

WHELEN[®]

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Installation Guide:
TIR3™ Super-LED® & Linear-LED®
Inner Edge® Interior Lightbars
Traffic Advisor™ Series
2004-06 Ford Crown Victoria
2007 Chevrolet Impala

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 owner's 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. Lens 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!**

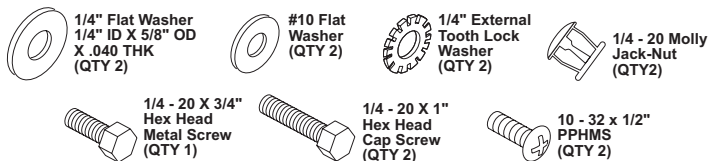
For warranty information regarding this product, visit www.whelen.com/warranty

Installation:

IMPORTANT! Before returning this vehicle to active service, visually confirm proper operation of this product, as well as all vehicle components/equipment.

1. Remove the 2 plastic push-in fasteners from above the rear window presently holding up the headliner and drill out the remaining holes with a 7/16" drill.

Supplied Mounting Hardware



WARNING: The 1/4-20 X 3/4" hex head metal screw supplied, is **ONLY** to be used to install the jack nuts. It is the wrong size for actual installation.

WARNING: When tightening the mounting or installation bolts make **absolutely sure** that they do not hit the inner surface of the roofs outer skin. Watch for dimpling on the outside of the roof.

2. Assemble the friction wrench to the jack nut with the special hex bolt with the projections against the head of the jack nut. Push the jack nut into the 7/16" hole then tighten firmly with a socket wrench while holding the friction wrench from turning. Remove the hex bolt and friction wrench (Fig. 1).

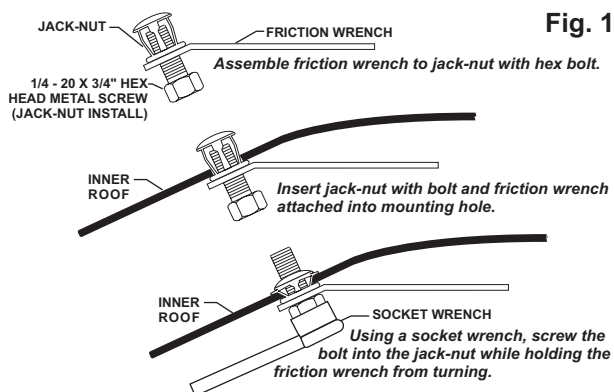
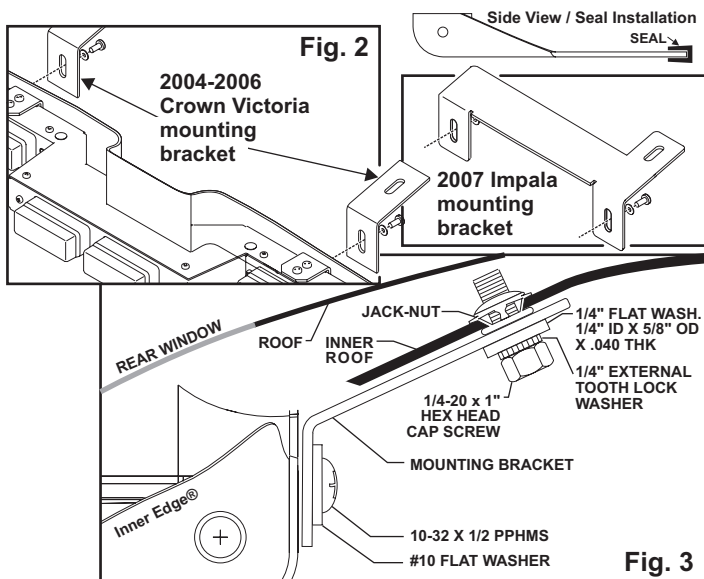


Fig. 1

3. Mount the short part of the brackets (Fig. 2) onto the lightbar snugly, but so that they can be adjusted.
4. Install the rubber window seal (included) onto the lower, leading edge of the housing (see below).
5. Tighten the long ends of the brackets to the roof using the supplied 1/4 - 20 X 1" hex head bolts (Fig. 3).

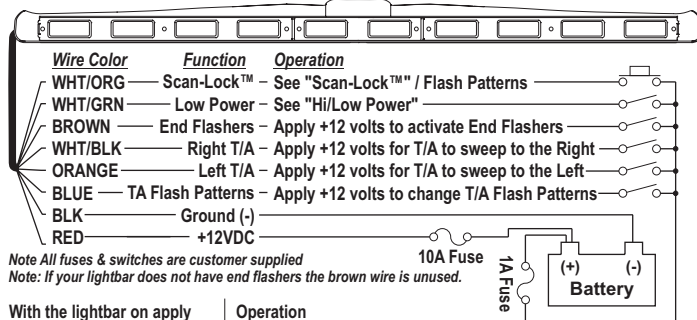


Wiring:

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**

2004-2006 Crown Victoria: Powered and operated by the 8-conductor control cable exiting the lightbar. Connections are as shown in the wiring diagram.

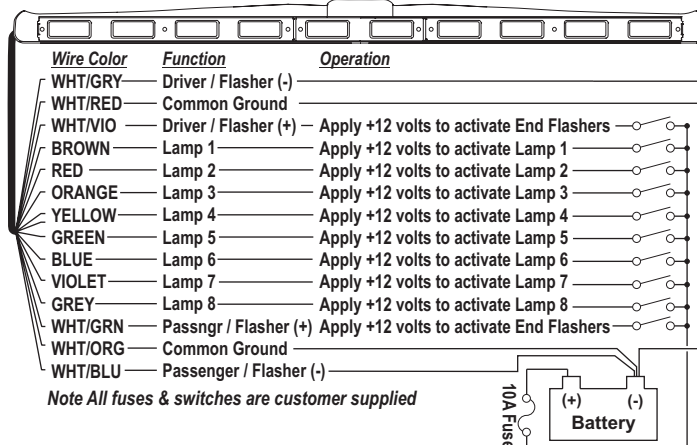
Wiring Diagram 2004-06 Crown Victoria



With the lightbar on apply +12 volts to:	Operation
WHITE/BLACK	T/A sweep RIGHT Select from the TA patterns using Scan-Lock
ORANGE	T/A sweep LEFT Select from the TA patterns using Scan-Lock
WHT/BLK & ORANGE	T/A split Select from the TA patterns using Scan-Lock
BROWN	End Flashers (if present) Select standard pattern with Scan-Lock
BLUE	T/A Flashers - Choose from the Standard Flash Patterns

2007 Chevrolet Impala: Powered by a 14-conductor control cable exiting the lightbar. Connections are as shown in the wiring diagram.

Wiring Diagram 2007 Impala



Operation:

Scan-Lock™ (WHITE/ORANGE):

Turn on the lightbar then turn on the desired function:

TO CYCLE THROUGH ALL PATTERNS: To cycle forward apply +12 volts to the WHT/ORG wire for less than 1 second and release. To cycle backward apply +12 volts to the WHT/ORG wire for more than 1 second and release.

SET A PATTERN AS DEFAULT: When the desired pattern is displayed allow it to run for more than 5 seconds.

RESET TO THE FACTORY DEFAULT PATTERN: Turn off power and apply +12 volts to the WHT/ORG wire while turning on power.

To control Scan-Lock a normally open momentary switch can be used.

Traffic Advisor Patterns:

Sequence On Solid (default pattern) > Sequence on Sequence off > 1 Lamp Triple-Flash™ > 2 Lamp TripleFlash™

Standard & TA Flash Patterns:

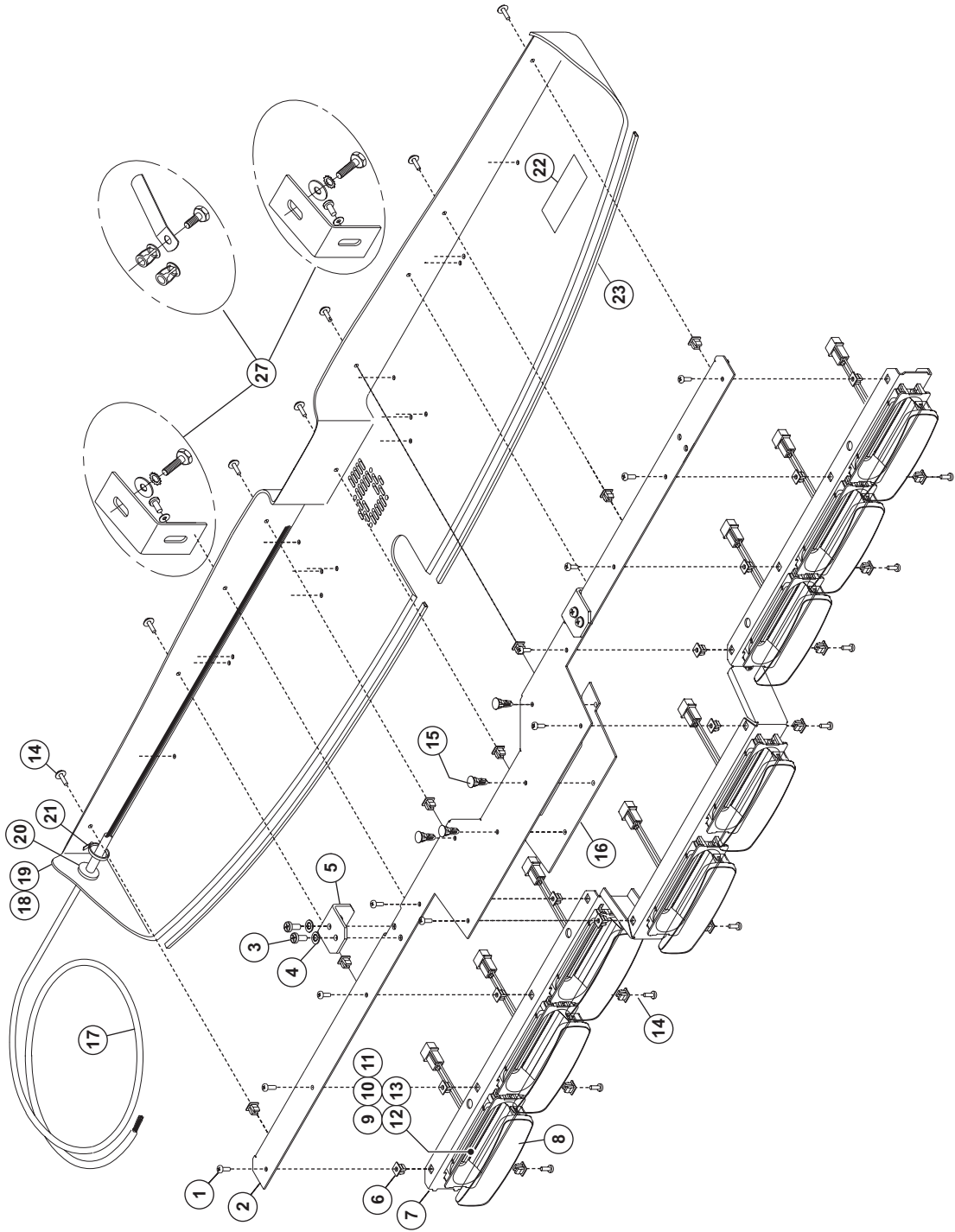
SignalAlert™ 75 > CometFlash® 75 > SingleFlash 375 > SingleFlash 150 > Single-Flash 75 > ActionFlash™ > ActionScan™

Hi-Low Power (WHITE/GREEN):

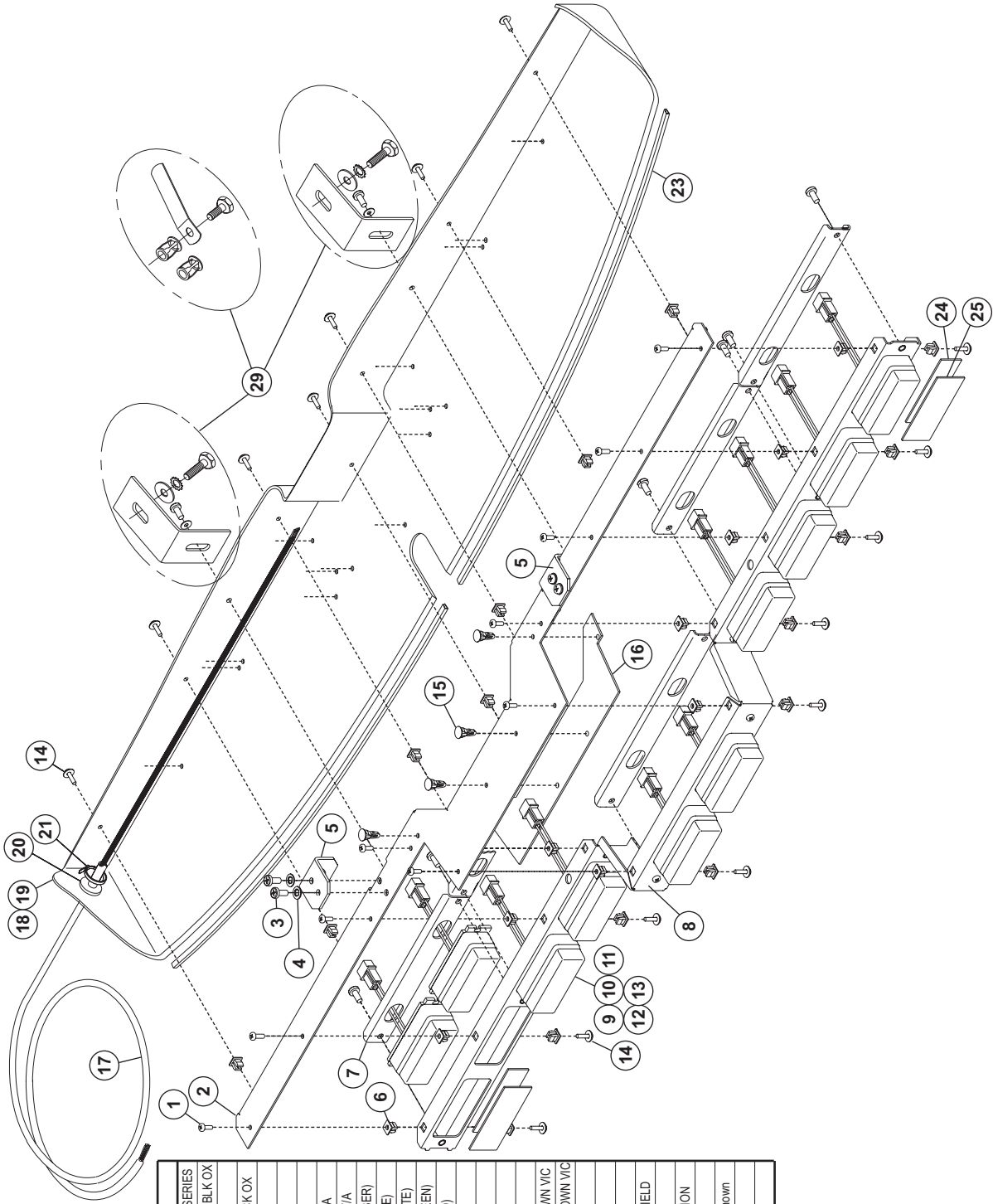
This feature allows the user to step the unit down to low power operation for nighttime use. The type of switch used depends on how the operator wishes the Hi-Low feature to function:

Latching Mode: By applying positive voltage to the WHT/GRN wire for less than 1 second, the lightbar is "latched" into low power. The unit must be turned off and then back on to restore normal high power operation (Momentary Switch).

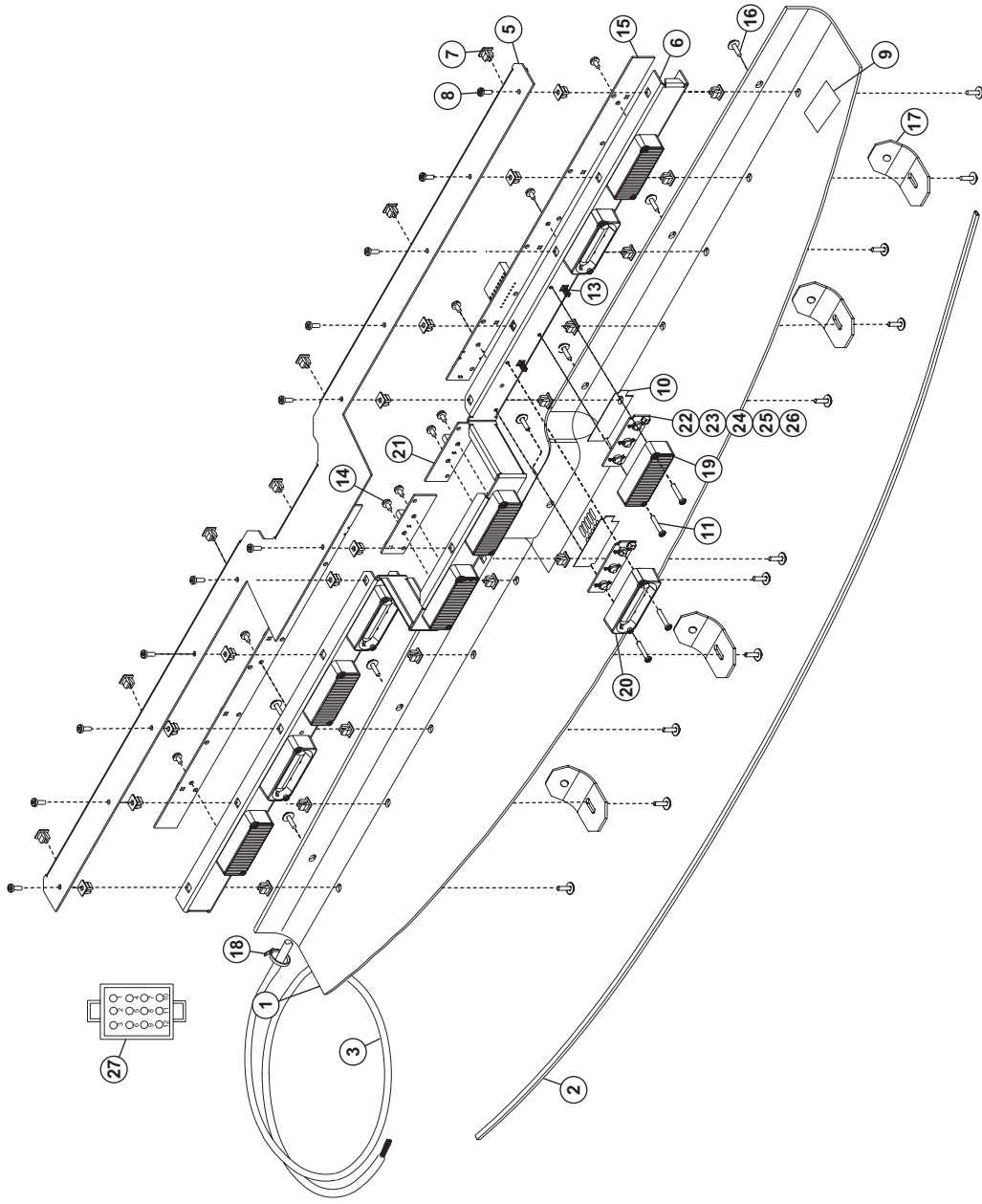
Level Mode: Applying positive voltage to the WHT/GRN wire for more than 1 second holds the lightbar in low power mode until voltage is removed (Toggle Switch).



QTY	ITEM	PART NUMBER	DESCRIPTION
*	01-0684406-__	INNER EDGE® 8 LINEAR T/A	
10	15-06521B-060	SCREW, #6 X 3/8" PPH P. LK SS BLK OX	
1	07-784399-023	PLATE, MOUNTING	
4	3 14-082215-050	#8-32 X .312" PPHMS SS BLK OX	
4	4 16-0821220-40	WASHER, #8 INT TOOTH LOCK	
2	5 07-243216-023	BRACKET, MOUNTING	
25	6 13-062C40-16J	SCREW GROMMET, #6-#8 FASTEX	
1	7 07-284398-023	BRACKET, LIGHTHEAD	
8	8 68-3963604-30	LENS, CLEAR, NON-OPTIC SNAP-ON	
A/R	9 01-0264260-52	LTHD. LINEAR-LED®, RED-STEADY	
A/R	10 01-0264260-42	LTHD. LINEAR-LED, GRN-STEADY	
A/R	11 01-0264260-32	LTHD. LINEAR-LED, WHT-STEADY	
A/R	12 01-0264260-22	LTHD. LINEAR-LED, BLU-STEADY	
A/R	13 01-0264260-12	LTHD. LINEAR-LED, AMB-STEADY	
15	14 15-M23B1C-120	SCREW, M4, 2X 12MM, BLACK OXIDE	
4	15 20-0017569-00	SPACER, MOUNTING / PCB	
1	16 02-0164351-__	PCB ASSY, CTRL BOARD, REAR	
1	17 46-0743243-01	CABLE, 9-C, 18GA, TPR 20 not shown	
A/R	18 11-484270-000	HOUSING, INT LTBR, 04-05 CROWN VIC	
A/R	19 11-484335-000	HOUSING, INT LTBR, 05-06 CROWN VIC	
1	20 21-11121602-0	GROMMET	
1	21 26-0215001-06	TY-WRAP, 6"	
1	22 10-0523212-__	LABEL, INNER EDGE® 8 LINEAR TA	
2	23 38-0543284-22	SEAL, EXTRUD. - HOUSING-WNDSHLD	
2	46-0764463-00	HARNES, IN. EDGE LINEAR not shown	
1	25 39-0408323-04	HOUSING, SOCKET, - 8-POS AMP	
A/R	26 26-0215001-03	TY-WRAP, 3"	
A/R	27 01-0484355-00	MOUNTING-KIT, 04-06 CROWN VIC	



QTY/ITEM	PART NUMBER	DESCRIPTION
*	01-06884355-	LIGHTBAR, INNER EDGE®, TIR3™ T/A SERIES
10	15-06521B-060	SCREW, #6 X 3/8" PPH PLASTI-LOK SS BLK OX
1	07-784347-023	PLATE, MOUNTING - INNER EDGE T/A
14	3-14-082215-050	SCREW, #8-32 X .312" PPHMS SS BLACK OX
4	16-0821220-40	#8 INTERNAL TOOTH LOCKWASHER
2	07-243216-023	BRACKET, MOUNTING
27	13-062C40-16J	SCREW GROMMET, #6 - #8
5	07-243251-000	BRACKET, 3 TIR-MTG - INNER EDGE T/A
1	07-284346-023	BRACKET, LIGHTHEAD, INNER EDGE T/A
A/R	02-036B494212	LIGHTHEAD, TIR3™ LED STEADY (AMBER)
A/R	02-036B494222	LIGHTHEAD, TIR3™ LED STEADY (BLUE)
A/R	02-036B494232	LIGHTHEAD, TIR3™ LED STEADY (WHITE)
A/R	02-036B494242	LIGHTHEAD, TIR3™ LED STEADY (GREEN)
A/R	02-036B494252	LIGHTHEAD, TIR3™ LED STEADY (RED)
13	15-M23B1C-120	SCREW, M4.2 X 12MM, BLACK OXIDE
4	20-0017569-00	SPACER, MOUNTING - PCB
1	02-0164351-	PCB ASSY, CONTROL BOARD, REAR
1	46-0743243-01	CABLE ASSY, 9-C 18GA, TPR 20"
A/R	11-484270-000	HOUSING, INT. LIGHTBAR '04-'05 CROWN VIC
A/R	11-484335-000	HOUSING, INT. LIGHTBAR '05-'06 CROWN VIC
1	21-11121602-0	GROMMET
1	26-0215001-06	TY-WRAP, 6"
1	10-0523213-	LABEL (Not shown)
2	38-0543284-22	SEAL, EXTRUDED - HOUSING/WINDSHIELD
A/R	38-0123089-000	T/A SPACER GASKET
A/R	09-1323185-00	PANEL, FILLER - INNER EDGE 8-POSITION
2	46-0764463-00	HARNES ASSY, Internal-Not shown
1	39-0408323-04	HOUS, SCCT - 8-POSITION AMP, Not shown
A/R	26-0215001-03	TY-WRAP, 3"
A/R	01-04884355-00	MOUNTING KIT, '04-'06 CROWN VIC



QTY/ITEM	PART NUMBER	DESCRIPTION
*	01-0684690-00	FULL LO-PRO™ INNER EDGE® 10-LIGHT
1	11-484687-000	HOUSING, UPPER REAR, FULL 2007 IMPALA
1	2 38-0543284-45	SEAL, EXTRUDED
1	3 46-076A130-00	ASSEMBLY T/D HARNESS
2	4 46-0743466-00	HARNESS, T/D INTERCONNECT
1	5 07-7847733-023	PLATE, MOUNTING
1	6 07-284732-023	BRACKET, LIGHTHEAD MOUNT
29	7 13-062C4D-16J	SCREW, GROMMET #6-8
11	8 15-06521B-060	SCREW, 6 X 3/8" PPH PLASTI-LOK
1	9 10-0523329-__	LABEL
1	10 56-023279-000	INSULATOR
20	11 14-040216-120	SCREW, 4-40 X 3/4" PPHMS SS
1	12 01-0484690-00	KIT, MTG. 12LT UP REAR 07 IMPALA (not shown)
10	13 40-0620400-03	HEADER, .1" X 2 POS DOUBLE
10	14 14-062216-041	SCREW, 6-32 X 1/4" PPHMS W/LOCKWASHER
2	15 02-016A057-01	ASSY, PCB, CONTROL BOARD
18	16 15-M23B1C-120	SCREW, M4.2 X 12MM, BLACK OXIDE
4	17 07-243360-023	BRACKET, MOUNTING
1	18 26-0215001-06	TY-WRAP, 6"
6	19 68-5964727-00	REFLECTOR, TIR
4	20 02-0323306-00	LINEAR ASSEMBLY
2	21 02-0146537-00	1-LIGHT CONNECTOR BOARD
A/R	22 02-0164748-10	ASSY, PCB 3LED ARRAY - AMBER
A/R	23 02-0164748-20	ASSY, PCB 3 LED ARRAY - BLUE
A/R	24 02-0164748-30	ASSY, PCB 3 LED ARRAY - WHITE
A/R	25 02-0164748-40	ASSY, PCB 3 LED ARRAY - GREEN
A/R	26 02-0164748-50	ASSY, PCB 3 LED ARRAY - RED
1	27 39-0412014-14	HSS 12 POS. PIN AMP. (not shown)
2	28 39-0403023-04	HSS 3 POS. PIN AMP. (not shown)