

# WHELEN<sup>®</sup>

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## Installation Guide: 400-series LED Lighthouse

### 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.

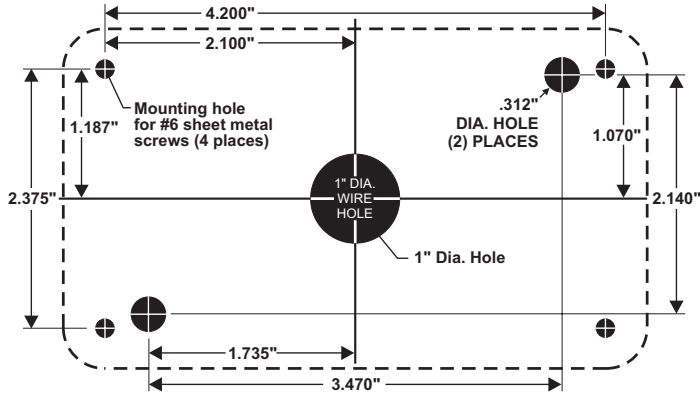
- **Proper installation of this product requires the installer to have a good understanding of automotive electronics, systems and procedures.**
- **If mounting this product requires drilling holes, the installer MUST be sure that no vehicle components or other vital parts could be damaged by the drilling 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.**
- **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 owners 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.**
- **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.**
- **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!**

**For warranty information regarding this product, visit [www.whelen.com/warranty](http://www.whelen.com/warranty)**

**Caution:** This product is designed for improved visibility. Prior to installing this product on any vehicle, check your state motor vehicle codes to confirm that this product complies with any and all state statutes.

**Mounting:**

- Using the dimensions below, mark off and drill the two 5/16 inch diameter vent tube holes and the 1 inch center wire hole into the mounting surface. **Check measurements before drilling.**



**Note:** Make sure lighthead will not interfere with existing equipment and be aware of any items on the opposite side of the mounting surface.

- Insert the 2 vent tubes extending from the rear of the lighthead into their holes. With a scribe or similar tool, mark off the 4 mounting holes.
- Using a drill bit sized for a #6 sheet metal screw (and the thickness of the mounting surface), drill the four mounting holes. Install a grommet (customer supplied) into the 1 inch wire hole.
- Using appropriately sized wires (Minimum wire size / 18 AWG), run the lighthead wires to their connections. (See Wire Designations) Fuse the +12VDC connections at 3 Amps and test operation of lighthead before securing it to vehicle.
- Position the lighthead onto the mounting surface and secure to the vehicle using four #6 x 1-1/4" sheet metal screws.

**Caution: WARNING!** All customer supplied wires that connect to the positive terminal of the battery must be sized to supply at least 125% of the maximum operating current and FUSED at the battery to carry the load. **DO NOT USE CIRCUIT BREAKERS WITH THIS PRODUCT!**

**Caution:** This product draws significantly less current than a standard incandescent automotive bulb. If your flasher does not operate properly, it may be necessary to replace your existing flasher module with a Whelen 3TERM flasher module. Contact your sales representative for specific vehicle application.

**Scan-Lock™ (White/Violet)**

**WARNING:** Pattern selection requires the LED to be turned on. Do not look directly at LEDs while the unit is in operation.

**IMPORTANT:** If you have a 24 volt lighthead, you will apply 24 volts to the Scan-Lock™ wire for flash pattern selection.

**TO CHANGE PATTERNS:** Apply +12 volts to the WHITE/VIOLET wire for less than 1 second and release to cycle forward to the next available pattern. Apply +12 volts to the WHITE/VIOLET wire for more than 1 second and release to cycle back to the previous pattern.

**TO CHANGE THE DEFAULT PATTERN:** When the desired pattern is displayed, allow it to run for more than 5 seconds. The lighthead will now display this pattern when initially activated.

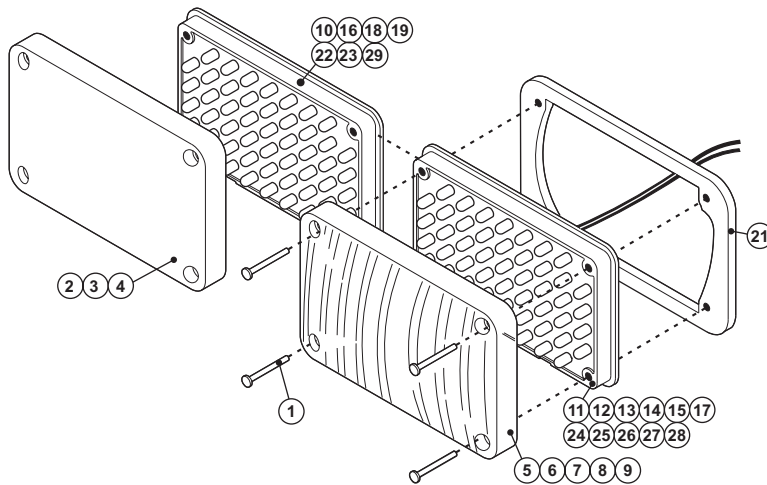
**TO RESTORE THE FACTORY DEFAULT PATTERN:** With the power to the lighthead off, apply +12 volts to the WHITE/VIOLET wire. Now turn power to the lighthead on. The factory default pattern should now be displayed.

**NOTE:** A Normally Open momentary switch can be used to control Scan-Lock™ operation.

**Flash Patterns:** SignalAlert™ 75 > SignalAlert™ 150 > SingleFlash 375 > SingleFlash 150 > SingleFlash 75 > SingleFlash 150 > DoubleFlash 150 > DoubleFlash 75 > CometFlash® 75 > ActionFlash™ > ModuFlash™ > ComAlert™ > ActionScan™ > SignalAlert™ Steady > Steady (Brake) **Available Brake Patterns:** SignalAlert™ Steady > Steady Brake

**IMPORTANT!** Before returning this vehicle to active service, visually confirm the proper operation of this product, as well as all vehicle components/equipment.

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



WIRE COLOR	FUNCTION	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	ITEM	PART NUMBER	DESCRIPTION	
<b>BRAKE / TAIL / TURN</b>																					
Yellow	Stop, Turn / Positive (+)																	*	01-06837592R0	LIGHTHEAD 400 LED B-T-T / MIN / RED	
Brown	Taillight / Positive (+)																	*	01-06837595A0	LIGHTHEAD 400 LED WIDE ANGLE / AMBER	
White (12V)	Ground																		01-06837595B0	LIGHTHEAD 400 LED WIDE ANGLE / BLUE	
White/Black (24V)	Ground																		01-06837595C0	LIGHTHEAD 400 LED WIDE ANGLE / WHITE	
White/Violet	Scan-Lock™																	*	01-06837595G0	LIGHTHEAD 400 LED WIDE ANGLE / GREEN	
																		*	01-06837595R0	LIGHTHEAD 400 LED WIDE ANGLE / RED	
																		*	01-06837596C0	LIGHTHEAD 400 LED FLOOD / WHITE	
<b>WIDE ANGLE / FLOOD</b>																					
Colored Wire	Positive (+)																	*	01-06837597C*	LIGHTHEAD 400 LED BACK-UP / WHITE	
Wire color is whatever the color its LED is, when the light is switched on.																		*	01-06837599A0	LIGHTHEAD 400 LED TURN/CLEARANCE / AMBER	
Black (12V)	Ground																	*	01-06837599BR0	LIGHTHEAD 400 LED B-T-T / MAX / RED	
Black/White (24V)	Ground																	*	01-06837599BR1	LIGHTHEAD 400 LED B-T-T / MAX / RED / DEUTSCH	
White/Violet	Scan-Lock™																	*	01-06837596C1	LIGHTHEAD 400 LED FLOOD - WHITE/DEUTSCH	
																		*	01-06837595*1	LIGHTHEAD 400 LED WIDE ANGLE - DEUTSCH	
																		*	01-06837599C1	LIGHTHEAD 400 LED BACK-UP / 24V / WHITE / DEUTSCH	
<b>BACK-UP / TURN</b>																					
White	Positive (+)	*																		01-06837599ER1	LIGHTHEAD 400 LED B-T-T / MAX / 24V / RED / DEUTSCH
Black	Ground	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	1	15-061416-200	SCREW / #6 X 1 1/4" PPHSMS	
Black/White (24V)	Ground	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	68-3183725-1S	LENS / NON OPTIC / AMBER with SEAL	
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	68-3183725-3S	LENS / NON OPTIC / CLEAR with SEAL	
		1	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	4	68-3183725-5S	LENS / NON OPTIC / RED with SEAL	
		-	-	A/R	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5	68-1183726-1S	LENS / OPTIC / AMBER with SEAL
		-	-	A/R	-	-	-	-	-	-	-	-	-	-	-	-	-	1	6	68-1183726-2S	LENS / OPTIC / BLUE with SEAL
		-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	7	68-1183726-3S	LENS / OPTIC / CLEAR with SEAL
		-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	8	68-1183726-4S	LENS / OPTIC / GREEN with SEAL
		-	-	A/R	-	-	-	-	-	-	-	-	-	-	1	-	-	-	9	68-1183726-5S	LENS / OPTIC / RED with SEAL
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	10	01-0283458-52	SUB ASSY / LED B-T-T / MIN
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	11	01-0283458-15	SUB ASSY / LED WIDE ANGLE / AMBER
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	12	01-0283458-25	SUB ASSY / LED WIDE ANGLE / BLUE
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	13	01-0283458-35	SUB ASSY / LED WIDE ANGLE / WHITE
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	14	01-0283458-45	SUB ASSY / LED WIDE ANGLE / GREEN
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	15	01-0283458-55	SUB ASSY / LED WIDE ANGLE / RED
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	16	01-0283458-36	SUB ASSY / LED FLOOD / WHITE
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A/R	17	01-0283458-37	SUB ASSY / BACK-UP / WHITE
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	18	01-0283458-19	SUB ASSY / TURN / CLEARANCE / AMBER
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	19	01-0283458-5B	SUB ASSY / B-T-T / MAX
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20	10-0522905***	LABEL
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	21	38-0262867-00	GASKET
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	02-038345815B	SUB ASSY / B-T-T / MAX / DEUTSCH
		-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	23	02-0383458136	SUB ASSY / LED FLOOD / WHITE / DEUTSCH
		-	-	A/R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	02-0383458115	SUB ASSY / LED WIDE ANGLE / AMBER / DEUT
		-	-	A/R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	02-0383458125	SUB ASSY / LED WIDE ANGLE / BLUE / DEUT
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	02-0383458155	SUB ASSY / LED WIDE ANGLE / RED / DEUT
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A/R	27	02-0383458137	SUB ASSY / BACK-UP / WHITE / DEUTSCH
		-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	02-038345813G	SUB ASSY / BACK-UP / 24V / WHITE / DEUTSCH
		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	02-038345815E	SUB ASSY / B-T-T / MAX / 24V / DEUTSCH

**ORDERING INFORMATION**

01-06837599



**STYLE**

- 2 = B-T-T / MIN
- 5 = WIDE ANGLE
- 6 = FLOOD
- 7 = BACK-UP
- 9 = TURN-CLEARANCE
- B = B-T-T / MAX
- G = BACK-UP / 24V
- E = B-T-T / MAX / 24V

**L.E.D. / LENS COLOR**

- A = AMBER / AMBER
- B = BLUE / BLUE
- C = WHITE / CLEAR
- G = GREEN / GREEN
- R = RED / RED
- 1 = AMBER / CLEAR
- 2 = BLUE / CLEAR
- 4 = GREEN / CLEAR
- 5 = RED / CLEAR

**TERMINATION**

- 0 = NONE
- 1 = DEUTSCH