

# WHELEN<sup>®</sup>

## ENGINEERING COMPANY INC.

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**Installation Guide:**  
**LED Traffic Advisor™**  
Model(s) TAL85, TAL85\*\*, TAL85W, TAL85W\*\*  
TAL65, TAL65W

### Warnings to Installers

Whelen's emergency vehicle warning devices must be properly mounted and wired in order to be effective and safe. Read and follow all of Whelen's written instructions when installing or using this device. Emergency vehicles are often operated under high speed stressful conditions which must be accounted for when installing all emergency warning devices. Controls should be placed within convenient reach of the operator so that they can operate the system without taking their eyes off the roadway. Emergency warning devices can require high electrical voltages and/or currents. Properly protect and use caution around live electrical connections. Grounding or shorting of electrical connections can cause high current arcing, which can cause personal injury and/or vehicle damage, including fire. Many electronic devices used in emergency vehicles can create or be affected by electromagnetic interference. Therefore, after installation of any electronic device it is necessary to test all electronic equipment simultaneously to insure that they operate free of interference from other components within the vehicle. Never power emergency warning equipment from the same circuit or share the same grounding circuit with radio communication equipment. All devices should be mounted in accordance with the manufacturer's instructions and securely fastened to vehicle elements of sufficient strength to withstand the forces applied to the device. Driver and/or passenger air bags (SRS) will affect the way equipment should be mounted. This device should be mounted by permanent installation and within the zones specified by the vehicle manufacturer, if any. Any device mounted in the deployment area of an air bag will damage or reduce the effectiveness of the air bag and may damage or dislodge the device. Installer must be sure that this device, its mounting hardware and electrical supply wiring does not interfere with the air bag or the SRS wiring or sensors. Mounting the unit inside the vehicle by a method other than permanent installation is not recommended as unit may become dislodged during swerving; sudden braking or collision. Failure to follow instructions can result in personal injury. Whelen assumes no liability for any loss resulting from the use of this warning device. **PROPER INSTALLATION COMBINED WITH OPERATOR TRAINING IN THE PROPER USE OF EMERGENCY WARNING DEVICES IS ESSENTIAL TO INSURE THE SAFETY OF EMERGENCY PERSONNEL AND THE PUBLIC.**

### Warnings to Users

Whelen's emergency vehicle warning devices are intended to alert other operators and pedestrians to the presence and operation of emergency vehicles and personnel. However, the use of this or any other Whelen emergency warning device does not guarantee that you will have the right-of-way or that other drivers and pedestrians will properly heed an emergency warning signal. Never assume you have the right-of-way. It is your responsibility to proceed safely before entering an intersection, driving against traffic, responding at a high rate of speed, or walking on or around traffic lanes. Emergency vehicle warning devices should be tested on a daily basis to ensure that they operate properly. When in actual use, the operator must ensure that both visual and audible warnings are not blocked by vehicle components (i.e.: open trunks or compartment doors), people, vehicles, or other obstructions. It is the user's responsibility to understand and obey all laws regarding emergency warning devices. The user should be familiar with all applicable laws and regulations prior to the use of any emergency vehicle warning device. Whelen's audible warning devices are designed to project sound in a forward direction away from the vehicle occupants. However, because sustained periodic exposure to loud sounds can cause hearing loss, all audible warning devices should be installed and operated in accordance with the standards established by the National Fire Protection Association.

### 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.

**⚠ WARNING:** This product can expose you to chemicals including Methylene Chloride which is known to the State of California to cause cancer, and Bisphenol A, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

- **Proper installation of this product requires the installer to have a good understanding of automotive electronics, systems and procedures.**
- **Whelen Engineering requires the use of waterproof butt splices and/or connectors if that connector could be exposed to moisture.**
- **Any holes, either created or utilized by this product, should be made both air- and watertight using a sealant recommended by your vehicle manufacturer.**
- **Failure to use specified installation parts and/or hardware will void the product warranty.**
- **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 the 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 (this does not include products that use cigar power cords).**
- **If this product uses a remote device for activation or control, make sure that this device is located in an area that allows both the vehicle and the device 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!**

# Mounting:

Read all warnings before starting installation.

**Note:** There are two ways to mount the light array. Both methods require the unit to be secured to the mounting surface using the supplied sheet metal screws. The cable harness can either be routed directly into the mounting surface or routed out the side of the end cap (see illustration below). When facing the LED display, the cable harness should exit from the right side of the bar.

**Note:** When routing the wires, it is important to choose a path that will keep these wires away from excessive heat and from any vehicle equipment that could compromise the integrity of the wires (ex. trunk lids, door jams, etc.).

1. Position the unit in its proposed mounting location to ensure that it fits properly. With the unit in place, use an awl or other suitable tool and scribe the areas to be drilled, based on the desired style.

**Style 1** - Remove the unit from its mounting area and, using a 5/8" drill bit, drill a hole for the cable harness. Affix the 5/8" grommet to the hole and feed the cable harness through the grommet.

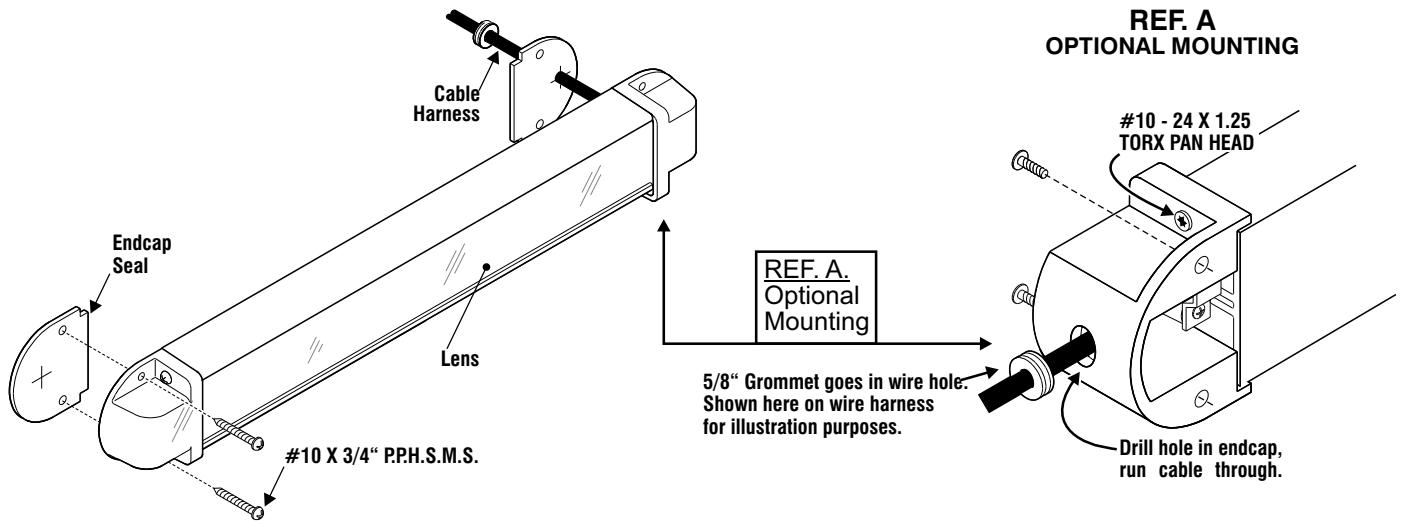
**Style 2 (OPTIONAL)** - To route the cable harness through the end cap a 5/8" passage hole must be drilled. Remove the endcap from the light array, via the machine screws, as to prevent damage to the cable harness and drill the hole. Place the 5/8" grommet on the hole and feed the cable through. Once this is done, secure the endcap back onto the light array.

2. Using an appropriately sized drill bit, drill a hole in each of the areas scribed in the previous step.

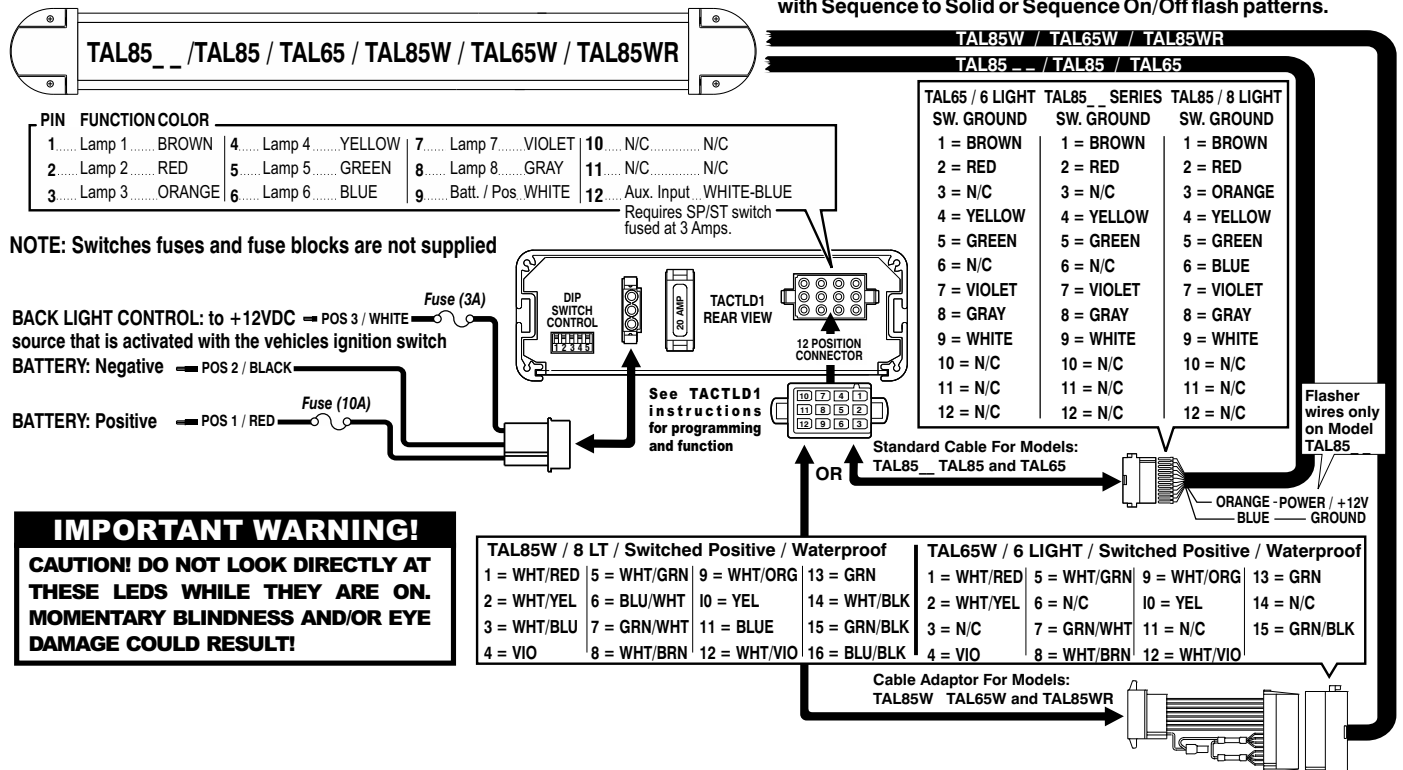
3. Return the unit to its mounting location and using the supplied hardware, mount the unit as shown below.

**Note:** Do not install the fuse required in the fuse block, until all wire connections are completed.

Installation is now complete. Refer to the information for your model on the wiring diagram below and the manual that comes with your control head.



**Note:** Optional, non-Standard length cables are not for use with Sequence to Solid or Sequence On/Off flash patterns.

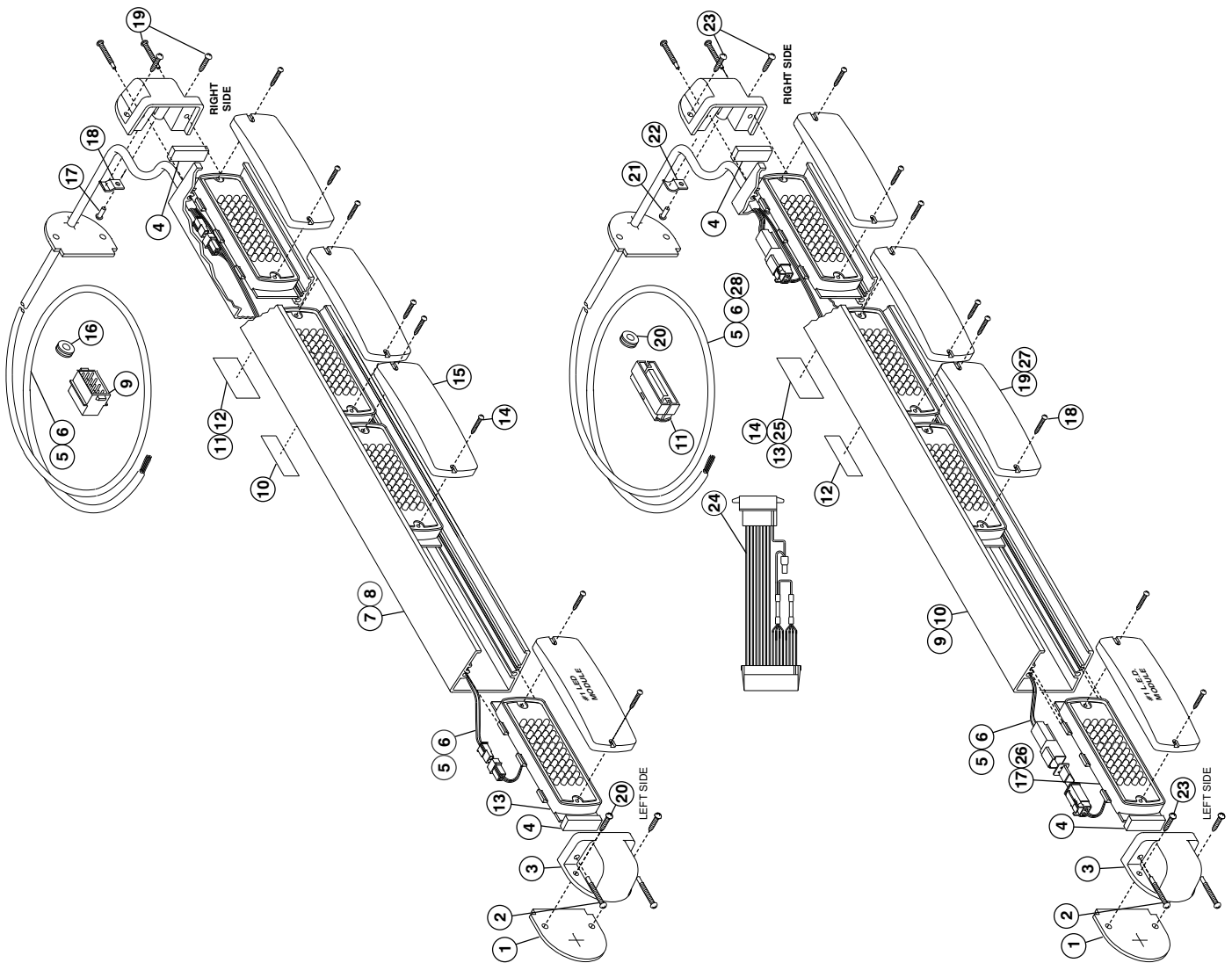


**IMPORTANT WARNING!**  
CAUTION! DO NOT LOOK DIRECTLY AT THESE LEDS WHILE THEY ARE ON. MOMENTARY BLINDNESS AND/OR EYE DAMAGE COULD RESULT!

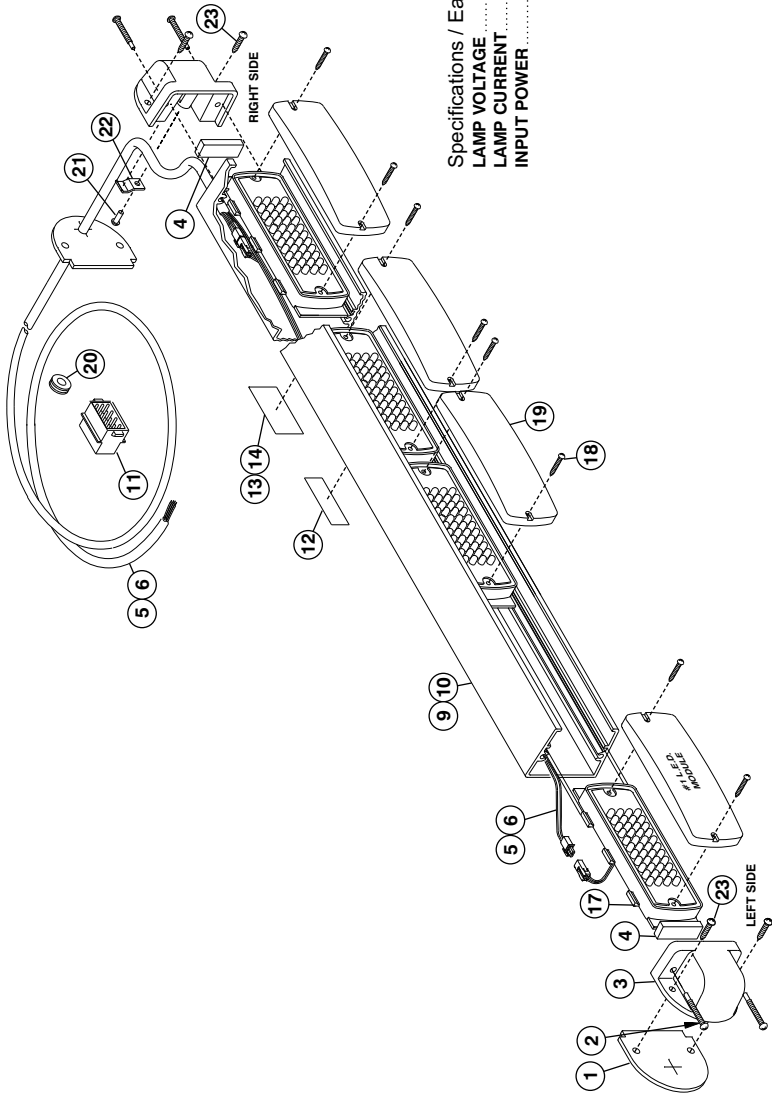
QTY	QTY ITEM	PART NUMBER	DESCRIPTION	
*		01-0683873-01	LED TA ASSY - TAL85W / 8 LT	
*		01-0683873-02	LED TA ASSY - TAL65W / 6 LT	
2	1	38-0242922-00	SEAL / ENDCAP	
4	4	14-0023347-00	SCREW / #10-24 X 1.25 TORX PAN HD.	
2	2	11-26B486-000	ENDCAP / TIR LED TA SERIES	
2	2	38-0143142-00	GASKET / ENDCAP/LIGHTHEAD	
-	1	46-0963577-00	CABLE ASSY / 8 LIGHT / TA SERIES	
1	-	46-0963577-01	CABLE ASSY / 6 LIGHT / TA SERIES	
-	1	11-463638-043	EXTRUSION / HOUSING - MACH'D / 43.25"	
1	-	11-463638-032	EXTRUSION / HOUSING - MACH'D / 32.43"	
1	1	39-0412014-14	HOUSING / 12 POS AMP PIN	
1	1	10-0320776-00	LABEL / MADE IN USA FLAG	
-	1	10-0522975-01	LABEL / MODEL NO. - TAL85	
-	1	10-0522975-02	LABEL / MODEL NO. - TAL65	
6	8	02-036326521A	500 LED S/A FLG ST MAX AMB 2 POS	
12	16	15-065419-080	SCREW / #6 X 1/2" PPH PLASTH-LOK	
6	8	68-3963228-10	LENS / AMBER / NON OPTIC 500 SERIES	
1	1	16	21-11122002-0	GROMMET 5/8"
1	1	17	15-06521B-060	SCREW / 6 X 3/8 PPH PLASTH-LOK SS BLK
1	1	18	07-222519-000	BRACKET / STRAIN RELIEF
4	4	19	15-101416-120	SCREW / #10 X 3/4 PPHSMS

Specifications / Each LED Module  
**LAMP VOLTAGE** 12.8 VDC ±20  
**LAMP CURRENT** .....520 MA / TYP  
**INPUT POWER** ..... 6.7 WATTS / TYP

QTY	QTY ITEM	PART NUMBER	DESCRIPTION
*		01-0683873-05	LED Traffic Advisor - TAL85W / 8 LT
*		01-0683873-06	LED Traffic Advisor - TAL65W / 6 LT
2	2	1	38-0242922-00 SEAL / ENDCAP
4	4	2	14-0023347-00 SCREW / #10-24 X 1.25 TX PHD
2	2	3	11-26B486-000 ENDCAP / TIR LED TA SERIES
2	2	4	38-0143142-00 GASKET / ENDCAP / LIGHTHEAD
1	-	5	46-0763689-04 CABLE ASSY / 8 LIGHT / 40 / TA .85W
-	1	6	46-0763689-01 CABLE ASSY / 6 LIGHT / TA .65W
1	-	9	11-463638-043 EXTRUSION / HOUSING - MACH'D / 43.25"
-	1	10	11-463638-032 EXTRUSION / HOUSING - MACH'D / 32.43"
1	1	11	39-0416313-04 HOUSING / 16 POS AMP PIN
1	1	12	10-0320776-00 LABEL / MADE IN USA FLAG
-	1	13	10-0522975-09 LABEL / MODEL NO. - TAL85W
-	1	14	10-0522975-10 LABEL / MODEL NO. - TAL65W
-	6	17	02-036326541A 500 LED S/A FLG ST MAX AMB 2 DEUTSCH
16	12	18	15-065419-080 SCREW / #6 X 1/2" PPH PLASTIC-LOC
-	6	19	68-3963228-10 LENS / AMBER / NON OPTIC 500 SERIES
1	1	20	21-11122002-0 GROMMET 5/8"
1	1	21	15-06521B-060 SCREW / 6 X 3/8 PPH PLASTH-LOK SS BLK
1	1	22	26-0117302-00 CLAMP / STRAIN RELIEF
4	4	23	15-101416-120 SCREW / #10 X 3/4 PPHSMS
1	1	24	46-0742992-00 CABLE ADAPTER ASSY
1	-	25	10-0522975-19 LABEL / MODEL NO. - TAL85WR
8	-	26	02-036326545A 500 LED S/A FLG ST MAX RED 2 DEUTSCH
8	-	27	68-3963228-50 LENS / RED / NON OPTIC 500 SERIES
-	1	28	46-0763689-00 CABLE ASSY / 8 LIGHT / TA .85W



QTY	QTY ITEM	PART NUMBER	DESCRIPTION	
*		01-0683873-10	LED Traffic Advisor / TAL85 / 8 LT / WATERPROOF	
*		01-0683873-11	LED Traffic Advisor / TAL65 / 6 LT / WATERPROOF	
2	1	38-0242922-00	SEAL / ENDCAP	
4	2	14-0023347-00	SCREW / #10 X 1.25 TORX PAN HD.	
2	2	11-26B486-000	ENDCAP / TIR LED TA SERIES	
2	2	38-0143142-00	GASKET / ENDCAP / LIGHTHEAD	
-	1	5	46-0963577-03	CABLE ASSY / 8 LIGHT / TA SERIES
-	1	6	46-0963577-02	CABLE ASSY / 6 LIGHT / TA SERIES
-	1	9	11-463638-043	EXTRUSION / HOUSING - MACHD / 43.25"
1	-	10	11-463638-032	EXTRUSION / HOUSING - MACHD / 32.43"
1	1	11	39-0412014-14	HOUSING, 12 POS AMP PIN
1	1	12	10-0320776-00	LABEL / MADE IN USA FLAG
-	1	13	10-0522975-20	LABEL / MODEL NO. - TAL85
1	-	14	10-0522975-21	LABEL / MODEL NO. - TAL65
6	8	17	02-036326551A	500 LED S/A FLGCD ST MAX AMB 2 POS
12	16	18	15-065419-080	SCREW / #6 X 1/2" PPH PLASTH-LOK
6	8	19	68-3963228-10	LENS / AMBER / NON OPTIC 500 SERIES
1	1	20	21-11122002-0	GROMMET 5/8"
1	1	21	15-06521B-060	SCREW / 6 X 3/8 PPH PLASTH-LOK SS BLK
1	1	22	07-222519-000	BRACKET / STRAIN RELIEF
4	4	23	15-101416-120	SCREW / #10 X 3/4 PPHSMS



Specifications / Each LED Module  
LAMP VOLTAGE ..... 12.8 VDC ±20  
LAMP CURRENT ..... 520 MA / TYP  
INPUT POWER ..... 6.7 WATTS / TYP

QTY/ITEM	PART NUMBER	DESCRIPTION
*	01-06838741	LED Traffic Advisor™ TAL85__ WP SERIES
2	1	38-0242922-00 SEAL / ENDCAP
4	2	14-0023347-00 SCREW / #10-24 X 1.25 TX PHD
2	3	11-268486-000 ENDCAP / TIR LED T/A SERIES
2	4	38-0143142-00 GASKET / ENDCAP/LIGHTHEAD
AR	5	02-0363265315 S/A 500 LED with FLG FLASHER AMB 3 POS
AR	6	02-0363265325 S/A 500 LED with FLG FLASHER BLU 3 POS
AR	7	02-0363265335 S/A 500 LED with FLG FLASHER CLR 3 POS
AR	8	02-0363265345 S/A 500 LED with FLG FLASHER GRN 3 POS
AR	9	02-0363265355 S/A 500 LED with FLG FLASHER RED 3 POS
1	10	46-0742931-00 HARNESS / TIR-LED FLASHER
1	11	11-463638-043 EXTRUSION / HOUSING - MACH'D / 43.25"
1	12	46-0963577-01 CABLE / 6 LIGHT / TA SERIES
1	14	39-0412014-14 HOUSING / 12 POS AMP PIN
1	15	10-0320776-00 LABEL / MADE IN USA FLAG
1	16	10-0522976-01 LABEL / MODEL NO. -TAL85__
AR	18	68-3963228-10 LENS / AMBER / NON OPTIC 500 SERIES
AR	19	68-3963228-20 LENS / BLUE / NON OPTIC 500 SERIES
AR	20	68-3963228-30 LENS / CLEAR / NON OPTIC 500 SERIES
AR	21	68-3963228-40 LENS / GREEN / NON OPTIC 500 SERIES
AR	22	68-3963228-50 LENS / RED / NON OPTIC 500 SERIES
6	23	02-036326521A S/A 500 LED without FLG ST MAX AMB 2 POS
16	24	15-065419-080 SCREW / #6 X 1/2" PPH PLASTIC-LOC
1	25	39-0402023-04 HOUSING / SOCKET - 2 POS AMP
1	26	21-11122002-0 GROMMET 5/8"
1	27	15-06521B-060 SCREW / 6 X 3/8 PPH PLASTI-LOK SS BLK
1	29	07-222519-000 BRACKET / STRAIN RELIEF
4	30	15-101416-120 SCREW / #10 X 3/4 PPHSMS

**PART NUMBER KEY**  
01 - 06838741

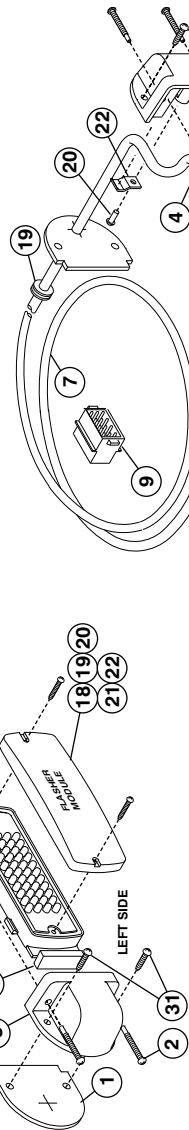
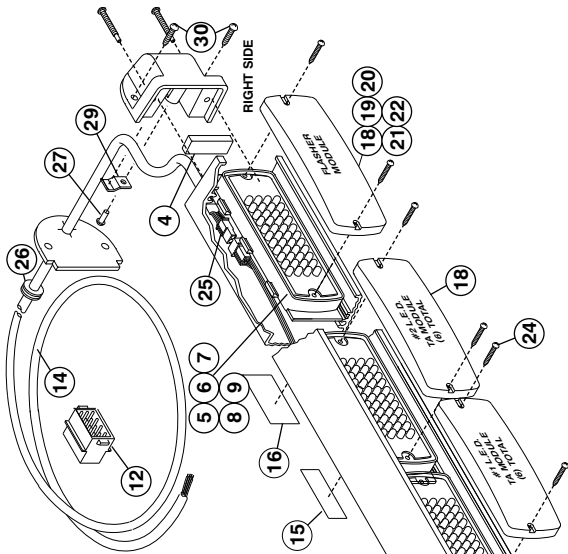
RIGHT FLASHER: LED/LENS COLOR  
LEFT FLASHER: LED/LENS COLOR

LED COLOR/LENS COLOR

A = AMBER/AMBERC = WHITE/CLEAR R = RED/RED 2 = BLUE/CLEAR 5 = RED/CLEAR  
B = BLUE/BLUE G = GREEN/GREEN 1 = AMBER/CLEAR4 = GRN/CLEAR

Specifications \ each segment  
LED-TIR Modules

LAMP VOLTAGE ..... 12.8 VDC ±20  
LAMP CURRENT ..... 520 MA (TYP)  
INPUT POWER ..... 6.7 WATTS (TYP)



**PART NUMBER KEY**  
01 - 06838741

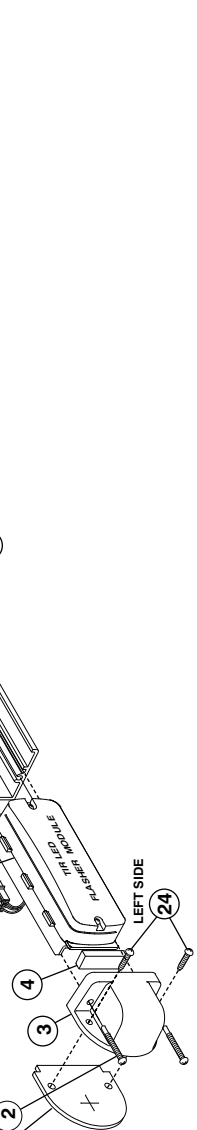
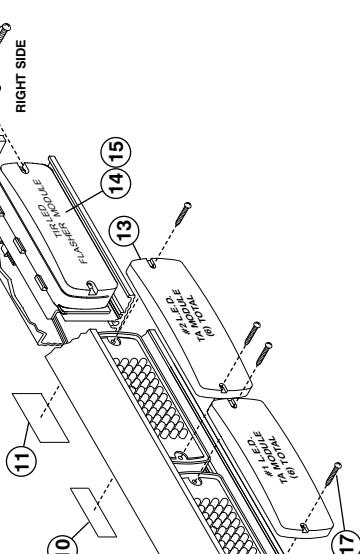
RIGHT FLASHER: LED/LENS COLOR  
LEFT FLASHER: LED/LENS COLOR

LED COLOR/LENS COLOR

A = AMBER/AMBERC = WHITE/CLEAR R = RED/RED 2 = BLUE/CLEAR 5 = RED/CLEAR  
B = BLUE/BLUE G = GREEN/GREEN 1 = AMBER/CLEAR4 = GRN/CLEAR

Specifications \ each segment  
LED-TIR Modules

LAMP VOLTAGE ..... 12.8 VDC ±20  
LAMP CURRENT ..... 520 MA (TYP)  
INPUT POWER ..... 6.7 WATTS (TYP)

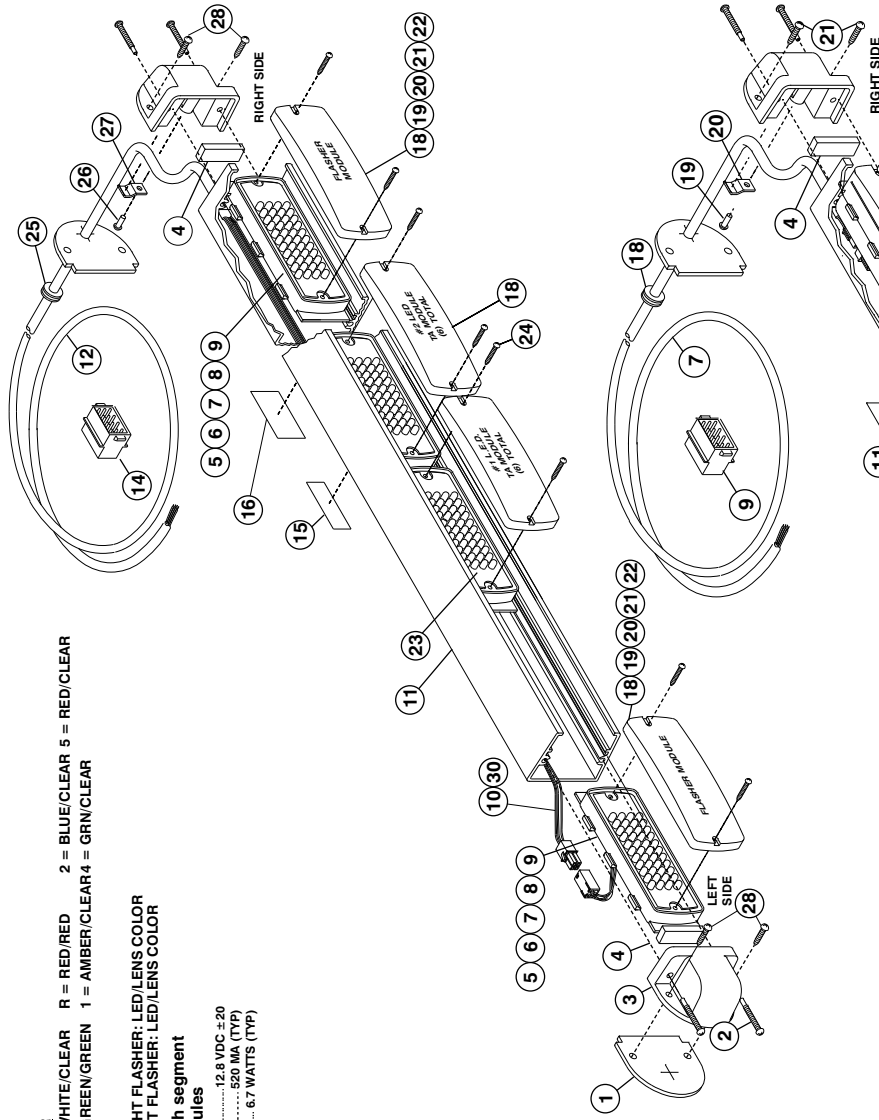


QTY/ITEM	PART NUMBER	DESCRIPTION	
*	01-06838743	LED Traffic Advisor™ TAL85__ WP SERIES	
2	38-0242922-00	SEAL / ENDCAP	
4	14-0023347-00	SCREW / #10-24 X 1.25 TX P:HD	
2	11-26B486-000	ENDCAP / TIR LED TA SERIES	
2	4	38-0143142-00	GASKET / ENDCAP / LIGHTHEAD
AR	5	02-0363265615	S/A 500 LED W/FLG FLASHER AMB 4 POS
AR	6	02-0363265625	S/A 500 LED with FLG FLASHER BLU 4 POS
AR	7	02-0363265635	S/A 500 LED with FLG FLASHER CLR 4 POS
AR	8	02-0363265645	S/A 500 LED with FLG FLASHER GRN 4 POS
AR	9	02-0363265655	S/A 500 LED with FLG FLASHER RED 4 POS
1	10	46-0742931-01	HARNES / TIR-LED FLASHER WP
1	11	11-463638-043	EXTRUSION / HOUSING - MACH'D / 43.25"
1	12	46-0963577-02	CABLE / 6 LIGHT / TA SERIES WP
1	14	39-0412014-14	HOUSING / 12 POS AMP PIN
1	15	10-0320776-00	LABEL / MADE IN USA FLAG
1	16	10-0522976-07	LABEL / MODEL NO.: TAL85__
AR	18	68-3963228-10	LENS / AMBER / NON OPTIC 500 SERIES
AR	19	68-3963228-20	LENS / BLUE / NON OPTIC 500 SERIES
AR	20	68-3963228-30	LENS / CLEAR / NON OPTIC 500 SERIES
AR	21	68-3963228-40	LENS / GREEN / NON OPTIC 500 SERIES
AR	22	68-3963228-50	LENS / RED / NON OPTIC 500 SERIES
6	23	02-036326551A	S/A 500 LED without FLG ST MAX AMB 2 POS
16	24	15-065419-080	SCREW / #6 X 1/2" PPH PLASTIC-LOC
1	25	21-11122002-0	GROMMET, 5/8"
1	26	15-065218-060	SCREW / 6 X 3/8 PPH PLASTI-HOK SS BLK
1	27	07-222519-000	BRACKET / STRAIN RELIEF
4	28	15-101416-120	SCREW / #10 X 3/4 PPHSMS

**PART NUMBER KEY**  
**LED COLOR/LENS COLOR**  
**A = AMBER/AMBERC = WHITE/CLEAR R = RED/RED 2 = BLUE/CLEAR 5 = RED/CLEAR**  
**B = BLUE/BLUE G = GREEN/GREEN 1 = AMBER/CLEAR 4 = GRN/CLEAR**

01 - 0 6 8 3 8 7 4 3  
 |  
 |---RIGHT FLASHER: LED/LENS COLOR  
 |---LEFT FLASHER: LED/LENS COLOR  
 |  
 |---RIGHT TIR Modules  
 |---LEFT TIR Modules

LAMP VOLTAGE ..... 12.8 VDC ±20  
 LAMP CURRENT ..... 520 MA (TYP)  
 INPUT POWER ..... 6.7 WATTS (TYP)



QTY/ITEM	PART NUMBER	DESCRIPTION	
*	01-06838743	LED Traffic Advisor™ TAL85__ WP SERIES	
2	38-0242922-00	SEAL / ENDCAP	
4	14-0023347-00	SCREW / #10-24 X 1.25 TX P:HD	
2	11-26B486-000	ENDCAP / TIR LED TA SERIES	
2	4	38-0143142-00	GASKET / ENDCAP / LIGHTHEAD
1	5	46-0742931-00	HARNES / TIR-LED FLASHER
1	6	11-463638-043	EXTRUSION, HOUSING - MACH'D / 43.25"
1	7	46-0963577-01	CABLE / 6 LIGHT / TA SERIES
1	9	39-0412014-14	HOUSING / 12 POS AMP PIN
1	10	10-0320776-00	LABEL / MADE IN USA FLAG
1	11	10-0522976-07	LABEL / MODEL NO.: TAL85__
6	13	68-3963228-30	LENS / CLEAR / NON OPTIC 500 SERIES
A/R	14	01-0663507228	LIGHTHEAD 500 TIR CLR-BLU MUMNL
A/R	15	01-0663507528	LIGHTHEAD 500 TIR CLR-RED MUMNL
6	16	02-036326551A	S/A 500 LED W/O FLG ST MAX AMB 2 POS
12	17	15-065419-080	SCREW / #6 X 1/2" PPH PLASTIC-LOC
1	18	21-11122002-0	GROMMET 5/8"
1	19	15-065218-060	SCREW / 6 X 3/8 PPH PLASTI-HOK SS BLK
1	20	07-222519-000	BRACKET / STRAIN RELIEF
4	21	15-101416-120	SCREW / #10 X 3/4 PPHSMS

**PART NUMBER KEY**  
**LED COLOR/LENS COLOR**  
**Y = BLUE/CLEAR**  
**V = RED/CLEAR**

01 - 0 6 8 3 8 7 4  
 |  
 |---RIGHT FLASHER: LED/LENS COLOR  
 |---LEFT FLASHER: LED/LENS COLOR  
 |  
 |---RIGHT TIR Modules  
 |---LEFT TIR Modules

LAMP VOLTAGE ..... 12.8 VDC ±20  
 LAMP CURRENT ..... 520 MA (TYP)  
 INPUT POWER ..... 6.7 WATTS (TYP)

