



Installation and Operation Instructions

358118591 QUAD LED Warning Light Head

X OPTICAL SELECT

L:Linear



LED COLORS:

A:Amber

B:Blue

C:White

R:Red

IMPORTANT: Please read all of the following instructions before installing your new **HELLA QUAD LED WARNING LIGHT HEAD**.

WARNING!!!

Failure to install or use this product according to manufacturer's recommendations may result in property damage, serious injury, and/or death to those you seek to protect!

*Proper installation of this product requires the installer to have a good understanding of automotive electronics, systems and procedures.

*This product contains high-intensity LEDs. 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.

*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 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.

*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.

*Inspect and operate this product regularly to confirm its proper operation and mounting condition. Do not use a pressure washer to clean this product.

*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.

*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!**

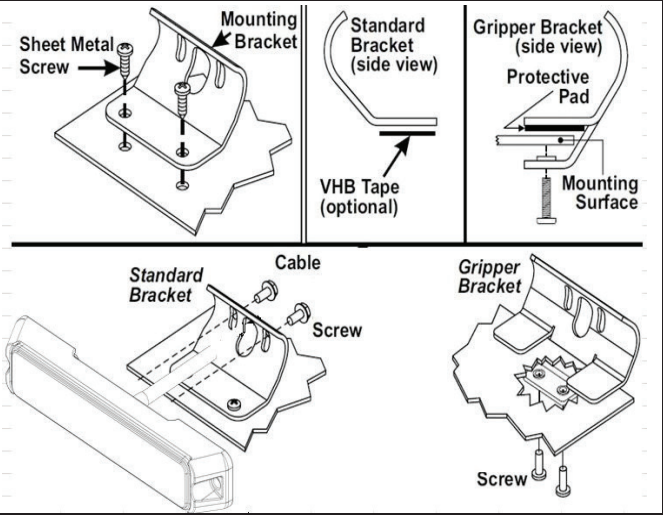
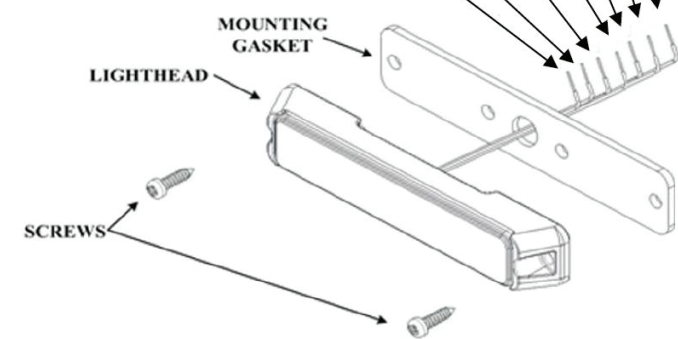
If this product uses a remote device to activate or control this product, make sure that this control is located in an area that allows both the vehicle and the control to be operated safely in any driving condition.

Do not attempt to activate or control this device in a hazardous driving situation.

HELLA Quad LED Specification	
Input Voltage	10 - 30VDC
Work current	LM6X 1.3A max@DC12V 1.0A max@DC24V
Waterproof	IP67

Mounting:

- Connect YELLOW wire of all units together for Synchronization
- Flash Pattern Select / Dim
- Mode switch
- To Chassis Ground
- To +10-30Vdc (fuse @2A)
- Memory function
- Memory function



TROUBLE SHOOTING

The HELLA QUAD LED Warning Lighthouse has been factory tested and approved. If the functions of device fail, please check the followings:

- After connecting with the power supply, be sure that the power source end is joined in correct way. And then, make sure that there is no shortcircuited power occurred. Plug device ensure the power switch which have LED is "on" state.
- Press the Pattern Switch to be sure the "OFF" pattern is not selected. If the blue wire touches black wire over 5 seconds, it would switch to OFF pattern. It would be lighted up again when using blue wire touches black wireless 1 second.

WARRANTY (2 YEARS WARRANTY)

This product was tested and found to be operational at the time of manufacture. Provided this product is installed and operated in accordance with the manufacturer's recommendations, HELLA guarantees the QUAD LED Warning Light Head for a period of 2 years from the day of purchase or delivery, whichever is later. Units demonstrated to be defective within the warranty period will be replaced. Improper installation or use of inappropriate or inadequate wiring or circuit protection causes the warranty to be void. Failure or destruction of the product resulting from abuse or unusual use and/or accidents is not covered by this warranty. HELLA 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.

HELLA AUTOMOTIVE SALES ,INC. MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY INCLUDING, WITHOUT LIMITATION, WARRANTIES OF FITNESS OR MERCHANTABILITY, WITH RESPECT THIS PRODUCT.



HELLA QUAD LED Warning light head Wire Function:

Wire	Function						
	Mode Select						
	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7
Red	Positive			Positive	Positive		Positive
White		Positive		Positive		Positive	Positive
Orange			Positive		Positive	Positive	Positive
Black	Negative						
Blue	Apply To Negative For Pattern Switch / Apply To Positive For Dim						
Yellow	Synchronized Function						
Green	Apply To Positive For Mode Switch						

Mode Switch Operation:

Apply Green wire to Positive:	
Mode 1	Color1
Mode 2	Color2
Mode 3	Color3
Mode 4	Color4
Mode 5	Color 1&2
Mode 6	Color 1&3
Mode 7	Color 1&4
Mode 8	Color 2&3
Mode 9	Color 2&4
Mode 10	Color 3&4
Mode 11	Color 1&2&3
Mode 12	Color 1&2&4
Mode 13	Color 1&3&4
Mode 14	Color 2&3&4
Mode 15	Color 1&2&3&4

Pattern Switch Operation:

Apply Blue to Black wire:	
PUSH TIMES	FUNCTION
0 ~ 1 sec.	Next pattern
1 ~ 3 sec.	Previous pattern
3 ~ 5 sec.	Factory default pattern
5 ~ sec.	Last pattern



	LED Color 1	LED Color 2	LED Color 3	LED Color 4	LED Color 1 & Color 2	LED Color 1 & Color 3	LED Color 1 & Color 4	LED Color 2 & Color 3	LED Color 2 & Color 4	LED Color 3 & Color 4	LED Color 1 & Color 2 & Color 3	LED Color 1 & Color 2 & Color 4	LED Color 1 & Color 3 & Color 4	LED Color 2 & Color 3 & Color 4	LED Color 1 & Color 2 & Color 3 & Color 4	SIN/C		
	Mode1	Mode2	Mode3	Mode4	Mode5	Mode6	Mode7	Mode8	Mode9	Mode10	Mode11	Mode12	Mode13	Mode14	Mode15			
1	Single 75FPM	1														Single 75FPM Ph1 Color 1	yes	
		2															Single 75FPM Ph2 Color 1	yes
		1															Single 75FPM Ph1 Color 2	yes
		2															Single 75FPM Ph2 Color 2	yes
		1															Single 75FPM Ph1 Color 3	yes
		2															Single 75FPM Ph2 Color 3	yes
		1															Single 75FPM Ph1 Color 4	yes
		2															Single 75FPM Ph2 Color 4	yes
		1															Single 75FPM Ph1 Color 1 Alternately Color 2	yes
		2															Single 75FPM Ph2 Color 1 Alternately Color 2	yes
		1															Single 75FPM Ph1 Color 1 Alternately Color 3	yes
		2															Single 75FPM Ph2 Color 1 Alternately Color 3	yes
		1															Single 75FPM Ph1 Color 1 Alternately Color 4	yes
		2															Single 75FPM Ph2 Color 1 Alternately Color 4	yes
		2	Single 120FPM	3														Single 120FPM Ph1 Color 1
4																Single 120FPM Ph2 Color 1	yes	
3																Single 120FPM Ph1 Color 2	yes	
4																Single 120FPM Ph2 Color 2	yes	
3																Single 120FPM Ph1 Color 3	yes	
4																Single 120FPM Ph2 Color 3	yes	
3																Single 120FPM Ph1 Color 4	yes	
4																Single 120FPM Ph2 Color 4	yes	
3																Single 120FPM Ph1 Color 1 Alternately Color 2	yes	
4																Single 120FPM Ph2 Color 1 Alternately Color 2	yes	
3																Single 120FPM Ph1 Color 1 Alternately Color 3	yes	
4																Single 120FPM Ph2 Color 1 Alternately Color 3	yes	
3																Single 120FPM Ph1 Color 1 Alternately Color 4	yes	
4																Single 120FPM Ph2 Color 1 Alternately Color 4	yes	
3	Single 375FPM			5														Single 375FPM Ph1 Color 1
		6														Single 375FPM Ph2 Color 1	yes	
		5														Single 375FPM Ph1 Color 2	yes	
		6														Single 375FPM Ph2 Color 2	yes	
		5														Single 375FPM Ph1 Color 3	yes	
		6														Single 375FPM Ph2 Color 3	yes	
		5														Single 375FPM Ph1 Color 4	yes	
		6														Single 375FPM Ph2 Color 4	yes	
		5														Single 375FPM Ph1 Color 1 Alternately Color 2	yes	
		6														Single 375FPM Ph2 Color 1 Alternately Color 2	yes	
		5														Single 375FPM Ph1 Color 1 Alternately Color 3	yes	
		6														Single 375FPM Ph2 Color 1 Alternately Color 3	yes	
		5														Single 375FPM Ph1 Color 1 Alternately Color 4	yes	
		6														Single 375FPM Ph2 Color 1 Alternately Color 4	yes	
		4	Double 75FPM	7														Double 75FPM Ph1 Color 1
8																Double 75FPM Ph2 Color 1	yes	
7																Double 75FPM Ph1 Color 2	yes	
8																Double 75FPM Ph2 Color 2	yes	
7																Double 75FPM Ph1 Color 3	yes	
8																Double 75FPM Ph2 Color 3	yes	
7																Double 75FPM Ph1 Color 4	yes	
8																Double 75FPM Ph2 Color 4	yes	
7																Double 75FPM Ph1 Color 1 Alternately Color 2	yes	
8																Double 75FPM Ph2 Color 1 Alternately Color 2	yes	
7																Double 75FPM Ph1 Color 1 Alternately Color 3	yes	
8																Double 75FPM Ph2 Color 1 Alternately Color 3	yes	
7																Double 75FPM Ph1 Color 1 Alternately Color 4	yes	
8																Double 75FPM Ph2 Color 1 Alternately Color 4	yes	
7																Double 75FPM Ph1 Color 2 Alternately Color 3	yes	
8														Double 75FPM Ph2 Color 2 Alternately Color 3	yes			
7														Double 75FPM Ph1 Color 2 Alternately Color 4	yes			
8														Double 75FPM Ph2 Color 2 Alternately Color 4	yes			
7														Double 75FPM Ph1 Color 3 Alternately Color 4	yes			
8														Double 75FPM Ph2 Color 3 Alternately Color 4	yes			
7														Double 75FPM Ph1 Color 3 Alternately Color 3	yes			
8														Double 75FPM Ph2 Color 3 Alternately Color 3	yes			
7														Double 75FPM Ph1 Color 1 Alternately Color 2 Alternately Color 3	yes			
8														Double 75FPM Ph2 Color 1 Alternately Color 2 Alternately Color 3	yes			
7														Double 75FPM Ph1 Color 1 Alternately Color 2 Alternately Color 4	yes			
8														Double 75FPM Ph2 Color 1 Alternately Color 2 Alternately Color 4	yes			
7														Double 75FPM Ph1 Color 1 Alternately Color 3 Alternately Color 4	yes			
8														Double 75FPM Ph2 Color 1 Alternately Color 3 Alternately Color 4	yes			
7														Double 75FPM Ph1 Color 2 Alternately Color 3 Alternately Color 4	yes			
8														Double 75FPM Ph2 Color 2 Alternately Color 3 Alternately Color 4	yes			



	LED Color 1	LED Color 2	LED Color 3	LED Color 4	LED Color 1 & Color 2	LED Color 1 & Color 3	LED Color 1 & Color 4	LED Color 2 & Color 3	LED Color 2 & Color 4	LED Color 3 & Color 4	LED Color 1 & Color 2 & Color 3	LED Color 1 & Color 2 & Color 4	LED Color 1 & Color 3 & Color 4	LED Color 2 & Color 3 & Color 4	LED Color 1 & Color 2 & Color 3 & Color 4	SYNC	
5	Mode1	Mode2	Mode3	Mode4	Mode5	Mode6	Mode7	Mode8	Mode9	Mode10	Mode11	Mode12	Mode13	Mode14	Mode15	Double 120FPM Ph1 Color 1	yes
	9															Double 120FPM Ph2 Color 1	yes
	10	9														Double 120FPM Ph2 Color 2	yes
		10														Double 120FPM Ph1 Color 2	yes
			9													Double 120FPM Ph2 Color 2	yes
			10													Double 120FPM Ph1 Color 3	yes
				9												Double 120FPM Ph2 Color 3	yes
				10												Double 120FPM Ph1 Color 4	yes
					9											Double 120FPM Ph2 Color 4	yes
					10											Double 120FPM Ph1 Color 1 Alternately Color 2	yes
						9										Double 120FPM Ph2 Color 1 Alternately Color 2	yes
						10										Double 120FPM Ph1 Color 1 Alternately Color 3	yes
							9									Double 120FPM Ph2 Color 1 Alternately Color 3	yes
							10									Double 120FPM Ph1 Color 1 Alternately Color 4	yes
	6	11															Triple 75FPM Ph1 Color 1
12		11														Triple 75FPM Ph2 Color 1	yes
		12														Triple 75FPM Ph1 Color 2	yes
			11													Triple 75FPM Ph2 Color 2	yes
			12													Triple 75FPM Ph1 Color 3	yes
				11												Triple 75FPM Ph2 Color 3	yes
				12												Triple 75FPM Ph1 Color 4	yes
					11											Triple 75FPM Ph2 Color 4	yes
					12											Triple 75FPM Ph1 Color 1 Alternately Color 2	yes
						11										Triple 75FPM Ph2 Color 1 Alternately Color 2	yes
						12										Triple 75FPM Ph1 Color 1 Alternately Color 3	yes
							11									Triple 75FPM Ph2 Color 1 Alternately Color 3	yes
							12									Triple 75FPM Ph1 Color 1 Alternately Color 4	yes
								11								Triple 75FPM Ph2 Color 1 Alternately Color 4	yes
7		13															Quad 75FPM Ph1 Color 1
	14															Quad 75FPM Ph2 Color 1	yes
		13														Quad 75FPM Ph1 Color 2	yes
		14														Quad 75FPM Ph2 Color 2	yes
			13													Quad 75FPM Ph1 Color 3	yes
			14													Quad 75FPM Ph2 Color 3	yes
				13												Quad 75FPM Ph1 Color 4	yes
				14												Quad 75FPM Ph2 Color 4	yes
					13											Quad 75FPM Ph1 Color 1 Alternately Color 2	yes
					14											Quad 75FPM Ph2 Color 1 Alternately Color 2	yes
						13										Quad 75FPM Ph1 Color 1 Alternately Color 3	yes
						14										Quad 75FPM Ph2 Color 1 Alternately Color 3	yes
							13									Quad 75FPM Ph1 Color 1 Alternately Color 4	yes
							14									Quad 75FPM Ph2 Color 1 Alternately Color 4	yes
	8	15															Quad 75FPM Ph1 Color 2 Alternately Color 3
16																Quad 75FPM Ph2 Color 2 Alternately Color 3	yes
		15														Quad 75FPM Ph1 Color 2 Alternately Color 4	yes
		16														Quad 75FPM Ph2 Color 2 Alternately Color 4	yes
			15													Quad 75FPM Ph1 Color 3 Alternately Color 4	yes
			16													Quad 75FPM Ph2 Color 3 Alternately Color 4	yes
				15												Quad 75FPM Ph1 Color 3 Alternately Color 4	yes
				16												Quad 75FPM Ph2 Color 3 Alternately Color 4	yes
					15											Quad 75FPM Ph1 Color 1 Alternately Color 2 Alternately Color 3	yes
					16											Quad 75FPM Ph2 Color 1 Alternately Color 2 Alternately Color 3	yes
						15										Quad 75FPM Ph1 Color 1 Alternately Color 3	yes
						16										Quad 75FPM Ph2 Color 1 Alternately Color 3	yes
							15									Quad 75FPM Ph1 Color 1 Alternately Color 4	yes
							16									Quad 75FPM Ph2 Color 1 Alternately Color 4	yes



Flash	LED Color 1	LED Color 2	LED Color 3	LED Color 4	LED Color 1 & Color 2	LED Color 1 & Color 3	LED Color 1 & Color 4	LED Color 2 & Color 3	LED Color 2 & Color 4	LED Color 3 & Color 4	LED Color 1 & Color 2 & Color 3	LED Color 1 & Color 2 & Color 4	LED Color 1 & Color 3 & Color 4	LED Color 2 & Color 3 & Color 4	LED Color 1 & Color 2 & Color 3 & Color 4	Pattern	SWHC				
	Group1	Group2	Group3	Group4	Group5	Group6	Group7	Group8	Group9	Group10	Group11	Group12	Group13	Group14	Group15						
9	NFPA-Quad Flash 90FPM	17	17													NFPA-Quad Flash 90FPM Color 1	no				
				17													NFPA-Quad Flash 90FPM Color 2	no			
					17												NFPA-Quad Flash 90FPM Color 3	no			
						17											NFPA-Quad Flash 90FPM Color 4	no			
10	ModuFlash	18														ModuFlash sm. Color 1	no				
			18														ModuFlash sm. Color 2	no			
				18														ModuFlash sm. Color 3	no		
					18														ModuFlash sm. Color 4	no	
						17													ModuFlash Color 1 Alternately Color 2	no	
							17													ModuFlash Color 1 Alternately Color 3	no
								17												ModuFlash Color 1 Alternately Color 4	no
									17											ModuFlash Color 2 Alternately Color 3	no
										17										ModuFlash Color 2 Alternately Color 4	no
											17									ModuFlash Color 3 Alternately Color 4	no
												17								ModuFlash Color 1 Alternately Color 2 Alternately Color 3	no
													17							ModuFlash Color 1 Alternately Color 2 Alternately Color 4	no
														17						ModuFlash Color 1 Alternately Color 3 Alternately Color 4	no
															17					ModuFlash Color 2 Alternately Color 2 Alternately Color 3 Alternately Color 4	no
		11	2 Double Flash,2 Quad Flash	19														2 Double Flash,2 Quad Flash Color 1	no		
					19													2 Double Flash,2 Quad Flash Color 2	no		
				19												2 Double Flash,2 Quad Flash Color 3	no				
					19											2 Double Flash,2 Quad Flash Color 4	no				
12	4 Single Flash,2 Triple Flash	20														4 Single Flash,2 Triple Flash Color 1	no				
			20													4 Single Flash,2 Triple Flash Color 2	no				
				20												4 Single Flash,2 Triple Flash Color 3	no				
					20											4 Single Flash,2 Triple Flash Color 4	no				
13	Autorun	21														Autorun Color 1	no				
			21													Autorun Color 2	no				
				21												Autorun Color 3	no				
					21											Autorun Color 4	no				
						18										Autorun Color 1 Alternately Color 2	no				
							18									Autorun Color 1 Alternately Color 3	no				
								18								Autorun Color 1 Alternately Color 4	no				
									18							Autorun Color 2 Alternately Color 3	no				
										18						Autorun Color 2 Alternately Color 4	no				
											18					Autorun Color 3 Alternately Color 4	no				
												18				Autorun Color 1 Alternately Color 2 Alternately Color 3	no				
													18			Autorun Color 1 Alternately Color 2 Alternately Color 4	no				
14		22														steady burn Color 1	no				
			22													steady burn Color 2	no				
				22												steady burn Color 3	no				
					22											steady burn Color 4	no				

Synchronize Feature:

Maximum of 8 LM6L-P1 Series can be synchronized.

Phase Operation:

Phase 1 (Ph1) flashes simultaneously with Ph1 Phase 2 (Ph2) flashes simultaneously with Ph2 Ph1 alternates with Ph2.