WARNING!

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR **INJURY TO PERSONS:**

- 1. Turn off/unplug before mounting, interconnecting fixtures, or replacing LED module.
- 2. Do not look directly into LEDs when lit.
- 3. Do not operate fixture(s) with missing or damaged parts.
- 4. Do not install fixture(s) in any unventilated compartment. Do not recess fixtures in any material. Surface mount only.
- 5. Use only Listed Class 2 LED Power Supplies per these instructions, shown below.
- 6. If lead wire in excess of 36" fixture leads is required, use only listed CL2 wire (NSL Part No. LW-18G-CL2) to join fixtures to LED Driver and to interconnect fixtures. Parallel wire only. Do not exceed 40 total feet from power supply to last fixture.
- 7. ETL listed Damp Location for under cabinet, cabinet, and shelf mount.
- 8. Securely mount with included double-sided tape and/or wood screws. Wood screws offer a more permanent temperature resistant option, and are required for all wood installations.
- 9. Properly dispose of all small parts and packing material. Small parts and packing material may be hazardous to children.
- 10.Install in accordance to manufacturer's instructions, current local codes, and/or the current National Electric Code (NEC).

INSTALLATION GUIDE

- 1. Each LED Mini Star II ships with the fixture. including 36" of lead wire, attached double-sided mounting tape, two mounting wood screws, and junction box with terminal block.
- 2. The complete system includes an LED Power Supply, wiring to interconnect the system, and fixture(s). Low voltage dimmer is optional.
- 3. Lay out the entire system without mounting any of the parts. With the system laid out, make sure you have all the required parts. Do not exceed 40 total feet from power supply to last fixture.
- 4. Install fixtures as per the following two options: A. Double-Sided Tape (Glass & Metal Surfaces)
 - (1) Clean mounting surface.
 - (2) Remove paper backing on double-sided tape.
 - (3) Firmly apply fixture to mounting surface.
- B. Wood Screws (Wood Surfaces)
- (1) Clean mounting surface.
- (2) Remove fixture cover (see #1 and #5 in Relamping LED Module on reverse side).
- (3) Remove paper backing on double-side tape.
- (4) Firmly apply fixture to mounting surface to temporarily hold in place.
- (5) Permanently attach fixture to mounting surface using two included wood screws.
- (6) Replace fixture cover.



- 5. Assure power supply is unplugged.
- 6. LED fixtures require polarity (+ and -) to be maintained throughout the wiring. Connect the fixtures to lead wire and power supply the side.
- A) Note the postitions and negative connections per Power Supply instructions.

- B) The LED Mini Star II fixture itself has two lead wires with the following markings: white only = "+", and white with black stripes = "-".
- C) Measure twice, and then cut fixture leads and/or CL2 lead wire to desired length leaving at least 3/8" stripped of insulation for terminal block connections.
- D) Interconnect fixtures to power supply and/or lead wire as per the Terminal Block Wiring Schematic and the Single Fixture Wiring Schematic, below.
- 7. Passing either fixture leads or CL2 lead wire through a cabinet will require a 3/16" diameter hole to be drilled.
- 8. Lead wire from the LED Mini Star II fixtures, or the power supplies, should never penetrate any wall. Lead wire from the LED Mini Star II fixtures or the power supplies may penetrate through cabinets with access doors to all interior spaces. Only the UL listed CL2 lead wire may penetrate walls allowing the power supply to be mounted in an adjacent room to the fixture application.
- 9. After assuring wiring is correctly installed as per all diagrams, +/- polarity is maintained throughout, and all terminal block screws are tightened, cover all terminal block connections with junction box covers and included screws. Mount junction box to surface using included double-sided tape and/or wood screws. Affix lead wires to mounting surface with included wire screw clips.
- 10.Plug in power supply, and turn on power supply switch if applicable.

TERMINAL BLOCK WIRING SCHEMATIC



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

WARNING

LED DRIVER SELECTION

	Dimmable Non-Dimming	Min. Fixtures	Max. Fixtures
LMS-24-60W	Non-Dimming	1	10
LEDDR-24-120W	Non-Dimming	1	18
TR24L20DC	Both	2	5
TR24L40DC	Both	4	10
TR24L60DC	Both	8	15
TR24L96DC	Both	14	25

If you do not wish to dim the LED Mini Star II use any of the LED Drivers listed above and be careful to abide by the minimum and maximum load values listed above.

If you wish to dim the LED Mini Star II, use only the TR24L20DC, TR24L40DC, TR24L60DC, or TR24L96DC and a magnetic low voltage dimmer listed below. All dimmable LED Drivers have no minimum load when used with an appropriate dimmer, however, all dimmable LED Drivers are more efficient if specified as per the minimum and maximum load values listed above.

Run appropriate lead wire from LED Mini Star II to LED Driver (see below). Check all connections and clearances.

1. Our 24 Volt Direct Current dimmable LED magnetic power supplies are designed to work with most 'stand alone' low voltage magnetic analog dimmers. A recommended dimmer list is as follows:

> LUTRON "Ariadni" AYLV-600PH LUTRON "Lyneo" LXLV-600PL LUTRON "Skylark" SLV-600P LUTRON "Diva" DVLV-600PH LUTRON "Glyder" GLV-600

Carefully following the dimmer instructions, dimmable LED magnetic power supply instructions, and the NEC, wire dimmer between 120VAC power input and 24 Volt Direct Current dimmable LED power supply.

WIRING INSTRUCTIONS

- 1. Parallel wire LED Mini Star II to LED Driver.
- 2. For all applications use only listed 18G wire labeled "CL2", NSL part number LW-18G-CL2.
- 2. First, make sure LED Driver is not receiving power in any way. Wire LED Mini Star II per these instructions, assure proper tightness, on all strain reliefs, and then apply 120VAC power to LED Driver.
- 3. Do not try to adjust, fix, rewire, LED Mini Star II. In the unlikely event LED module does not illuminate, check wiring first. If this does not work, send LED Mini Star II back 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).



No excess cord to hide

SINGLE FIXTURE WIRING SCHEMATIC

DIMMING INSTALLATION FLOW CHART

No Low Voltage Wire Interior to Walls or Structural Members

Required Wire:	Romex 12/14 AWG	Rome: 12/14 AWG	k CL2 18 AWG		Fixture Lead Wire	Fixture Lead Wire	2
System Layout: 120VAC	>	Low Voltage> Analog Magnetic Dimmer	24VDC> Class 2 Dimmable LED Power Supply	LMSII-001> Terminal Block and Junction Box	LED> Mini Star II	LMSII-001 Terminal Block and Junction Box	> LED> Mini Star II

DIMMING REMOTE POWER SUPPLY INSTALLATION FLOW CHART

Low Voltage CL2 Wire Interior to Walls or Structural Members

Required Wire:	Romex 12/14 AWG	Romex 12/14 AWG	CL2 18 AWG		CL2 18 AWG (If in wall	0	CL2 18 AWG (If in wall)
System Layout:						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(in in work,
120VAC	>	Low Voltage> Analog Magnetic Dimmer	24VDC> Class 2 Dimmable LED Power Supply	LMSII-001> Terminal Block and Junction Box	LED> Mini Star II	LMSII-001> Terminal Block and Junction Box	LED> Mini Star II

NOTE: If you Do Not want LED Mini Star II to dim, the above charts are modified to remove "Low Voltage Analog Magnetic Dimmer", the power supply becomes "Non-Dimmable" LEDDR-24-120W. As always, check the current NEC and local building codes for acceptance of your application design.

Fixture stranded lead wire should never penetrate any wall. Fixture stranded lead wire may penetrate through cabinets with access doors to all interior spaces. Only the UL listed CL2 lead wire may penetrate walls allowing the power supply to be mounted in an adjacent room to the fixture application.

After assuring wiring is correctly installed as per all diagrams, +/- polarity is maintained throughout, and all terminal block screws are tightened, cover all terminal block connections with junction box covers and included screws. Mount junction box to surface using included double-sided tape and/or wood screws. Lead wires should be neatly affixed to mounting surface with WSC-004 wire screw clips.

RELAMPING LED MODULE

In the highly unlikely event of an LED module failure, please follow the instructions listed below:

- **CAUTION!** If unit has recently been operating, glass, LED module, and fixture are hot! Turn off fixture and allow it to cool for 15 minutes before relamping.
- **CAUTION!** Always replace LED module with power supply switch in the OFF position.
- **NOTE:** Using a thin pair of gloves during this procedure will eliminate fingerprints on glass lens and LED module(s).
- 1. With a small screw driver, use slot in cover to remove cover from base.
- 2. With a pair of needle nosed pliers, remove module connector from printed circuit board.
- 3. Unscrew old LED module. Replace with new LED module (NSL Part No. LEDMOD-24-LP). Tighten screws just snug.
- 4. Push male connector from LED module into female connector in printed circuit board.
- 5. Replace cover by aligning slot in cover with slot in base. Press firmly together.



SPECIFICATIONS

Fixture Dimensions	3" x 3" x 1/2"
Cover Finish	White, Black, Bronze, Aluminum
Base Finish	Aluminum
Wiring/Connections	Each fixture has 36" leads. Fixture leads and optional CL2 lead wire can be custom cut to desired length. Fixture leads, lead wire, and power supply connect together with included terminal blocks. Each terminal block connection is covered with a plastic junction box (see Single Fixture Wiring Schematic).
Cord Color	White
Voltage	24 volt direct current
Wattage	3.26 watts per fixture
LED Color Temperature	3000K +/- 200K
Mounting	Doubled-side tape and/or wood screws
Agency Approval	ETL listed for under cabinet or cabinet mount, Damp Location. Listing requires usage of Listed Class 2 LED Power Supply as shown.

NATIONAL SPECIALTY LIGHTING

Architectural and Decorative Lighting

LOUISVILLE, CO 80027 www.nslusa.com

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INSTALLATION INSTRUCTIONS

LED Mini Star II



APPLICATIONS

Under Cabinets

Cabinets

Shelves

Display Cases

Work Stations



