



# BKDLXT

Constellation Thinline Auxiliary LED Lights



The BKDLXT series heads utilize special connectors designed for use with the BKLD418-2 controller (sold separately).



BKLD418

## Installation Notes

- The installer must have a firm knowledge of basic electricity, vehicle electrical systems, and emergency equipment.
- If you need to drill any holes when installing this light, please take care to check that BOTH SIDES of your drilling surface are clear from obstructions, to ensure that you do not damage your vehicle and or pre-existing wiring.
- 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 this product. Use of other chemicals may discolor the lens and/or housing, thus diminishing the output of the light. Lenses that have become discolored should be replaced immediately!
- DO NOT use a pressure washer to clean this light. Use of a pressure washer may damage the light and WILL VOID THE WARRANTY.

## 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.
- The Ground, Power, and Synchronization wires should be bound tightly together as they run from light to light, through your switchbox, and finally to the battery.

# STAR

Safety Technologies by *Crote*

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## Surface Mounting Instructions

**Please Note:** These instructions are provided as a general guideline only. **Some vehicles may require special mounting, wiring, and/or weather-sealing. This is the sole responsibility of the installer.** Star Headlight & Lantern Co., Inc. assumes no responsibility for the integrity of the installation for this or any of its products.

### Rubber Mounting Gasket (P30047-123)

#### Mark Screw Holes

- Drill 1/8" Holes for Self Tapping Screws
- Drill 3/16" Holes if Using Rubber Well Nuts



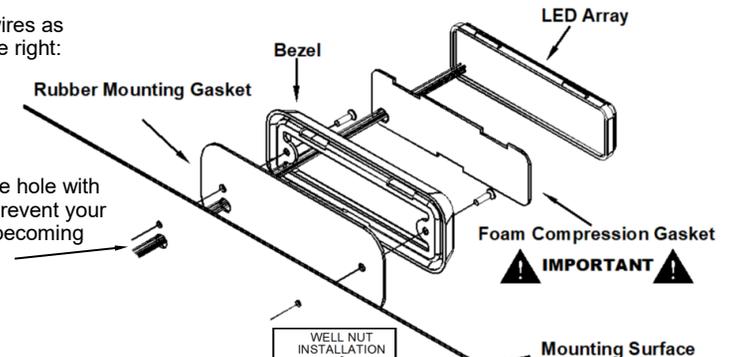
#### Mark Wire Hole

- Drill 3/8" Hole to Route Wires Through

1. Use the gasket as a template to mark your mounting holes.

2. Determine whether you are going to use the self-tapping screws or the machine screws and well nuts.
  - Use the self tapping screws for applications where the mounting surface is a minimum of .060" (1/16") thick and is composed of a material that will provide sufficient "bite" for the self tapping screw.
  - Use the machine screws and well nuts if your surface is less than .060" thick and/or composed of a material insufficient for securing with self tapping screws.

3. Route the wires as shown to the right:



4. Seal the wire hole with silicone to prevent your wires from becoming damaged.

5. *If you are using the well nuts*, push the enclosed rubber well nuts through the holes until the bottom side of the wider lip rests on the surface of the vehicle.

6. Review the mounting diagram and use the appropriate screws to mount the bezel.

- Check the gasket to ensure it is resting flat and that there are no gaps between the light and the mounting surface.
- Take extreme caution not to over tighten the screws!!! Over tightening of the screws can strip the holes and result in a faulty mount.

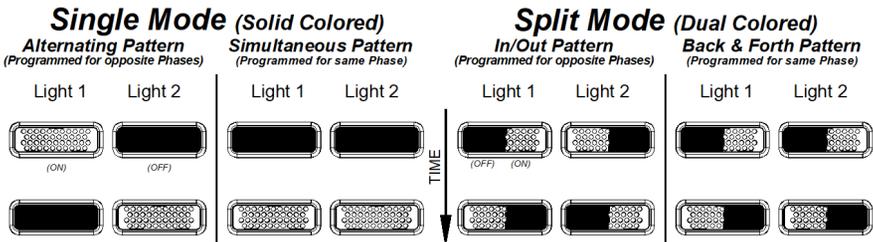


7. Once the bezel is firmly attached to the mounting surface, seat the foam compression gasket inside of it. Carefully feed any loose wire into the wire hole and press the LED head into the bezel.

## Pattern Programming and Synchronization

You can synchronize up to six Constellation lights using the BKLD418-2 (sold separately).

- Lights with the SAME phase flash together (simultaneous).
  - Lights with DIFFERENT phases flash opposite one another (alternate).
- Connect all lights you want to flash **simultaneously** to the BKLD418-2 and power it up by connecting the Black wire to ground and the Red wire to power.
  - Touch and release a screwdriver across both Pattern Programming Pins to change patterns.
  - After programming, remove power and disconnect the lights from the BKLD418-2.
  - Connect all of the other lights you want to flash opposite from (alternate with) the lights you just programmed to the BKLD418-2 and power it up.
  - Touch and release a screwdriver to both Pattern Programming Pins to change patterns until you get to the same **Pattern Type**, but the opposite **Phase**.
  - Remove power, connect all lights, and power up to test.



**Please Note:** Solid colored BKDLXT lights are programmed for Single Mode and dual colored BKDLXT lights are programmed for Split Mode.

Flash Pattern #	Phase 1	Phase 2	Pattern Type	S-LINK SYSTEM Pattern Description	Shortcut
1	11	A		Fast Singleflash (1.9 CPS)	←
2	12	B		Flicker flash (1.7 CPS)	Pattern 1 (Phase 1): 3 sec or 1 flash
3	13	C		Post pop (1.4 CPS)	
4	14	D		PSU-flicker (0.4 CPS)	Pattern 11 (Phase 2): 9 sec or 3 flashes
5	15	E		Random (1.9 CPS) (DEFAULT PATTERN)	
6	16	F		Quadflash (1.0 CPS)	←
7	17	G		Quadflash w/Post-Pop (1.0 CPS)	Pattern 6 (Phase 1): 6 Sec or 2 flash
8	18	H		Singleflash (1.0 CPS)	
9	19	I		Doubleflash (1.0 CPS)	Pattern 16 (Phase 2): 12 sec or 4 flashes
10	20	J		Delta-Omega (0.3 CPS)	
	N/A			Steady (see below)	18 sec or 6 flashes

**Pattern Shortcuts:** Short Pattern Select Pins for indicated time.

**Steady Burn:** Not in pattern cycle. Only accessible through shortcut.

## Steady Burn Programming

### Programming Steady Burn Pattern in Single Mode:

- Connect the heads you wish to be steady burn to the BKLD418-2 and power it up.
- Hold a screwdriver across both Pattern Programming Pins until the light(s) blink(s) six times (approximately 18 seconds), then release it. The light(s) should change to the Steady Burn pattern.
- To exit Steady Burn pattern touch and release a screwdriver to both Pattern Programming Pins.

### Programming Steady Burn Pattern in Split Mode:

- Connect heads, apply power, and program for Steady Burn as described above for Single Mode. One of the two halves will become steady, while the other flashes.
- To change the pattern on the flashing side, touch and release a screwdriver to both Pattern Programming Pins.
- To flip-flop the steady side and the flashing sides, hold a screwdriver across both Pattern Programming Pins until the light flashes 5 times (approximately 15 seconds) and then release it.
- To exit Steady Burn pattern hold a screwdriver across both Pattern Programming Pins until the light(s) blink(s) six times (approximately 18 seconds), then release it.

### LED FIVE YEAR LIMITED WARRANTY

Star Safety Technologies warrants this LED light against factory defects in material and workmanship for five years after the date of manufacture. 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.** Star 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 a product must be returned for any reason, please contact our Repair Department at (585) 226-9500 Option #3 to obtain a Returned Materials Authorization number (RMA #) before you ship the product back. Please write the RMA # clearly on the package near the mailing label.

If you have any questions concerning this or any other product, please contact our Customer Service Department at (585) 226-9500 Option #4.

### 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 Safety Technologies, 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 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.

