



Installation and Operation Instructions

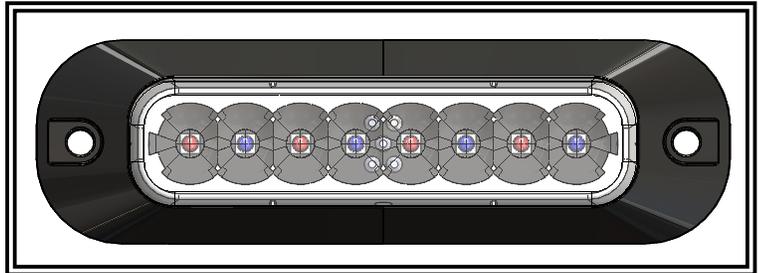
XTP SERIES LIGHT HEADS

Multi Color

Introduction:

CODE3 XTP series LED heads are compact and versatile high intensity directional LED warning lights suitable for mounting anywhere on a vehicle. Colorless until illuminated, these discrete LED heads feature a high degree of environmental and vibration protection.

Additional benefits include low current draw, a long and maintenance free service life with reliable solid-state operation. LED heads can be controlled by conventional switches or relays and can also be synchronized to flash with other compatible CODE3 synchronizing LED products.



IMPORTANT! Read all instructions before installing and using. Installer: This manual must be delivered to the end user.

WARNING!
Failure to install or use this product according to manufacturers recommendations may result in property damage, serious injury, and/or death to those you are seeking to protect!

Do not install and/or operate this safety product unless you have read and understand the safety information contained in this manual.

1. Proper installation combined with operator training in the use, care, and maintenance of emergency warning devices are essential to ensure the safety of emergency personnel and the public.
2. Emergency warning devices often require high electrical voltages and/or currents. Exercise caution when working with live electrical connections.
3. This product must be properly grounded. Inadequate grounding and/or shorting of electrical connections can cause high current arcing, which can cause personal injury and/or severe vehicle damage, including fire.
4. Proper placement and installation is vital to the performance of this warning device. Install this product so that output performance of the system is maximized and the controls are placed within convenient reach of the operator so that s/he can operate the system without losing eye contact with the roadway.
5. It is the responsibility of the vehicle operator to ensure daily that all features of this product work correctly. In use, the vehicle operator should ensure the projection of the warning signal is not blocked by vehicle components (i.e., open trunks or compartment doors), people, vehicles or other obstructions.
6. The use of this or any other warning device does not ensure 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, drive against traffic, respond at a high rate of speed, or walk on or around traffic lanes.
7. This equipment is intended for use by authorized personnel only. The user is responsible for understanding and obeying all laws regarding emergency warning devices. Therefore, the user should check all applicable city, state, and federal laws and regulations. The manufacturer assumes no liability for any loss resulting from the use of this warning device.

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Package Contains:

1	Light Head
2	Screws
1	Installation Guide
1	Mounting Gasket
1	Bezel

Operation Environment:

Ambient Temperature: -40 to 77°C(-40 to 170°F)

Specifications:

Light Head Model	XTP4-MC	XTP6-MC
Input Voltage	12-24VDC	12-24VDC
Work Current	1.0A Max @ DC12V or 24V	1.0A Max @ DC12V or 24V
Physical H x W x L	0.62 in x 1.39 in x 4.72 in 1.58 cm x 3.53 cm x 11.98 cm	0.62 in x 1.39 in x 6.21 in 1.58 cm x 3.53 cm x 15.78 cm
Weight	0.127 lb (0.06 Kg)	0.160 lb (0.07 Kg)
Available Dual Colors	Amb/Wht, Blue/Amb, Blue/Wht, Red/Amb, Red/Blue, Red/Wht	Blue/Amb, Blue/Wht, Red/Amb, Red/Blue, Red/Wht

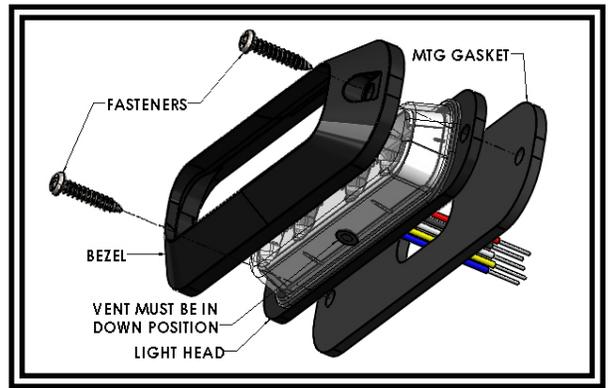
Installation and Mounting:

To mount the light head, use the bezel as a template to mark the mounting holes. The supplied self-tapping #6 x 0.75" screws typically use 0.125" diameter holes but this may vary depending on the type of material and the thickness being tapped. Provide a minimum 0.50" diameter hole for the wires. Grommet the hole if possible and seal with RTV sealant.

It is important to note:

The light head has a small round hole covered with vent membrane that must face downward when mounting the light head.

Caution! When drilling into any vehicle surface, make sure that the area is free from any electrical wires, fuel lines, vehicle upholstery, etc. that could be damaged.



Important! This unit is a safety device, and it must be connected to its own separate, fused power point to assure its continued operation should any other electrical accessory fail.

Wiring Instructions:

- RED: Positive, (5A fuse required)
- WHITE: Positive, (5A fuse required)
- BLACK: Negative
- BLUE: Pattern select to negative -- Dim control to positive
- YELLOW: Synchronized Function (Up to 32 units can be Synchronized)

Notes on Choosing Flash Patterns:

A variety of flash patterns may be chosen for the light head. The Multi Color light heads are split vertically as separate lighted areas that may be chosen to operate alternately. The areas are denoted by: Primary color 1&3 (color1 on the left side and color3 on the right, typically the same color) and Secondary color 2&4 (color2 on the left side and color4 on the right, typically the same color). This allows for patterns that flash right-left using various multiple color combinations.

A separate flash pattern may be assigned for the power wires red, white, or both connected together and the pattern operated depending which wire or wires are energized. Power the red or the white wires (or both together) then use the pattern select blue wire (touch to ground) to select the chosen flash pattern from the list below. See the legend at the top of the pattern list for compliance with various standards.

Pattern Select Operation:

The light head flash pattern may be changed by touching the Blue wire to ground for the following intervals (while the light head is flashing):

NOTE: The blue wire must be disconnected from any voltage when not activating DIM nor changing flash patterns.

- When the light head signal becomes steady, disconnect the Blue wire and the flash pattern will increment by one pattern.
- When the light head signal becomes steady, then goes off, disconnect the Blue wire and the flash pattern will decrement by one pattern.
- When the light head signal becomes steady, then goes off, then becomes steady again, disconnect the Blue wire and the flash pattern will reset to the factory default pattern.
- When the light head signal becomes steady, then goes off, then becomes steady again, then goes off again, disconnect the Blue wire and the flash pattern will become set to the steady burn mode.

Notes on Dim Control:

The light head intensity may be reduced if necessary. The Blue wire when connected to positive will reduce the intensity to 25% for SAE patterns. Light intensity for ECE patterns will reduce to 55%.

NOTE: The blue wire must be disconnected from any voltage when not activating DIM nor changing flash patterns.

Notes on Synchronizing and Phase (Sync Ph):

(Up to 32 light heads can be Synchronized by connecting their yellow wires). When the yellow wires of the light heads are connected together, the group with Ph1 flash patterns will flash simultaneously. If the light heads in the second group are set to Ph2 flash patterns, they will flash alternately with the first group. To simplify the set-up of a synchronized installation, the following process is recommended:

1. Before connecting the yellow wires together, choose the desired flash pattern for each light head. **The patterns chosen must have the same flash rate for all light heads intended to be synchronized. (By definition a 75fpm light head will not sync with at 120fpm light head)** To avoid confusion set each light head individually to the chosen flash pattern using the blue pattern select wire. Ph1 light heads will alternate with Ph2 light heads and simultaneously with all other light heads set to Ph1. Ph2 light heads flash simultaneously with all other light heads set to Ph2. It is also strongly recommended that the same style of flash pattern be used on all heads to produce the most effective warning pattern.
2. Connect the yellow synchronization wires together and check that the light heads are flashing in a synchronized manner as expected. If a pattern for one light head appears to be wrong, keep the yellow wire connected and use the blue pattern select wire to cycle forward or backward for that individual light head until the correct pattern is selected. Once that is completed verify the light head is synchronized correctly.

Flash Patterns XTP4MC and XTP6MC - Multi Color: (continued on next page)

For patterns that meet SAE J595 Class1 requirements for Red, Blue, Amber, and White, see **S** in chart!

For patterns that meet California Title 13 Class B requirements for Red, Blue, and Amber, see **C** in chart!

For patterns that meet ECE65 Class1 Cat X (night only) requirements for Red, Blue, Amber, see **E1** in chart!

For patterns that meet ECE65 Class2 Cat X (day & night) requirements for Red, Blue, Amber, see **E2** in chart!

PATTERN GROUP	RED WIRE LED Color 1&3	WHITE WIRE LED Color 2&4	RED & WHITE WIRE LED Color 1&3, Color 2&4	FLASH PATTERN	SYNC	Complies with
0	1-Default			Cycle Flash Color 1&3	no	
		1-Default		Cycle Flash Color 2&4	no	
			1-Default	Cycle Flash Color 1&3 and Color 2&4	no	
1	2		2	Single 75FPM Ph1 Color 1 Sync Color 3	yes	SC
	3		3	Single 75FPM Ph2 Color 1 Sync Color 3	yes	SC
			4	Single 75FPM Ph1 Color 1 Alt Color 4	yes	
			5	Single 75FPM Ph2 Color 1 Alt Color 4	yes	
		2	6	Single 75FPM Ph1 Color 2 Sync Color 4	yes	SC
		3	7	Single 75FPM Ph2 Color 2 Sync Color 4	yes	SC
	4	4	8	Single 75FPM (Color 1 Sync Color 3) Alt (Color 2 Sync Color 4) (Phase 1)	yes	SC
2	5	5	9	Single 75FPM (Color 1 Sync Color 3) Alt Color 2 Sync Color 4) (Phase 2)	yes	SC
	6	6	10	Single 75FPM Color 1 Alt Color 2 Alt Color 3 Alt Color 4	yes	
	7		11	Single 375FPM Ph1 Color 1 Sync Color 3	yes	
	8		12	Single 375FPM Ph2 Color 1 Sync Color 3	yes	
			13	Single 375FPM Ph1 Color 1 Alt Color 4	yes	
			14	Single 375FPM Ph2 Color 1 Alt Color 4	yes	
		7	15	Single 375FPM Ph1 Color 2 Sync Color 4	yes	
		8	16	Single 375FPM Ph2 Color 2 Sync Color 4	yes	
	9	9	17	Single 375FPM (Color 1 Sync Color 3) Alt (Color 2 Sync Color 4) (Phase 1)	yes	
	10	10	18	Single 375FPM (Color 1 Sync Color 3) Alt (Color 2 Sync Color 4) (Phase 2)	yes	
	11	11	19	Single 375FPM Color 1 Alt Color 2 Alt Color 3 Alt Color 4	yes	

Flash Patterns XTP4MC and XTP6MC - Multi Color (Continued):

For patterns that meet SAE J595 Class1 requirements for Red, Blue, Amber, and White, see **S** in chart!

For patterns that meet California Title 13 Class B requirements for Red, Blue, and Amber, see **C** in chart!

For patterns that meet ECE65 Class1 Cat X (night only)requirements for Red, Blue, Amber, see **E1** in chart!

For patterns that meet ECE65 Class2 Cat X (day & night) requirements for Red, Blue, Amber, see **E2** in chart!

PATTERN GROUP	RED WIRE LED Color 1&3	WHITE WIRE LED Color 2&4	RED & WHITE WIRE LED Color 1&3, Color 2&4	FLASH PATTERN	SYNC	Complies with
3	12		20	Double 75FPM Ph1 Color 1 Sync Color 3	yes	SC
	13		21	Double 75FPM Ph2 Color 1 Sync Color 3	yes	SC
			22	Double 75FPM Ph1 Color 1 Alt Color 4	yes	
			23	Double 75FPM Ph2 Color 1 Alt Color 4	yes	
		12	24	Double 75FPM Ph1 Color 2 Sync Color 4	yes	SC
		13	25	Double 75FPM Ph2 Color 2 Sync Color 4	yes	SC
	14	14	26	Double 75FPM (Color 1 Sync Color 3) Alt (Color 2 Sync Color 4) (Phase 1)	yes	SC
	15	15	27	Double 75FPM (Color 1 Sync Color 3) Alt (Color 2 Sync Color 4) (Phase 2)	yes	SC
16	16	28	Double 75FPM Color 1 Alt Color 2 Alt Color 3 Alt Color 4	yes		
4	17		29	XTP4MC BLUE ONLY - Dbl 120FPM Ph1 Color 1 Sync Color 3	yes	SE1
				XTP4MC RED, AMB ONLY - Dbl 120FPM Ph1 Color 1 Sync Color 3		SE2
				XTP6MC RED, BLUE, AMB - Dbl 120FPM Ph1 Color 1 Sync Color 3		SE2
	18		30	XTP4MC BLUE ONLY - Dbl 120FPM Ph2 Color 1 Sync Color 3	yes	SE1
				XTP4MC RED, AMB ONLY - Dbl 120FPM Ph2 Color 1 Sync Color 3		SE2
				XTP6MC RED, BLUE, AMB - Dbl 120FPM Ph2 Color 1 Sync Color 3		SE2
			31	Double 120FPM Ph1 Color 1 Alt Color 4	yes	
			32	Double 120FPM Ph2 Color 1 Alt Color 4	yes	
		17	33	XTP4MC BLUE ONLY - Dbl 120FPM Ph1 Color 2 Sync Color 4	yes	SE1
				XTP4MC RED, AMB ONLY - Dbl 120FPM Ph1 Color 2 Sync Color 4		SE2
				XTP6MC RED, BLUE, AMB - Dbl 120FPM Ph1 Color 2 Sync Color 4		SE2
		18	34	XTP4MC BLUE ONLY - Dbl 120FPM Ph2 Color 2 Sync Color 4	yes	SE1
XTP4MC RED, AMB ONLY - Dbl 120FPM Ph2 Color 2 Sync Color 4				SE2		
XTP6MC RED, BLUE, AMB - Dbl 120FPM Ph2 Color 2 Sync Color 4				SE2		
19	19	35	Double 120FPM (Color 1 Sync Color 3) Alt (Color 2 Sync Color 4) (Phase 1)	yes	S	
20	20	36	Double 120FPM (Color 1 Sync Color 3) Alt (Color 2 Sync Color 4) (Phase 2)	yes	S	
21	21	37	Double 120FPM Color 1 Alt Color 2 Alt Color 3 Alt Color 4	yes		
5	22		38	Triple 75FPM Ph1 Color 1 Sync Color 3	yes	S
	23		39	Triple 75FPM Ph2 Color 1 Sync Color 3	yes	S
			40	Triple 75FPM Ph1 Color 1 Alt Color 4	yes	
			41	Triple 75FPM Ph2 Color 1 Alt Color 4	yes	
		22	42	Triple 75FPM Ph1 Color 2 Sync Color 4	yes	S
		23	43	Triple 75FPM Ph2 Color 2 Sync Color 4	yes	S
	24	24	44	Triple 75FPM (Color 1 Sync Color 3) Alt (Color 2 Sync Color 4) (Phase 1)	yes	S
	25	25	45	Triple 75FPM (Color 1 Sync Color 3) Alt (Color 2 Sync Color 4) (Phase 2)	yes	S
26	26	46	Triple 75FPM Color 1 Alt Color 2 Alt Color 3 Alt Color 4	yes		
6	27		47	Quad 75FPM Ph1 Color 1 Sync Color 3	yes	SC
	28		48	Quad 75FPM Ph2 Color 1 Sync Color 3	yes	SC
			49	Quad 75FPM Ph1 Color 1 Alt Color 4	yes	
			50	Quad 75FPM Ph2 Color 1 Alt Color 4	yes	
		27	51	Quad 75FPM Ph1 Color 2 Sync Color 4	yes	SC
		28	52	Quad 75FPM Ph2 Color 2 Sync Color 4	yes	SC
	29	29	53	Quad 75FPM (Color 1 Sync Color 3) Alt (Color 2 Sync Color 4) (Phase 1)	yes	SC
	30	30	54	Quad 75FPM (Color 1 Sync Color 3) Alt (Color 2 Sync Color 4) (Phase 2)	yes	SC
31	31	55	Quad 75FPM Color 1 Alt Color 2 Alt Color 3 Alt Color 4	yes		
7	32		56	Quad 150FPM Ph1 Color 1 Sync Color 3	yes	S
	33		57	Quad 150FPM Ph2 Color 1 Sync Color 3	yes	S
			58	Quad 150FPM Ph1 Color 1 Alt Color 4	yes	
			59	Quad 150FPM Ph2 Color 1 Alt Color 4	yes	
		32	60	Quad 150FPM Ph1 Color 2 Sync Color 4	yes	S
		33	61	Quad 150FPM Ph2 Color 2 Sync Color 4	yes	S
	34	34	62	Quad 150FPM (Color 1 Sync Color 3) Alt (Color 2 Sync Color 4) (Phase 1)	yes	S
	35	35	63	Quad 150FPM (Color 1 Sync Color 3) Alt (Color 2 Sync Color 4) (Phase 2)	yes	S
36	36	64	Quad 150FPM Color 1 Alt Color 2 Alt Color 3 Alt Color 4	yes		
8			65	Modulation (Color 1 Sync Color 3) Alt (Color 2 Sync Color 4)	no	
9			66	2 Double, 2 Quad (Color 1 Sync Color 3) Alt (Color 2 Sync Color 4)	no	
10			67	4 Single, 2 Triple (Color 1 Sync Color 3) Alt (Color 2 Sync Color 4)	no	
11			68	1 Double, 1 Triple, 1 Quad (Color 1 Sync Color 3) Alt (Color 2 Sync Color 4)	no	
12	37		69	Steady Burn-Color 1 & 3	no	
		37	70	Steady Burn-Color 2 & 4	no	

Troubleshooting:

The XTP series light head has been thoroughly factory tested. If any of the the device functions fail, please check the following:

1. Be sure the power source is activated, then check all connections both positive and ground at the light head (to assure no open or shorted circuits).
2. Permanently connecting the Blue programming wire to ground will disable the light head, no matter what the programmed flash pattern.
3. If the Dim function does not operate, verify the Blue wire is connect to positive.
4. If the sync function is not being used and the light head is functioning erratically, verify the Yellow wire is not connected to positive.

Replacement Parts and Accessories:

Part/Accs	XTP4-MC	XTP6-MC
Bezel Black Plastic	T51875	T51876
Bezel Chrome Plastic	250-0427-00	250-0429-00
Mtg Grommet Rubber	T51891	T51892
Mtg Gasket Foam	T51887	T51888

Manufacturer Limited Warranty Policy:

Manufacturer warrants that on the date of purchase this product will conform to Manufacturer's specifications for this product (which are available from the Manufacturer upon request). This Limited Warranty extends for Sixty (60) months from the date of purchase.

DAMAGE TO PARTS OR PRODUCTS RESULTING FROM TAMPERING, ACCIDENT, ABUSE, MISUSE, NEGLIGENCE, UNAPPROVED MODIFICATIONS, FIRE OR OTHER HAZARD; IMPROPER INSTALLATION OR OPERATION; OR NOT BEING MAINTAINED IN ACCORDANCE WITH THE MAINTENANCE PROCEDURES SET FORTH IN MANUFACTURER'S INSTALLATION AND OPERATING INSTRUCTIONS VOIDS THIS LIMITED WARRANTY.

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MANUFACTURER MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED. THE IMPLIED WARRANTIES FOR MERCHANTABILITY, QUALITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, USAGE OR TRADE PRACTICE ARE HEREBY EXCLUDED AND SHALL NOT APPLY TO THE PRODUCT AND ARE HEREBY DISCLAIMED, EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW. ORAL STATEMENTS OR REPRESENTATIONS ABOUT THE PRODUCT DO NOT CONSTITUTE WARRANTIES.

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MANUFACTURER'S SOLE LIABILITY AND BUYER'S EXCLUSIVE REMEDY IN CONTRACT, TORT (INCLUDING NEGLIGENCE), OR UNDER ANY OTHER THEORY AGAINST MANUFACTURER REGARDING THE PRODUCT AND ITS USE SHALL BE, AT MANUFACTURER'S DISCRETION, THE REPLACEMENT OR REPAIR OF THE PRODUCT, OR THE REFUND OF THE PURCHASE PRICE PAID BY BUYER FOR NON-CONFORMING PRODUCT. IN NO EVENT SHALL MANUFACTURER'S LIABILITY ARISING OUT OF THIS LIMITED WARRANTY OR ANY OTHER CLAIM RELATED TO THE MANUFACTURER'S PRODUCTS EXCEED THE AMOUNT PAID FOR THE PRODUCT BY BUYER AT THE TIME OF THE ORIGINAL PURCHASE. IN NO EVENT SHALL MANUFACTURER BE LIABLE FOR LOST PROFITS, THE COST OF SUBSTITUTE EQUIPMENT OR LABOR, PROPERTY DAMAGE, OR OTHER SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES BASED UPON ANY CLAIM FOR BREACH OF CONTRACT, IMPROPER INSTALLATION, NEGLIGENCE, OR OTHER CLAIM, EVEN IF MANUFACTURER OR A MANUFACTURER'S REPRESENTATIVE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. MANUFACTURER SHALL HAVE NO FURTHER OBLIGATION OR LIABILITY WITH RESPECT TO THE PRODUCT OR ITS SALE, OPERATION AND USE, AND MANUFACTURER NEITHER ASSUMES NOR AUTHORIZES THE ASSUMPTION OF ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH SUCH PRODUCT.

This Limited Warranty defines specific legal rights. You may have other legal rights which vary from jurisdiction to jurisdiction. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages.

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 returned to sender after the service has been rendered.



10986 North Warson Road
St. Louis, MO 63114

Customer Service

(314) 426-2700

c3_tech_support@code3esg.com

www.code3esg.com

An ECCO SAFETY GROUP™ Company

www.eccosafetygroup.com