

# INSTALLATION & OPERATION MANUAL



## PAR36 LED LIGHTHEAD

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**IMPORTANT:** Read all instructions and warnings before installing and using.  
**INSTALLER:** This manual must be delivered to the end user of this equipment.

## Introduction:

The PAR36 modules are weatherproof LED based warning light modules that contain state-of-the-art high intensity LEDs. These products provide seven different operation modes including a steady-burn mode. The PAR36 product may be adapted to a variety of exterior applications such as motorcycle warning lights.

### WARNING!



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



### WARNING!

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.

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.

## Features and Specifications:

**Operating Voltage:** 10-16Vdc, Reverse Polarity<sup>1</sup> Protected

**Flash Rate:** 70 fpm minimum

**Flash Modes:**

PATTERN NO.	PATTERNS	SYNCHRONIZE
1	SINGLE FLASH 75FPM PHASE 1 T13	YES
2	SINGLE FLASH 75FPM PHASE 2 T13	YES
3	SINGLE FLASH 120FPM PHASE 1 ECE R65	YES
4	SINGLE FLASH 120FPM PHASE 2 ECE R65	YES
5	SINGLE FLASH 375FPM PHASE 1	YES
6	SINGLE FLASH 375FPM PHASE 2	YES
7	DOUBLE FLASH 75FPM PHASE 1	YES

PATTERN NO.	PATTERNS	SYNCHRONIZE
8	DOUBLE FLASH 75FPM PHASE 2	YES
9	DOUBLE FLASH 130FPM PHASE 1 SIM 1	YES
10	DOUBLE FLASH 130FPM PHASE 2 SIM 2	YES
11	TRIPLE FLASH 75FPM PHASE 1	YES
12	TRIPLE FLASH 75FPM PHASE 2	YES
13	QUAD FLASH 75FPM PHASE 1	YES
14	QUAD FLASH 75FPM PHASE 2	YES
15	QUAD FLASH 150FPM PHASE 1	YES
16	QUAD FLASH 150FPM PHASE 2	YES
17	FIVE FLASH 150FPM PHASE 1	YES
18	FIVE FLASH 150 FPM PHASE 2	YES
19	QUAD FLASH 75FPM NFPA	NO
20	SINGLE FLASH 75FPM CAT13	NO
21	DOUBLE FLASH 75FPM CAT13	NO
22	MODUFLASH SIM.	NO
23	ACTION FLASH	NO
24	AUTORUN (RANDOM)	NO
25	STEADY BURN	NO
26	OFF	NO

	Flashing Current Draw:	Steady Burn Current Draw:
Red/Amber:	.25A Avg.	.5A Avg.
Blue/White:	.4A Avg.	.8A Avg.

**Available colors** - Red, Amber, Blue, or White

## Installation:

This unit is designed to be mounted as a PAR36 lamp using the same PAR36 style housing and housing clamp. Follow normal lamp maintenance procedures to remove incandescent lamp and replace with the LED lighthouse. (Also, see wiring instructions below.) The 36PARXX version LED lighthouse may also be mounted to a flat surface using 4-#8 sheet metal screws installed in the holes provided on the rear of the unit.



### WARNING!

If the product is to be used inside the vehicle, it may cause severe personal injury if not properly mounted and secured. Objects used in vehicle may become airborne during a collision or other sudden changes in vehicle speed or direction, such as braking, acceleration or turns.

## Wiring:

The PAR36 unit is terminated with a 6" long 4-wire cable harness that may be connected as follows:

<u>COLOR</u>	<u>FUNCTION</u>	<u>CONNECT TO</u>
Red	Power	+VDC
Black	Ground	Chassis Ground
Blue	Pattern Switching	Chassis Ground to Activate
Yellow	Synchronization	See Synchronization Section

## Synchronization (Permanent Mount Only):

To sync two PAR36 lights, configure both lights to display the same Phase 1 pattern. With the power off, connect the YELLOW wires from each lights together. When the lights are activated, their patterns will be synchronized. To configure the two lighthoods to alternate their patterns, advance the pattern of either beacon to the Phase 2 mode of the current pattern. A maximum of 8 lights may be sychronized.

## Setting the Flash Pattern:

Connect blue wire to black wire (chassis ground):

- Less than 1 second for the NEXT pattern
- 1 to 3 seconds for the PREVIOUS pattern
- 3 to 5 seconds for the DEFAULT pattern
- Greater than 5 seconds to TURN OFF the beacon

## Maintenance:

The PAR36 Modules are completely sealed units designed to be maintenance free. Refer to the guide below for help with troubleshooting. Should the unit be diagnosed as malfunctioning, remove unit and replace with a new module.

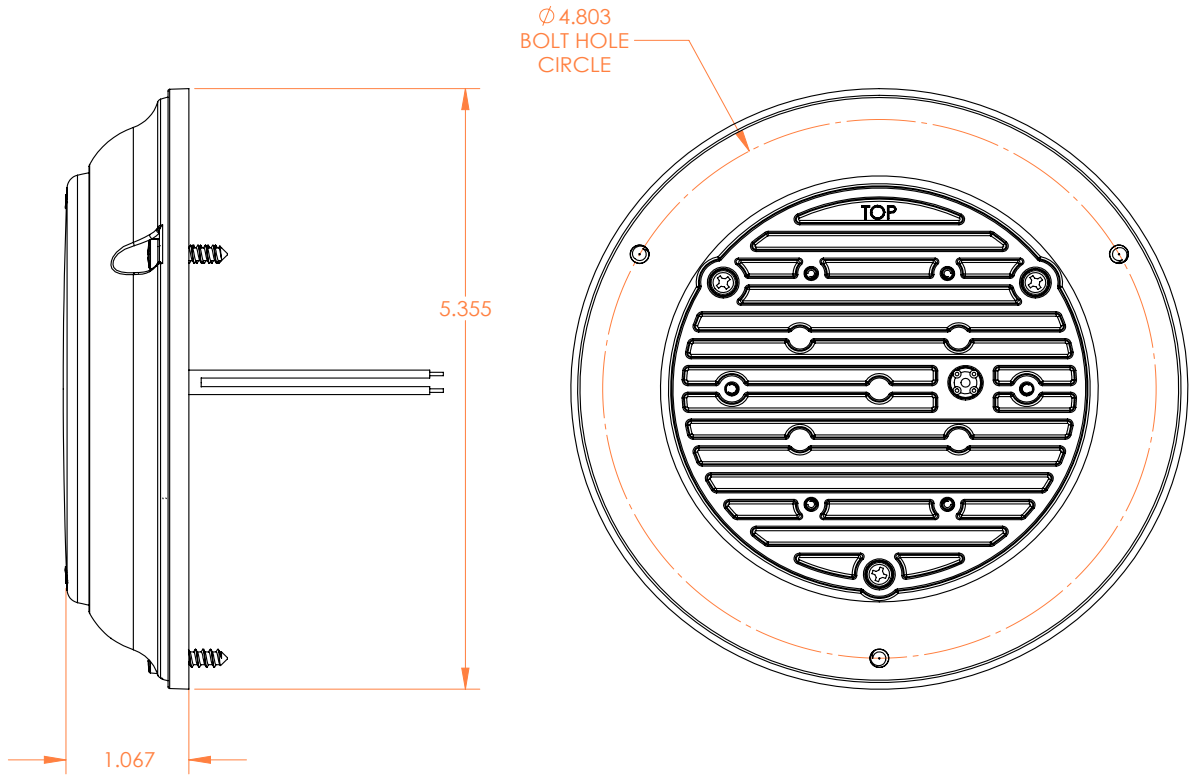
**WARNING!**



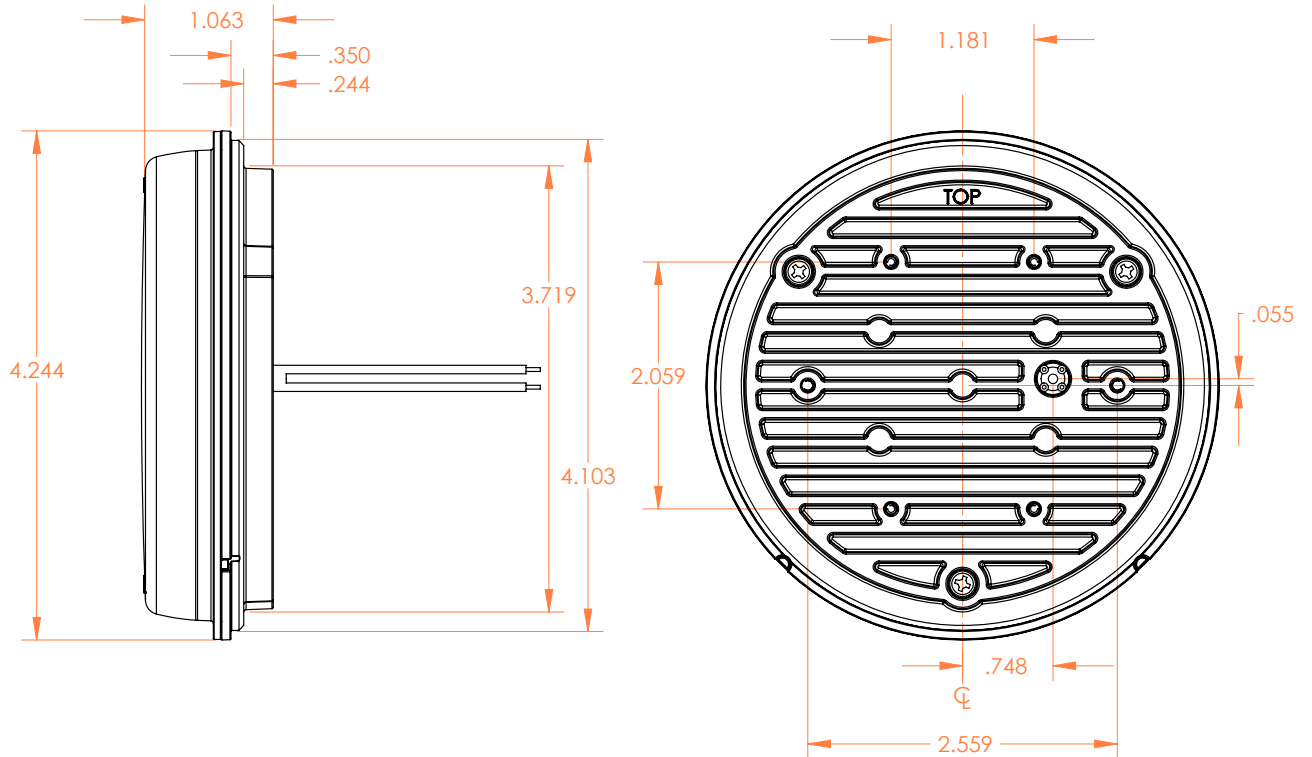
LED module housings may become hot with extended use. Allow modules to cool completely before attempting to remove.

TROUBLESHOOTING		
Problem	Probable Cause	Remedy
Lighthouse does not activate	a. No power to unit	a. Check wire for loose connection
	b. Power input wire reversed	b. Reverse power wires
	c. Damaged or shortaged cabling	c. Check cables for damage
	d. Defective lighthouse	d. Replace lighthouse module
Lighthouse is constantly ON	a. Control wire permanently grounded or shorted to GND	a. Avoid permanent grounding of control wire

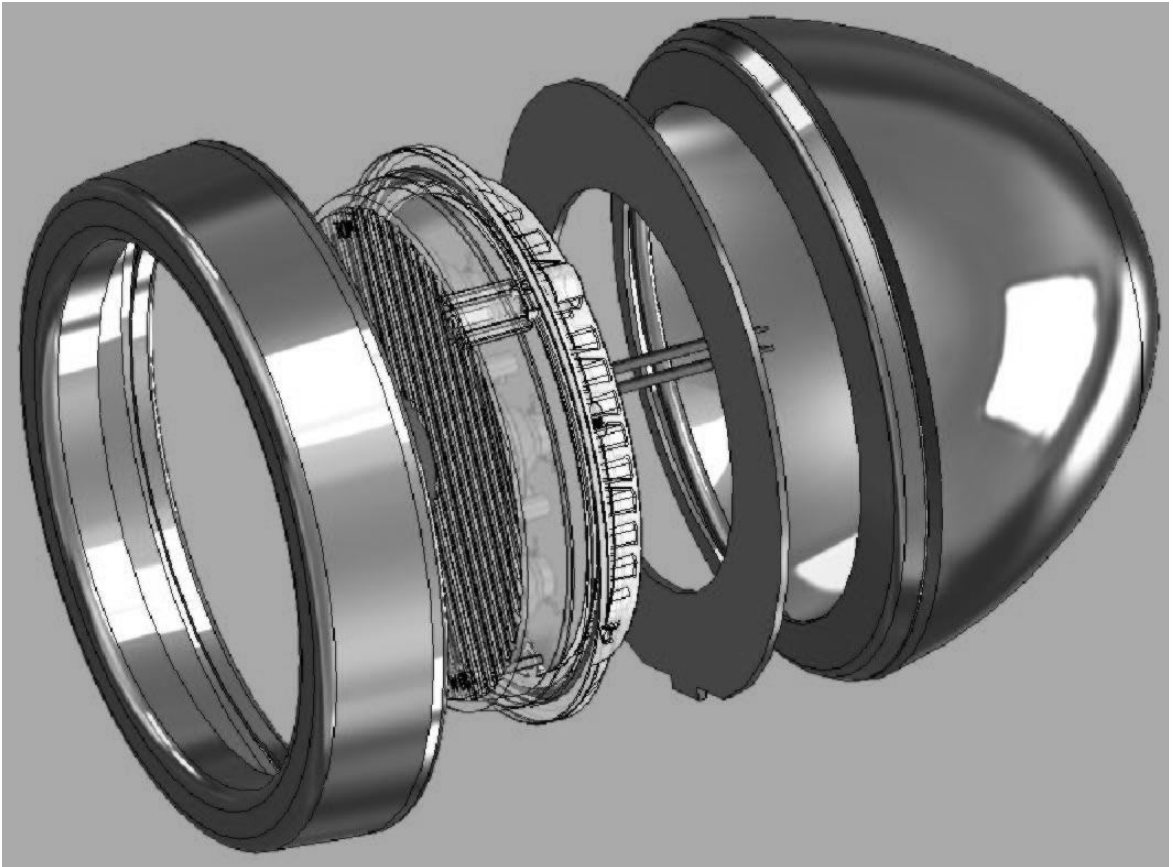
# Dimensions



**36PARXX with bezel**



**36PARXX without bezel**



Exploded View of Harley Davidson Motorcycle Emergency Warning Light with Code 3 Anti-Rotation Ring

## NOTES

# 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 except the lamps to a period of 1 year, LED Lighthouse modules 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 lamp or other electrical load of a wattage higher than installed or recommended by the factory, or 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 RESPECT 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.

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