

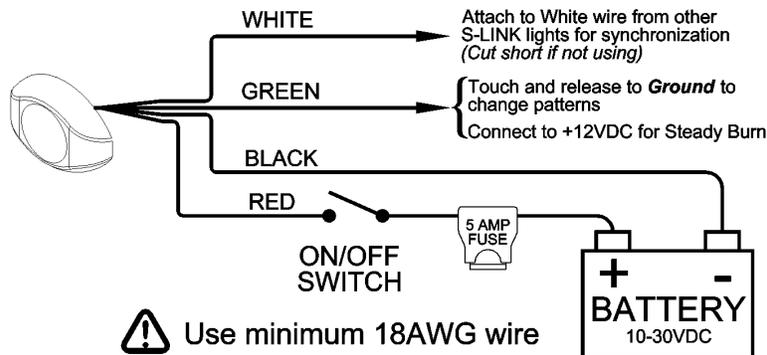
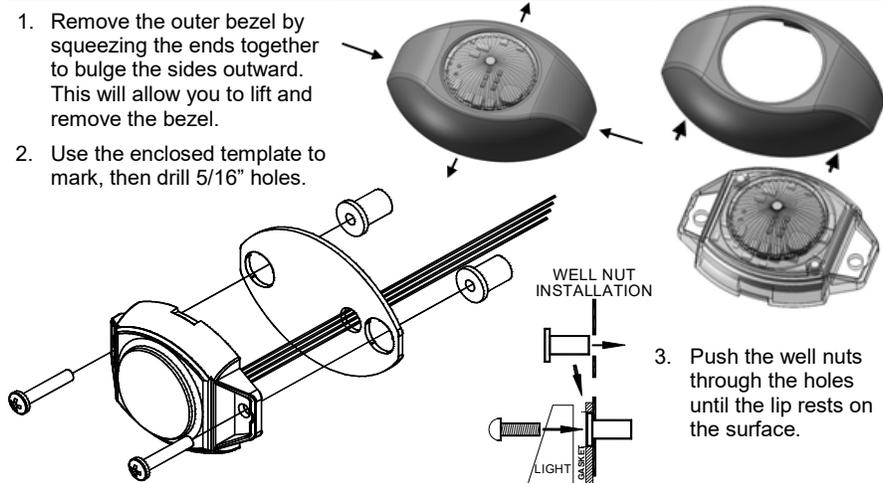
# DLS306

## Omni-Directional LED Light

### Mounting Instructions

**CAUTION:** Installation on a metal surface is highly recommended for proper heat dissipation allowing the light to obtain full brightness.

1. Remove the outer bezel by squeezing the ends together to bulge the sides outward. This will allow you to lift and remove the bezel.
2. Use the enclosed template to mark, then drill 5/16" holes.
3. Push the well nuts through the holes until the lip rests on the surface.
4. Feed the wires through the gasket and install the screws through the light and gasket and into the well nuts, ensuring the gasket remains flat.
5. Once the wires are run, the use of a small amount of silicone or other similar sealant (not included) is recommended to seal the wire hole and prevent your wires from becoming damaged.



- When drilling holes while installing this light, please take care to check that BOTH SIDES of your drilling surface are clear from obstructions.
- Choose a mounting location away from any air bag deployment areas.
- Controls should be placed within convenient reach of the driver.
- Use only soap and water when cleaning product. Use of other chemicals may discolor lens and/or housing, diminishing light output. Replace discolored lenses immediately!

## Wiring Notes



When wiring your lights, it is recommended that you take the following precautions to reduce any Electromagnetic Interference (EMI).

- Keep LED modules and any radios as far away from each other as possible.
- Separate the radio wires and the LED wires.
- Any excess wires should be cut short.
- The Ground wire, Power wire, and Synchronization wire should be bound tightly together as they run from light to light, through your switchbox, and to the battery.
- Do not ground each unit independently to the chassis. Run the ground for each unit in a "bus" like structure, to the negative terminal on the battery.

**Note:** The total wire length between the two farthest units should be no more than 40 feet.

## Operation

### *Default Operation*

- Applying power to the Red wire activates Flashing Mode.
- Applying power to the Green wire activates Steady Mode.
- By default, Steady Mode will override Flashing Mode.



**Please Note:** Because the Green wire is also used for Pattern Selection (see below), if you are connecting the Green wire to a switch that is also connected to other lights, it is possible that those other lights could pull the Green wire to ground and change the pattern. To avoid this issue, please install the enclosed diode on the Green wire using the butt splice, as shown below.

You do NOT need the diode if either of the following is true:

- You will not be using the steady feature of this light and the green wire is left unconnected.
- You use the shortcut indicated below to program the flash pattern to Steady Burn, and use the Red wire to activate it.



The DLS306 lights are available in either single color versions or dual color versions. By default, Flashing Mode functions slightly different from one another:

- Single color versions will operate in Simultaneous Flashing Mode. Both halves will flash together (at the same time).
- Dual color models will operate in Alternating Flashing Mode. The flashing will alternate back and forth between each of the sides.
- For dual color models, by default Steady Mode activates only one half, while the other side is off.

### Flash Pattern Programming

- Connect Black to Ground.
- Connect Red to switched +12-30VDC to activate the light in Flashing Mode.
- Touch and release the Green wire to Ground to scroll through the patterns

Flash Pattern #	Phase 1 Flash Pattern #	Phase 2 Flash Pattern #	Pattern Type	 Pattern Description	Shortcut
1	13	K	Flicker (1.0 CPS)		←
2	14	L	Fast Doubleflash (3.3 CPS)		Pattern 1 (Phase 1): 3 sec or 1 flash
3	15	M	Tripleflash (2.5 CPS)		
4	16	N	PSU Flicker (0.7 CPS)		
5	17	O	PSU Random (0.6 CPS)		
6	18	F	Quadflash (1.0 CPS)		←
7	19	G	Quadflash w/Post-Pop (1.0 CPS)		
8	20	H	Singleflash (1.0 CPS)		Pattern 6 (Phase 1): 6 Sec or 2 flash
9	21	I	Doubleflash (1.0 CPS)		
10	22	J	Variable AKA Delta-Omega (0.3CPS)		Pattern 18 (Phase 2): 12 sec or 4 flashes
11	23	C	Post pop(1.4 CPS)		
12	24	E	Random (0.4 CPS)		
N/A			Steady		18 sec or 6 flashes

**Pattern Shortcuts:** Hold Green wire to ground for indicated time.

## Programming Options

**Hold Red and White wire to Power / Black and Green wires to Ground:**

***Release White***

<u>After</u>	<u>Result</u>
2 Flashes	Toggles between Simultaneous (Solid Color) Mode and Alternating (Dual Color) Mode.
3 Flashes	Allow 1/2 to continue flashing when Steady enabled (by default Steady overrides all flashing). <b><i>Applies to Dual Color Mode Only</i></b>
4 Flashes	Do not flash Steady color side in Flashing Mode. (Both outputs flash by default.) <b><i>Applies to Dual Color Mode Only</i></b>

**To Flip-Flop The Steady Color And The Flashing Color (Dual Color Mode Only):**

Activate the light by connecting Red to Power and Black to Ground. Hold the Green wire to Ground until the light flashes 5 times (approximately 15 seconds) and then release it.

## Synchronization

**SYNCHRONIZATION**

You can synchronize up to six lights with  compatibility.

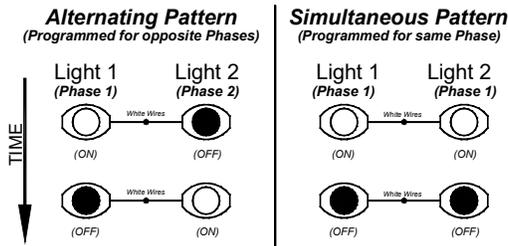
**DO NOT CONNECT WHITE WIRES UNTIL PROGRAMMING HAS BEEN COMPLETED FOR ALL LIGHTS!!**

1. Power up the first unit and select a Phase 1 pattern. Touch and release the green wire to ground to change patterns.
2. Program the second light with the same **Pattern Type**.

Lights with the SAME phase flash together (simultaneous).

Lights with DIFFERENT phases flash opposite one another (alternate).

3. After programming all lights, tie off the green wires and connect the white wires together.
4. Test lights by applying power to all of them at the same time.



## Troubleshooting

Symptom	Possible Cause/Solution
Full light steady on (no flashes)	<b>Light programmed for Steady Burn pattern</b> <i>Touch green to ground to change pattern.</i> <b>White wire shorted to power?</b> <b>Green wire shorted to power?</b>
1/2 light steady on	<b>Dual Color Steady Burn pattern set:</b> <i>See Steady Burn Programming section on page 2.</i>
Lights do not synchronize:	<b>Ensure that all lights are powered up simultaneously.</b> <b>A maximum of 6 lights can be synchronized.</b> <b>Maximum wire length of 20' per light.</b>
Flashes for only a few seconds	<b>Green wire shorted to ground?</b>
Light does not illuminate at all	<b>Incorrect or no power?</b> <i>Voltage across red and black wires should be 10-30VDC</i>
Dim light output over time.	<b>Mounting of light not providing a good heat-sink:</b> Ensure light is mounted tightly to a flat metal surface with included green thermal gasket for maximum light output.

### LED FIVE YEAR LIMITED WARRANTY

The manufacturer warrants this LED light against factory defects in material and workmanship for five years after the date of purchase. The owner will be responsible for returning to the Service Center any defective item(s) with the transportation costs prepaid. The manufacturer will, without charge, repair or replace *at its option*, products, or part(s), which its inspection determines to be defective. Repaired or replacement item(s) will be returned to the purchaser with transportation costs prepaid from the service point. A copy of the purchaser's receipt must be returned with the defective item(s) in order to qualify for the warranty coverage. Exclusions from this warranty include, but are not limited to, domes, and/or the finish. This warranty shall not apply to any light, which has been altered, such that in the manufacturer's judgment, the performance or reliability has been affected, or if any damage has resulted from abnormal use or service.

There are no warranties expressed or implied (including any warranty of merchantability or fitness), which extend this warranty period. **The loss of use of the product, loss of time, inconvenience, commercial loss or consequential damages, including costs of any labor, are not covered.** The manufacturer reserves the right to change the design of the product without assuming any obligation to modify any product previously manufactured.

This warranty gives you specific legal rights. You might also have additional rights that may vary from state to state. Some states do not allow limitations on how long an implied warranty lasts. Some states do not allow the exclusion or limitation of incidental or consequential damages. Therefore, the above limitation(s) or exclusion(s) may not apply to you.

If you have any questions concerning this or any other product,  
please contact our **Customer Service Department** at (585) 226-9787.

If a product must be returned for any reason, please contact our Customer Service Department to  
obtain a Returned Material Authorization number (RMA #) before you ship the product back.  
Please write the RMA # clearly on the package near the mailing label.

### NOTICE

Due to continuous product improvements, we must reserve the right to change any specifications and information, contained in this manual at any time without notice. Star Headlight & Lantern Co., Inc. makes no warranty of any kind with regard to this manual, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Star Headlight & Lantern Co., Inc. shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this manual.

