Installation Instructions
Bullet Series Hide–A-LEDs

The Bullet Series Hide-A-LED™ provides exceptional warning capability in a compact light that can be mounted inside a head/tail light casing. Using 2 high intensity LEDs the Bullet Series features 12 or 24 VDC operation, 16 flash patterns, the ability to synchronize with additional units and a 9' cable.

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

1. **Proper installation combined with operator training in the use, care, and maintenance of emergency warning devices are essential to ensure the safety of you and those you are seeking to protect.**
2. **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 are 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. **Do not install this product or route any wires in the deployment area of an air bag. Equipment mounted or located in an air bag deployment area may reduce the effectiveness of the air bag or become a projectile that could cause serious personal injury or death. Refer to the vehicle owner's manual for the air bag deployment area. It is the responsibility of the user/operator to determine a suitable mounting location ensuring the safety of all passengers inside the vehicle particularly avoiding areas of potential head impact.**
6. **It is the responsibility of the vehicle operator to ensure during use 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.**
7. **The use of this or any other warning device does not ensure all drivers can or will observe or react to a 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, driving against traffic, responding at a high rate of speed, or walking on or around traffic lanes.**
8. **This equipment is intended for use by authorized personnel only. The user is responsible for understanding and obeying all laws regarding warning signal 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.**

Specifications:

Size: Short: 1.2"H x Dia. 0.5"
Long: 2.25"H x Dia. 0.5"
Input Voltage: 10-30 VDC
Current Draw: 0.7A Max
Operating temperature range: -30 to +50ºC
Lumens: Bullet(Amber) 200
Bullet(Blue) 100
Bullet(Red) 200
Bullet(White) 460

Contents:

1 X HIDE-A-LED head with built-in power module and cable
1 X Adhesive Mounting Gasket

Installation & Mounting:

Before installation, examine the LED heads for transit damage. Do not use damaged or broken parts.

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.

Lamp Mounting:

Pick a location in the vehicle lamp housing that is at least 1" away from any existing bulbs. Drill 1/2" hole in vehicle lamp reflector housing with hole saw. Remove the adhesive ring backing from the LED head and insert the hide-a-LED into the lamp housing taking care not to touch, bump or scratch the exposed LEDs. Strap the driver module to a nearby wire harness or body structure. Make electrical connections as described below.

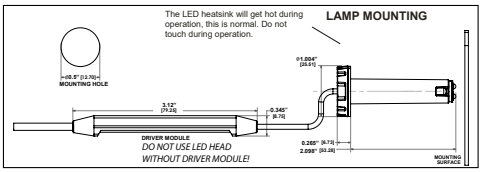


FIGURE 1

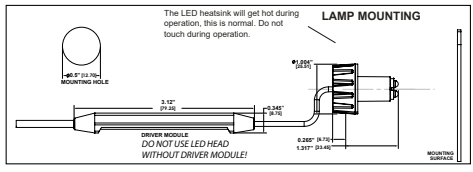
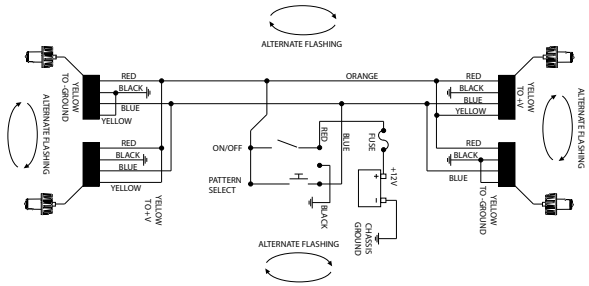


FIGURE 2

Electrical Connections:

RED: Connect to +V through an ON/OFF switch. The use of a fuse located close to the voltage source is recommended. Size the fuse according to the number of heads used in the system. 18AWG or larger wire is recommended.
BLACK: Connect to - GROUND vehicle chassis. 18AWG or larger wire is recommended.
BLUE: Flash pattern SYNC and SELECTION wire. If you wish to have all the LED heads synchronize their flash timings and patterns with each other then all the BLUE wires must be connected together. (64 Heads Maximum) The BLUE wire is also used to select the flash pattern. Touch the BLUE wire to +V to select the next pattern in the FLASH PATTERN LIST. The BLUE wire can also be run to a momentary push-button located on the dashboard to allow the flash pattern to be changed when desired. Note: Do not connect the BLUE wire to - Ground. It will disrupt the flash pattern sync signal.
YELLOW: Alternating / Simultaneous selection. Connect to either +V or GROUND (GND).
The YELLOW wire makes the head fire AT THE SAME TIME or ALTERNATING with the other heads in the system.
Heads with YELLOW connected to +V fire at the same time. Heads with YELLOW connected to GND fire at the same time.
Heads with YELLOW connected to +V will ALTERNATE with heads that have YELLOW connected to GND.
The YELLOW wire has no function in STEADY ON mode.

INSTALLATION OF 4 HIDE-A-LED™ USING PATTERN SELECT SWITCH PANEL (OPTIONAL) ON DASHBOARD.



Operation:

After installing the system it is best to do a POWER-UP RESET the first time to ensure that all heads are in sync. Touch BLUE wires to +V (RED wire) while applying power. Wait 1 second and then release the BLUE wires. All heads will reset to Pattern #2. (If you have installed a pattern select pushbutton, press and hold pattern select while turning power switch ON.) To select a flash pattern, touch BLUE to +V or press pattern select switch to increment the flash pattern. The heads will remember the flash pattern you have selected until it is changed again. When you increment past pattern #16 it will roll back around to pattern #1.

Flash patterns 9 to 16 in the flash pattern list run through the patterns
listed in a continuous cycle.

If you are using this product to synchronize with an older product which only has flash patterns 1 through 8 then you may program this product to limit it's flash pattern list. Perform the following: Connect BLUE to RED (or press and hold pattern select button if installed. Connect to power and hold for 5 seconds. The LED head will blink 1 time to indicate it is set for the old 8 pattern set, twice to indicate the 16 pattern set.

#	Pattern:	Frequency:	Description:
1	Quad Flash	1.25 Hz	75 Quad Flashes Per Minute
2	Double Flash	1.25 Hz	75 Double Flashes Per Minute
3	Triple Flash	1.53 Hz	92.3 Triple Flashes Per Minute
4	DeciBlast	1.42 Hz	85.5 Deci Flashes Per Minute
5	Single Flash	1.25 Hz	75 Single Flashes Per Minute
6	Mega Flash	1.90 Hz	114 Single Flashes Per Minute
7	Triple+Burst	1.37 Hz	82.5 Triple+Burst Flashes Per Minute
8	Steady On		Steady On
9	Cycle All		Cycle through patterns 1 to 7
10	Double-Triple+Burst		2 Double, 2 Triple+Burst cycle
11	Cycle Classic		1 Double, 1 Quad, 2 Mega cycle
12	Quad-Mega		3 Quad, 4 Mega cycle
13	Single-Quad		2 Single, 2 Quad cycle
14	DeciBlast-Quad		2 DeciBlast, 2 Quad cycle
15	Single-Triple-DeciBlast		2 Single, 2 Triple, 2 DeciBlast cycle
16	Mega-Triple+Burst		1 Mega, 1 Triple+Burst cycle.

TroubleShooting:

HEAD NOT FLASHING:

Check the RED and BLACK wires for a reversed connection. (Reverse connection will not damage the unit).
Check RED and BLACK wires for either a bad splice or a corroded ground connection.

HEADS NOT SYNCHRONIZING:

Check for a short circuit on the BLUE wire to either +V or GROUND. Salt water on the wire connections will short circuit the sync signal on the BLUE wire. Check for non-functional heads in the system. If any one of the heads has a bad GROUND connection it can cause the sync signal to become corrupted. If any one of the heads has it's RED and BLACK wires reverse connected it will corrupt the sync signal.

FLASH PATTERN CHANGING:

If the flash pattern changes on it's own there may be an intermittent short between the BLUE wire and +V. Check for water in the wiring connections. If any one of the heads in the system has an intermittent GROUND connection it can also cause the flash pattern to change.