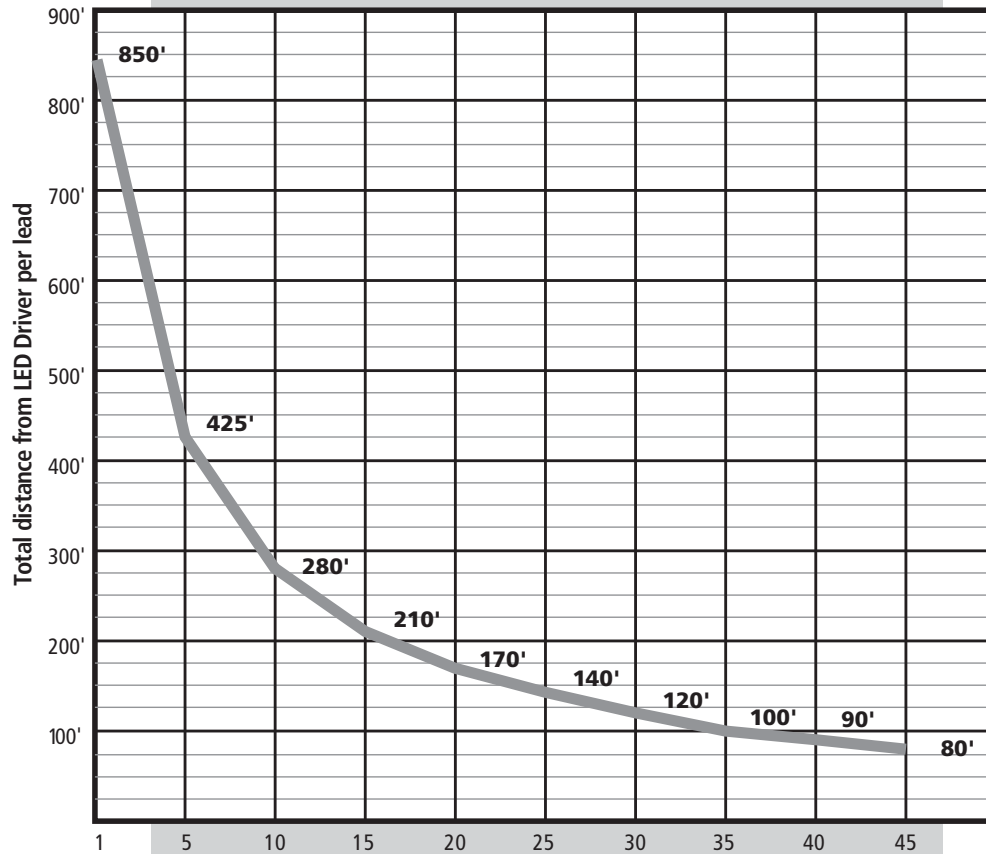


# 100% LED LIGHT OUTPUT CHART

With every foot of lead wire, and every light fixture, there is voltage loss. With too much voltage loss, all light fixtures will not develop 100% of their potential output. Below is a chart of acceptable voltage loss which will maintain 100% of the potential light output of the LED Surface Star. Simply plot the number of

Surface Stars you wish to place on one lead on the horizontal axis, with the total distance from the LED Driver to the last LED Surface Star on the vertical axis. If the resulting plot is at or below the line shown, you will have acceptable voltage loss and your LED Surface Star will output 100% of their potential.

Please note that this is per lead, and you have the option of up to two leads from the LED Driver. In any of the two leads, if your plot is below the line shown, you have acceptable voltage loss. The only limitation is that you may place no more than 45 Surface Stars on any one LED Driver.

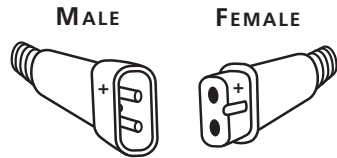


**NOTE:** No more than 45 Surface Stars per LED driver. Each LED driver has the option of two leads.

## INSTALLATION

- Determine where you would like the string of LED Surface Stars, and LED Driver, to be mounted given the following cautions:
  - LED Surface Stars are UL Listed for indoor and outdoor wall and ceiling applications, above grade (ground level). LED Surface Stars are not UL Listed, or to be used, in any application where the fixture or the interconnecting cords would be interior to walls or come in contact with insulating material, or where the fixture, cords, or driver are within 9" of grade.
  - The LED Driver must be screwed to an appropriate mounting surface, and hardwired to 110VAC in a manner to meet the National Electrical Code (NEC), Chapter 725 and local building codes. A qualified electrician should perform this task.
  - All mounting of LED Surface Stars must conform to the included Voltage Loss Chart.
- LED Surface Stars may be mounted at any distance from one another, directly adjacent to a maximum of 800 feet between the fixtures. Consult Voltage Loss Chart mentioned above.
- Secure LED Surface Star to mounting surface utilizing included mounting screws. Applications into gypsum drywall will require initial installation of included plastic wall anchors before screwing fixture into wall.
- Each fixture is pre-wired with two leads enabling fixture spacing of up to 12" on-center (+/- 1/2"). Additional spacing between fixtures is accomplished with optional extension cords of 1', 2', 3', 6', 12', 24', and 48'. Each length of extension cord comes in a choice of three colors: white, black, or brown.
- To interconnect fixture-to-fixture, fixture-to-extension cord, and fixture-to-driver, simply remove end cap off of female connector and insert male connector into female connector as per diagram below. Molded ridge in male connector must fit into slot of female connector, and the

“+” molded into male connector must align with the “+” molded into female connector, as per the diagram. It is very important to get all connections correctly orientated as LEDs are DC driven, and correct polarity is ESSENTIAL. Connecting as per the diagram below assures correct polarity.



## WARNING

To reduce the risk of fire, electrical shock, or injury to persons:

1. Use only with our UL Listed LED Class 2 Driver, NSL part number LEDSS-12-60W.
2. Use only with our UL Listed extension cords, NSL part number LEDSS-XX-YY. Note: “XX” refers to length; options are 1’, 2’, 3’, 6’, 12’, 24’, 48’. “YY” refers to cord color; options include WH=white, BK=black, BN=brown.
3. The LED Surface Star is for use in above-ground, surface-mount applications only. The LED Surface Star is not for use in applications interior to walls, or anywhere the fixture or connecting cords may come in contact with insulating materials, or in locations less than 9” above grade level.
4. In the installation process, first make sure LED Driver is not receiving power in any way. Mount LED Surface Stars as per instructions. If applicable, interconnect LED Surface Stars with NSL extension cords mentioned in #2 above. Connect string of LED Surface Stars to LED Driver. Check that in all connections the male molded wire connector is properly inserted into the female molded wire connector. See connection diagram under Installation Section. Check to assure no more than 45 LED Surface Stars are connected to any one LED Driver. After successfully checking all cautions above, Apply 110VAC power to the primary side of the LED Driver.
5. Do not attempt to open fixture, adjust wiring, or modify LED circuit board. In the unlikely event one LED Surface Star does not light, first check to assure all connectors are properly aligned from LED Driver to last LED Surface Star. If all LED

Surface Stars do not light, check to assure incoming 110VAC is available and connected properly. If so, then check first connection from LED Driver to LED Surface Star string for proper alignment. After completion of all inspections listed above, if LED Surface Star(s) still do not light, send back fixture(s) and/or LED Driver for warranty replacement, if applicable.

**NOTE:** These products may represent a possible shock or fire hazard if improperly installed or attached in any way. Products should be installed in accordance with the owner’s manual, current local codes, and/or the current National Electrical Code (NEC).

6. Not for use with dimmers.

## SPECIFICATIONS

Voltage:	UL Listed with our LED Driver, LEDSS-12-60W
Electrical Rating Per Surface Star Light:	1.2 watts, 100mA, 12VDC
Max. Surface Star Lights Per Run:	45 Surface Star Lights per 60 watt LED Driver
Average LED Life:	60,000 hours
Finish Options:	Natural Aluminum, Black, White, Bronze
Lens:	Tempered Glass
UL Listing:	UL Listed for surface mount applications on walls, ceilings, inside cabinets, under cabinets, and exterior wet locations. Not UL Listed for recessed, IC (Insulation Contact), or direct burial locations.

## NATIONAL SPECIALTY LIGHTING

ARCHITECTURAL AND DECORATIVE LIGHTING

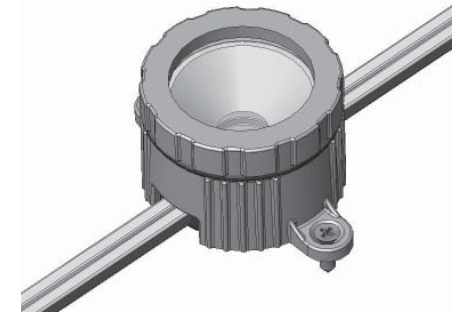
LOUISVILLE, CO 80027

[www.nslusa.com](http://www.nslusa.com)

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## INSTALLATION INSTRUCTIONS

# LED SURFACE STAR



- Deck Lighting
- 
- Rail Lighting
- 
- Architectural Accents
- 
- Merchandising
- 
- Directional Accents
- 
- Paths
- 
- Landscape Accents

**NSL**  
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