

WHELEN[®]

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Installation Guide: LED Mirror-Beam™

Models: MBLT98, MBMT98 and MBPS00
1992-98 Chevy Tahoe & Suburban

Safety First

This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information is contained herein that could prevent serious injury or damage.

- **Proper installation of this product requires the installer to have a good understanding of automotive electronics, systems and procedures.**
- **If mounting this product requires drilling holes, the installer MUST be sure that no vehicle components or other vital parts could be damaged by the drilling process. Check both sides of the mounting surface before drilling begins. Also de-burr any holes and remove any metal shards or remnants. Install grommets into all wire passage holes.**
- **If this manual states that this product may be mounted with suction cups, magnets, tape or Velcro™, clean the mounting surface with a 50/50 mix of isopropyl alcohol and water and dry thoroughly.**
- **Do not install this product or route any wires in the deployment area of your air bag. Equipment mounted or located in the air bag deployment area will damage or reduce the effectiveness of the air bag, or become a projectile that could cause serious personal injury or death. Refer to your vehicle owners manual for the air bag deployment area. The User/Installer assumes full responsibility to determine proper mounting location, based on providing ultimate safety to all passengers inside the vehicle.**
- **For this product to operate at optimum efficiency, a good electrical connection to chassis ground must be made. The recommended procedure requires the product ground wire to be connected directly to the NEGATIVE (-) battery post.**
- **If this product uses a remote device to activate or control this product, make sure that this control is located in an area that allows both the vehicle and the control to be operated safely in any driving condition.**
- **Do not attempt to activate or control this device in a hazardous driving situation.**
- **This product contains either strobe light(s), halogen light(s), high-intensity LEDs or a combination of these lights. Do not stare directly into these lights. Momentary blindness and/or eye damage could result.**
- **Use only soap and water to clean the outer lens. Use of other chemicals could result in premature lens cracking (crazing) and discoloration. Lenses in this condition have significantly reduced effectiveness and should be replaced immediately. Inspect and operate this product regularly to confirm its proper operation and mounting condition. Do not use a pressure washer to clean this product.**
- **It is recommended that these instructions be stored in a safe place and referred to when performing maintenance and/or reinstallation of this product.**
- **FAILURE TO FOLLOW THESE SAFETY PRECAUTIONS AND INSTRUCTIONS COULD RESULT IN DAMAGE TO THE PRODUCT OR VEHICLE AND/OR SERIOUS INJURY TO YOU AND YOUR PASSENGERS!**

For warranty information regarding this product, visit www.whelen.com/warranty

To Remove the Side Mirror Assembly:

1. Remove the door panel from the vehicle.
2. Remove the hex nuts that secure the mirror assembly to the vehicle. Unplug the mirror assembly harness cable from the door's power harness.
3. Carefully remove the mirror assembly from the vehicle.

To Prepare the Mirror Assembly:

1. Locate the area indicated in Fig. 1.
2. After measuring the distances indicated, mark this location.
3. Visually confirm that no internal component of the mirror assembly will be damaged by drilling in this area. Tilt the top of the mirror glass outwards to gain a better view of the cavity behind the mirror.
4. Using a 3/8" drill bit, carefully drill into the area marked in Step 2. **Use a drill stop to prevent the bit from penetrating too deeply into the mirror assembly.** Be sure to remove any chips caused by the drilling process from the mirror.

To Prepare the Harness Cable:

Note: Because the harness cable must be routed through a specific, narrow and twisting path within the mirror assembly, it is necessary to temporarily extend the length of the harness with a temporary "snake".

1. Locate the tie-wrap (included) and cut the fastener-end off.
2. Locate the end of the harness cable that has SOCKET-type terminals installed on the free wires. Cut off the non-insulated wire (it is not used in this application).
3. Strongly secure the tie-wrap to the harness cable with electrical or similar tape (Fig.2). It is important to have a sufficient length of the tie-wrap secured to the harness (2" minimum).
4. The harness cable will now be routed through the mirror assembly.

Routing the Harness Cable:

1. Remove the Torx-head screws that secure the plastic mirror assembly to the metal mounting bracket. These screws are located on the bottom side of the mounting bracket (Fig.3). Separate the plastic mirror assembly from the mounting bracket.
2. Insert the end of the tie-wrap through the mounting bracket and into the mirror assembly via the same pathway as the mirror power cable. Push the tie-wrap through this opening until the end of the tie-wrap sticks out from behind the top, inboard corner of the mirror. Pull the tie-wrap until the slack in the harness is gone.
3. Now push the tie-wrap back into the mirror cavity and out the hole drilled in the "To prepare the mirror assembly" section. There should not be more than 4 or 5 inches of harness sticking out of the hole. If the length is different from this, adjust harness length accordingly.

The tie-wrap is now removed from the harness and wire terminals inserted into their 2 or 3 position connectors (see wiring diagram).

LED:

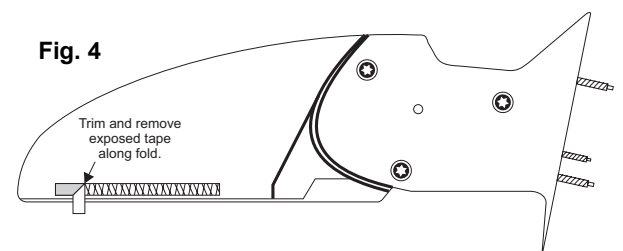
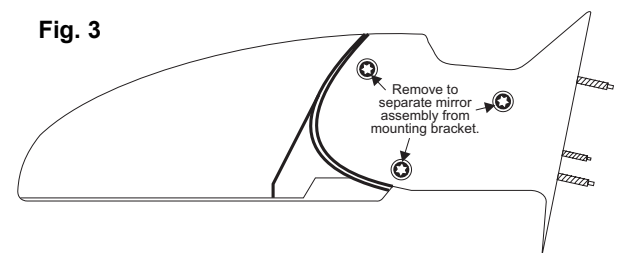
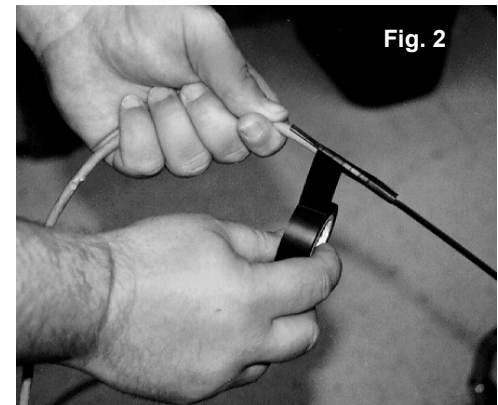
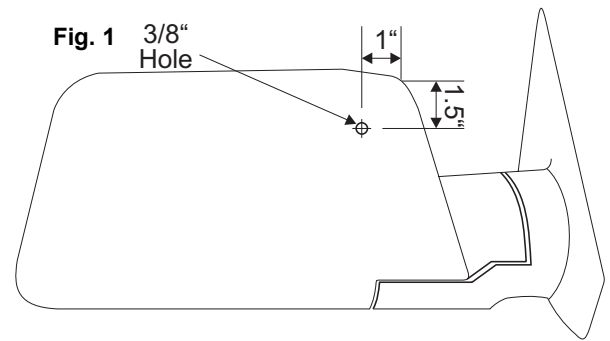
Position 1 = Wire is color of LED
Position 2 = None
Position 3 = BLK

Linear LED:

Position 1 = RED
Position 2 = GRY (Sync)
Position 3 = BLK
Loose = WHT/VIO (Scan-Lock™)

TIR LED

Position 1 = RED
Position 2 = GRY (Sync)
Position 3 = BLK
Loose = WHT/VIO (Scan-Lock™)



Affixing the MirrorBeam Housing to the Mirror Assembly:

Note: The following procedure requires that the mirror assembly be no colder than 60°F (18°C).

1. Re-mount the plastic mirror assembly onto the mounting bracket using the original hardware. Make sure that neither of the harness cables (LED and mirror) are crimped or pinched. Tighten the Torx-head screws firmly.
2. Thoroughly clean the plastic mirror assembly and the inside surface of the MirrorBeam housing using a 50/50 mixture of isopropyl (Not rubbing) alcohol and water. Dry completely.
3. Locate the three, 6" strips of double-sided adhesive tape (included) and position one 6" strip on the top and one on the bottom of the mirror assembly. when properly positioned, the tape will be centered between the inboard and outboard ends of the mirror assembly and the leading edge of the tape will be set back approximately 1/4" from the rear (mirror side) edge of the assembly. After the tape is positioned, it is important to apply pressure to the protective backing so that the tape adheres to the surface.
4. Cut the remaining 6" length of tape in half. Using the procedure outlined in the previous step, adhere one 3" length of tape to the outboard end of the mirror assembly and the remaining 3" length to the curved "neck" of the mirror assembly.
5. Fold the protective backing strips on the top, bottom and outboard tape strips so that 1/2" to 3/4" of backing is extended over the rear edge of the plastic mirror assembly. Trim and remove the exposed tape. Remove the protective backing from the tape strip on the "neck" of the mirror.
6. Mount the MirrorBeam housing onto the mirror assembly as shown. **The housing must fully engage the mirror assembly!** Press the housing firmly onto the exposed tape on the "neck" of the mirror.
7. The remaining protective backing strips must now be removed. To accomplish this, the housing must not be in contact with the backing strips. Starting with the outboard strip, and using a small, flat blade screwdriver (or similar tool) gently pry the housing about 1/4" away from the mirror assembly. Carefully pull the protective strip "tab" created in step 6, and gently remove it completely from the tape strip. Do not allow the strip to tear while being removed.
8. Repeat for the tape strips on the top and bottom of the assembly.
9. Apply pressure to the MirrorBeam assembly at the tape locations. Maintain pressure for a minimum of 20 minutes to allow the tape to properly setup. This can be accomplished by wrapping the MirrorBeam/mirror assembly tightly with adhesive tape. See important adhesion information at the end of this manual.
10. Locate the factory-drilled hole in the MirrorBeam housing. Using a 1/8" drill bit and the MirrorBeam housing as a template, drill a hole into the mirror housing. Locate the #8 x 1/2" sheet metal screw (included) and secure the MirrorBeam housing to the mirror housing.

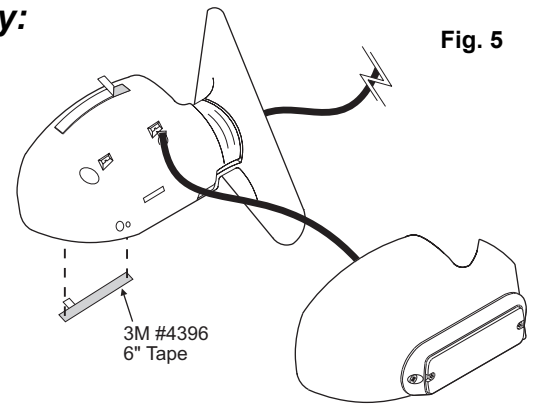


Fig. 5

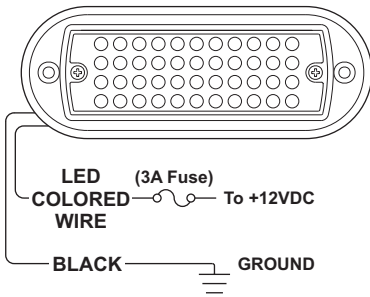
Re-assembling the MirrorBeam Assembly:

1. Re-connect the mirror assembly to its main power harness. Route the MirrorBeam harness through the door, along the same path as the vehicle's main power harness and connect to power (See wiring diagrams on next page).
- **FOR LED, connect to a switched +12VDC power source. Install a 3 Amp fuse (customer supplied) within 2 wire feet of this source.**
2. Cut the non-insulated wire off the harness. After the connections are complete, confirm proper operation.
3. Using the original hardware, remount the mirror onto the vehicle.

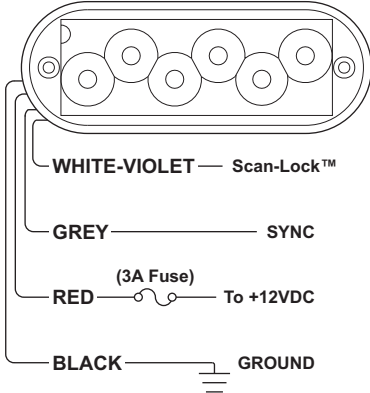
WARNING! The tape adhesive used in this procedure is fully bonded after 72 hours @ 70°F (21°C). During this period, do not expose the MirrorBeam to any un-necessary force, such as the high-pressure water from a car wash.

WARNING! The outer surfaces of this product may be cleaned with mild soap and water. Use of any other chemicals may void product warranty. Do not use a pressure washer.

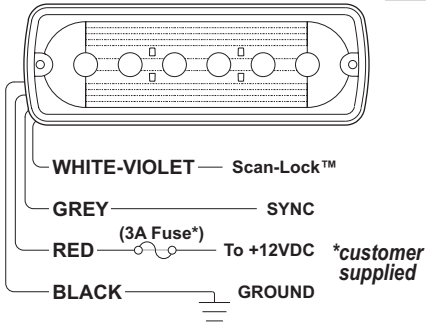
Items 4, 5, 6, 7 & 8 (LED)



Items 18, 19, 20 & 21 (TIR)



Items 22, 23, 24, 25 & 26 (LINEAR)



| QTY | QTY | QTY | QTY | QTY | QTY | QTY | QTY | QTY | QTY | QTY | ITEM | PART NUMBER | DESCRIPTION |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----------------|---|
| | | | | | | | | | | * | | 01-06836082()L | MIRROR BEAM DRIVER SIDE LED - TAHOE |
| | | | | | | | | | * | | | 01-06836086()L | MIRROR BEAM DRIVER SIDE LED - SUBURBAN |
| | | | | | | | | | * | | | 01-06836082()T | MIRROR BEAM DRIVER SIDE TIR - TAHOE |
| | | | | | | | | | * | | | 01-06836086()T | MIRROR BEAM DRIVER SIDE TIR - SUBURBAN |
| | | | | | | | | | * | | | 01-06836092()L | MIRROR BEAM PASSENGER SIDE LED - TAHOE |
| | | | | | | | | | * | | | 01-06836096()L | MIRROR BEAM PASSENGER SIDE LED - SUBURBAN |
| | | | | | | | | | * | | | 01-06836092()T | MIRROR BEAM PASSENGER SIDE TIR - TAHOE |
| | | | | | | | | | * | | | 01-06836096()T | MIRROR BEAM PASSENGER SIDE TIR - SUBURBAN |
| | | | | | | | | | * | | | 01-06836092()R | MIRROR BEAM PASSENGER SIDE LINEAR LED - TAHOE |
| | | | | | | | | | * | | | 01-06836096()R | MIRROR BEAM DRIVER SIDE LINEAR LED - SUBURBAN |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | --- | SCREW / #10-24 X 3/4" PPHMS |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | --- | SCREW / #8 X 5/8" PPHSMS SS |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2A | --- | #8 FASTEX SCREW GROMMET |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 11-763226-000 | BLACK FLANGE |
| - | - | - | - | A/R | A/R | - | - | A/R | A/R | A/R | 4 | 02-0383558513 | ASSY / LED FLASHER / AMBER-CLEAR 3 POS |
| - | - | - | - | A/R | A/R | - | - | A/R | A/R | A/R | 5 | 02-0383558523 | ASSY / LED FLASHER / BLUE-CLEAR 3 POS |
| - | - | - | - | A/R | A/R | - | - | A/R | A/R | A/R | 6 | 02-03835585C3 | ASSY / LED FLASHER / WHITE-CLEAR 3 POS |
| - | - | - | - | A/R | A/R | - | - | A/R | A/R | A/R | 7 | 02-0383558543 | ASSY / LED FLASHER / GREEN-CLEAR 3 POS |
| - | - | - | - | A/R | A/R | - | - | A/R | A/R | A/R | 8 | 02-0383558553 | ASSY / LED FLASHER / RED-CLEAR 3 POS |
| - | - | - | 1 | - | 1 | - | - | - | - | - | 9 | 11-483109-R00 | HOUSING / PASSENGER SIDE / TAHOE |
| - | - | 1 | - | 1 | - | - | - | - | - | - | 10 | 11-483562-R00 | HOUSING / PASSENGER SIDE / SUBURBAN |
| - | - | - | - | - | - | - | 1 | - | 1 | 1 | 11 | 11-483109-L00 | HOUSING / DRIVER SIDE / TAHOE |
| - | - | - | - | - | - | - | 1 | - | 1 | - | 12 | 11-483562-L00 | HOUSING / DRIVER SIDE / SUBURBAN |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 13 | 15-08141A-080 | SCREW / #8 X 1/2" PPHSMS BLACK PHOS |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 14 | 66-0416642-00 | MOUNTING TAPE (Not Shown) |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 15 | 46-0742172-15 | CABLE ASSEMBLY 3/C |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 16 | 01-0415532-00 | KIT / CABLE INSTALLATION |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 17 | 26-0315001-14 | TY-WRAP / 14 1/2" BLACK (Not Shown) |
| - | - | A/R | A/R | - | - | A/R | A/R | - | - | - | 18 | 01-0663507123 | ASSY / TIR FLASHER / AMBER-CLEAR 3 POS |
| - | - | A/R | A/R | - | - | A/R | A/R | - | - | - | 19 | 01-0663507223 | ASSY / TIR FLASHER / BLUE-CLEAR 3 POS |
| - | - | A/R | A/R | - | - | A/R | A/R | - | - | - | 20 | 01-0663507C23 | ASSY / TIR FLASHER / WHITE-CLEAR 3 POS |
| - | - | A/R | A/R | - | - | A/R | A/R | - | - | - | 21 | 01-0663507523 | ASSY / TIR FLASHER / RED-CLEAR 3 POS |
| A/R | A/R | - | - | - | - | - | - | - | - | - | 22 | 01-0664013-10 | ASSY / PASSIVE LINEAR LED / AMBER-AMP |
| A/R | A/R | - | - | - | - | - | - | - | - | - | 23 | 01-0664013-20 | ASSY / PASSIVE LINEAR LED / BLUE-AMP |
| A/R | A/R | - | - | - | - | - | - | - | - | - | 24 | 01-0664013-30 | ASSY / PASSIVE LINEAR LED / WHITE-AMP |
| A/R | A/R | - | - | - | - | - | - | - | - | - | 25 | 01-0664013-40 | ASSY / PASSIVE LINEAR LED / GREEN-AMP |
| A/R | A/R | - | - | - | - | - | - | - | - | - | 26 | 01-0664013-50 | ASSY / PASSIVE LINEAR LED / RED-AMP |

IMPORTANT NOTE: If your Mirror Beam housing has metal inserts where the lighthouse mounts, you will use ITEM 1 to mount the lighthouse. if it has no metal insert, you will use ITEMS 1A and 2.

PART NUMBER KEY:
01-0683608

MODEL

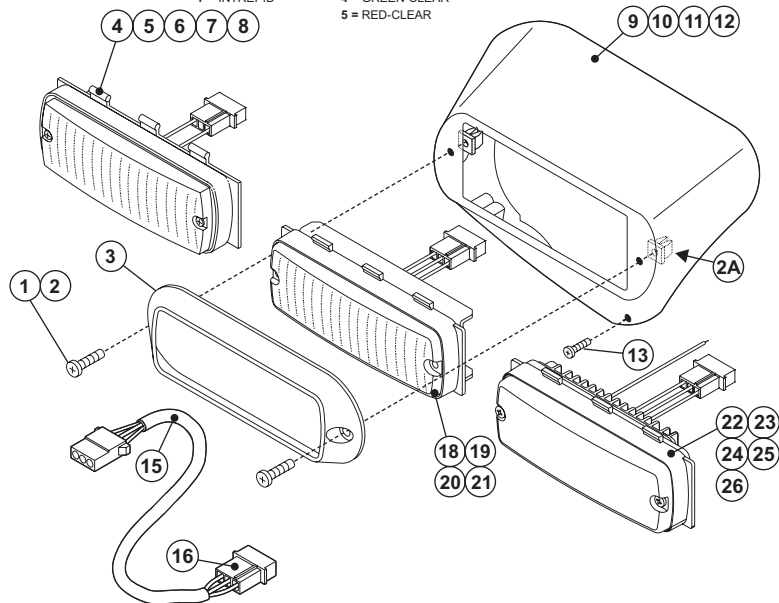
- 0 = CROWN VICTORIA
- 1 = LUMINA
- 2 = TAHOE
- 3 = EXPEDITION
- 4 = EXPLORER
- 5 = IMPALA
- 6 = SUBURBAN
- 7 = INTREPID

COLOR

- A = AMBER-AMBER
- B = BLUE-BLUE
- C = CLEAR-WHITE
- G = GREEN-GREEN
- R = RED-RED
- 1 = AMBER-CLEAR
- 2 = BLUE-CLEAR
- 4 = GREEN-CLEAR
- 5 = RED-CLEAR

LIGHTHEAD

- S = STROBE
- L = LED (5mm)
- T = TIR LED
- P = LINEAR LED (PASSIVE)



OPERATION:

Depending on which lighthouse is installed in your Mirror-Beam, you may be able to change flash patterns or synchronize lighthouses to flash simultaneously or alternately. This manual gives you basic wiring and installation. For information on the operation of your Mirror-Beam refer to the lighthouse manual included.

WARNING! All customer supplied wires that connect to the positive terminal of the battery must be sized to supply at least 125% of the maximum operating current and FUSED at the battery to carry that load. **DO NOT USE CIRCUIT BREAKERS WITH THIS PRODUCT!**