



EXTERIOR LED MODULES



Code 3, Inc., a subsidiary of Public Safety Equipment, Inc.



# LED-EX SIDE BY SIDE DUAL EXTERIOR LED MODULE

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**INPORTANT:** Readallinstructions and warnings before installing and using. INSTALLER This manual must be delivered to the end user of this equipment.

### Introduction:

The Exterior LED modules are weatherproof LED based warning light modules that contain state-of-the-art high intensity LEDs. These products provide twenty-one different operation modes including a steady-burn mode. These products may be adapted to a variety of exterior applications such as motorcycle applications, OEM fire truck, grill light and back-deck applications.



This Product contains high intensity LED devices. To prevent eye damage, DO NOT stare into light beam at close range.

The use of this or any warning device does not insure that all drivers can or will observe or react to an emergency warning signal. Never take the right-of-way for granted. It is your responsibility to be sure you can proceed safely before entering an intersection, driving against traffic, responding at a high rate of speed, or walking on or around traffic lanes.

The effectiveness of this warning device is highly dependent upon correct mounting and wiring. Read and follow the manufacturer's instructions before installing or using this device. The vehicle operator should insure daily that all features of the device operate correctly. In use, the vehicle operator should insure the projection of the warning signal is not blocked by vehicle components (i.e.: open trunks or compartment doors), people, vehicles, or other obstructions. This equipment is intended for use by authorized personnel only. It is the user's responsibility to understand and obey all laws regarding emergency warning devices. The user should check all applicable city, state and federal laws and regulations.



WARNING! Code 3, Inc., assumes no liability for any loss resulting from the use of this warning device. Proper installation is vital to the performance of this warning device and the safe operation of the emergency vehicle. It is important to recognize that the operator of the emergency vehicle is under psychological and physiological stress caused by the emergency situation. The warning device should be installed in such a manner as to: A) Not reduce the output performance of the system, B) Place the controls within convenient reach of the operator so that he can operate the system without losing eye contact with the roadway.

Emergency warning devices often 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 severe vehicle damage, including fire.

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.

## Standard Features For Side by Side LED Module:

2 Head L.E.D. warning Flashing system
10-16 Vdc operation
Current: less than 1amp average, all colors
Reverse polarity protection
21 Flash Patterns, externally controlled

## Installation:

#### Side by Side Exterior LED Module:

This unit can be mounted to metal surfaces using two #8 x 1" pan head sheet metal screws (included). It is recommended that the wire access hole is drilled so that it is centered across the width and the length of the module (Refer to Fig.1). An optional mounting rubber gasket, included with the unit, may be used to prevent oxidization and galvanization of the mounting surface due to metal-on-metal contact.



#### Figure 1



#### Wiring:

The side by side LED-EX modules are equipped with 3 - 8" long wires. Connect wires as follows:

- 1. Red wire: Power wire, connect to +12V voltage line.
- 2. Black wire: **GND** wire, connect to ground terminal.
- 3. White wire: Control wire, may be left unconnected. It can also be connected to **GND** through a momentary push-button switch, and be used for programming the operation mode.

Note: The white wire should NOT be connected to a positive voltage under any circumstances.

## **Programming:**

Programming the desired flash pattern (or operation mode) is done with the **white** control wire. You can scroll through the twenty-one available flash patterns, by momentarily ground-ing the **white** control wire until you arrive at the desired operation mode. Momentary ground-ing of the white wire can be accomplished either by momentarily touching the wire to **GND**, or through a momentary push-button switch.

The unit will come on in the default Cycle-flash mode at the time of first power-up, until the desired flash pattern is programmed. The default flash pattern can then be changed by programming the desired pattern into the unit, the unit will continue to operate in the same mode every time the unit is turned off and turned back on. The default flash pattern can be changed at will for any number of times.

The unit can be reset back to the default flash pattern (cycle-flash) by grounding the control wire for about 8-10 seconds and then releasing it. This can be done while operating in any of the flash modes.

#### Flash Modes:

Alternating Heads Cycle Flash Single Flash Double Flash Triple Flash Quad Flash Five Flash Fast Single Flash Fast Double Flash Fast Double Flash Fast Quad Flash Quad Pop Flash Triple Pop Flash Double Pop Flash Wig-Wag Flash Alt. Simultaneous Heads Quad Flash Triple Flash Double Flash Single Flash Pursuit Flash <u>Steady with Flashing</u> Fast Double Flash w/Steady Quad Flash w/Steady

**Note:** All modes flash at a rate of 70 fpm minimum. Fast modes flash at a rate of 100 fpm minimum.

## **Options & Specifications**

(Currents are calculated at 12.8 volts)

MODEL	н	L	D	WEIGHT	OPERATING VOLTAGE	CURRENT DRAW	FLASH RATE
2 Head L.E.D. 1.75" warning system	1.60"	8.75"	2.75"	1.3 lbs	10-16Vdc	.6A avg	70 fpm min



Figure 2

ITEM NO.	QUA.	PART DESCRIPTION	P/N
1	1	DUAL LED HOUSING	
2	1	DUAL LED GASKET	T09477
3	2	#8 SMS 1" LONG	T09338

Optic Variations				
	HORIZONTAL	VERTICAL	SPREADING	
Black Finish	LXTABF	LXTABFV	LXTABFW	
Bright Finish	LXTAF	LXTAFV	LXTAFW	





## **Orientation of Vertical Optic Product:**

Position LED light head vertically so that one may be able to read "TOP" during installation.



#### **Installation and Mounting**

- 1) Remove sun visor clips.
- 2) Slide bracket between the headliner and the roof of car.
- 3) Horizontal slots on up-turned flange of bracket will align with existing holes in roof.
- 4) Slots on flat part of bracket will align with the hole for the sun visor clips.
- 5) Run T010725/16"-18 sheet metal screws through slot in up turned flange into holes in roof.
- 6) Re-attach sun visor clips through slots on the flat part of the bracket.
- 7) Attach LED X unit to bracket.



#### Installation and Mounting

- 1) Remove sun visor clips.
- 2) Slide bracket between the headliner and the roof of car.
- 3) Slots on flat part of bracket will align with the hole for the sun visor clips.
- 4) Drill 1/8" holes at 3/16" hole locations of bracket into roof support.
- 5) Run T05336#8 sheet metal screws through holes in up turned flanges into holes drilled in roof support.
- 6) Re-attach sun visor clips through slots on the flat part of the bracket.
- 7) Attach LED X unit to bracket.

#### <u>Notes</u>

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## WARRANTY

Code 3, Inc.'s L.E.D. emergency devices are tested and found to be operational at the time of manufacture. Provided they are installed and operated in accordance with manufacturer's recommendations, Code 3, Inc. guarantees all parts and components to a period of 5 years (unless otherwise expressed) from the date of purchase or delivery, whichever is later. Units demonstrated to be defective within the warranty period will be repaired or replaced at the factory service center at no cost.

Use of inappropriate or inadequate wiring or circuit protection causes this warranty to become void. Failure or destruction of the product resulting from abuse or unusual use and/or accidents is not covered by this warranty. Code 3, Inc. shall in no way be liable for other damages including consequential, indirect or special damages whether loss is due to negligence or breach of warranty.

CODE 3, INC. MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY INCLUDING, WITHOUT LIMITATION, WARRANTIES OF FITNESS OR MERCHANTABILITY, WITH RE-SPECT TO THIS PRODUCT.

## **PRODUCT RETURNS**

If a product must be returned for repair or replacement\*, please contact our factory to obtain a Return Goods Authorization Number (RGA number) before you ship the product to Code 3, Inc. Write the RGA number clearly on the package near the mailing label. Be sure you use sufficient packing materials to avoid damage to the product being returned while in transit.

\*Code 3, Inc. reserves the right to repair or replace at its discretion. Code 3, Inc. assumes no responsibility or liability for expenses incurred for the removal and /or reinstallation of products requiring service and/or repair.; nor for the packaging, handling, and shipping: nor for the handling of products return to sender after the service has been rendered.

PROBLEMS OR QUESTIONS? CALL OUR TECHNICAL ASSISTANCE HOTLINE (314) 996-2800

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> Part No. T09490 Rev. 2 5/2006 ©2005 Code 3, Inc