warning may cause the malfunction of the Opticom, resulting in property damage, serious injury, or death, and/or a voided limited warranty.

8. Remove the excess slack in the routing cable to the area where the power and control inputs are located.
9. To secure the cable on the lightbar, use the outdoor-rated, UV-stabilized cable ties.
10. Apply an outdoor-rated, UV-stabilized RTV around all drilled holes to the external environment.
11. See Figure 4 on page 7. Connect the 1-foot programming cable to the end of the 25-foot control cable. Note that the 1-foot cable is used as an inline connector for programming the vehicle ID number into the GTT Model 795H Opticom. The GTT Interface Cable Assembly supplied by GTT is required along with downloadable GTT software for programming. For programming instructions, see Section 5.5 in the Wiring and Programming Instructions manual included with the Opticom, part number 79-1000-0316 (Federal Signal part number 2562457).
12. Connect the seven colored leads at the end of the programming cable to the control switches, fuses, and battery inputs.

Figure 4 Connections for programming cable and Opticom emitter



Testing the Opticom Installation

Following the installation and final wiring instructions provided with the GTT Model 795H -EXT Opticom, test the Opticom while driving to Ensure the emitter works with the detectors in your municipality per the standards of GTT and your municipality.

Testing the Warning System

⚠ WARNING

LIGHT HAZARD

To be an effective warning device, an emergency warning system 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.

⚠ WARNING

SOUND HAZARD

All effective sirens and horns produce loud sounds (120 dB) that may cause permanent hearing loss. Always minimize your exposure to the sound of the siren or horn, and wear hearing protection. Do not sound the siren or horn indoors or in enclosed areas where you and others will be exposed to the sound.

After the installation, test the emergency warning system to ensure that it is operating properly. Also test all vehicle functions, including horn operation, vehicle safety functions, and vehicle lighting systems to ensure proper operation. Ensure that the installation has not affected the vehicle operation or changed any vehicle safety functions or circuits. After testing is complete, provide a copy of these instructions to the instructional staff and all operating personnel.

Do not test the sound and light system of the vehicle while driving. Operating the vehicle warning systems may pose a hazard to the operator and other drivers if the systems do not function as expected. Test the vehicle only in a controlled environment.

Limited Warranty

Global Traffic Technologies, LLC (GTT) provides a limited warranty from the date of purchase for the components within the housing of the GTT Opticom Model 795H-EXT. For details, see the Model 795H Wiring and Programming Instructions manual, part number 79-1000-0316 (Federal Signal part number 2562457) supplied with the Opticom. Please provide GTT with the purchase date and the serial number of the Model 795H-EXT when calling for technical support. The serial number is printed on the label on the rear of the Opticom.

Getting Technical Support and Service

If the Opticom Model 795H-EXT is:

- ✓ within the GTT limited warranty and powers up, but does not operate properly, or
- ✓ if you need technical support for the operation of the Opticom,

contact the GTT Service Department at:

Global Traffic Technologies, LLC
7800 Third Street North
St. Paul, Minnesota 55128-5441
1-800-258-4610
<http://www.gtt.com>

If the Opticom Model 795H-EXT is within the GTT limited warranty and:

- ✓ does not power up, or
- ✓ after you have contacted GTT Technical Support and the Opticom does not operate per the instructions provided by GTT Technical Support or
- ✓ you need assistance when installing the Opticom,

contact the Federal Signal Service Department at:

Federal Signal Corporation
Public Safety Systems
2645 Federal Signal Drive
University Park, Illinois 60484-3167
1-800-433-9132
<http://www.fedsig.com>