

# WIRING / INSTALL INSTRUCTIONS

## GemLite Letters - Lit with GE Tetra LEDs

Warnings in English & French for Canada

### Customer Installation/Tips/Troubleshooting Guide

Enclosed are your Gemini, GemLite Formed Channel Letters populated with 12VDC LEDs. Each individual letter has been carefully filled with LED modules and aligned to provide a consistent output of Lumens.

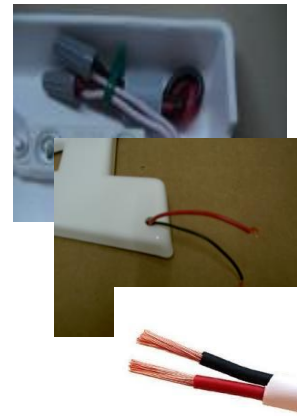


### Components Used

All components used in Gemini lit letters are UL approved for LED lighting.  
Gemini Sign Body UL#E319118 - UL Listed & CSA approved.  
LEDs are UL approved and listed in the UL SAM.  
UL approved electrical tap connectors - 3M Scotchlok 558  
UL approved twist on wire connectors - GB 10-001.  
UL approved cord clips - ACC19-A-C  
UL approved 18 awg lead wires-#E135243, or Cables.  
12VDC-Class 2 Power Supply: UL information listed on power supply.

### Electrical Connections

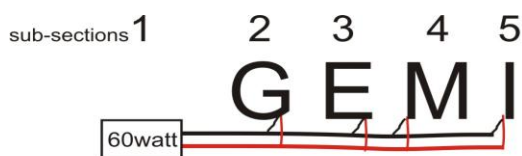
It is recommended that all electrical connections be performed by a licensed electrical contractor. Each IM Channel letter has been filled with LEDs and is fitted with a **Red (+)** and **Black (-)** pigtail wire for connecting letters to your main line and/or UL approved Class 2 Power Supplies (see wiring example).  
When Class 2 wiring circuits are located in a concealed space, such as above a suspended ceiling, or passing through a wall, NEC code requires use of conduit or a UL Listed Class 2 cable (optional). Longer wires or cables are optional.



### Power Supply (PS) Connections

Power Supplies provided are UL, 60watt (Max 5 amp), Class 2, Wet location rated, maximum 277VAC input. Do NOT mount power supply directly into letters.  
Amperage ratings are listed on the power supply labels.  
Maximum remote mounting distance for Power Supply, with 18 AWG wire is 30ft.  
Connect **Red (+)** Lead wires to **Red** main line, in **parallel**, then to **Red (+)** wire of the power supply.  
Connect **Black (-)** Lead wires to **Black** main line, in **parallel**, then to **Black (-)** wire of the power supply.  
Connect power supply to appropriate sized breaker or power cord, in accordance with National Electric Code (NEC) Article 600 and all Local Electrical Codes.  
Each PS is equipped with external connection cables (approx. 11" long) containing 3 input wires, for connecting to the power source, and two output wires, for connecting to the LEDs (letters).  
Reference your supplied Wiring Diagram for specifics on Sign Section groupings to power supplies.

### Wiring Diagram Example



**Caution:** Plugging LEDs direct into 110V will destroy them.  
Use ONLY Class 2 Power Supplies

Gemini Inc. - GemLite  
UL Listed File No. E319118  
Cannon Falls, MN. Mfg Date: \_\_\_\_\_  
Electrical Rating: 12VDC, \_\_\_\_\_ amps

Apply manufacturer label  
to power supply (first Section).

## Notes:

If more than one power supply is being used, disconnect ALL power supplies before servicing.

### Letter Sign Bodies

All letter sign bodies have been supplied with 1/4" min. weep (drain) holes per UL requirements. Weep holes are used to allow moisture or water to escape. Do not block or plug weep holes.

### Mounting Letters to Raceway or wall

Letter backs (sign bodies) can be mounted direct to raceways with self tapping sheet metal screws.

Pre-drill a small pilot hole first, to prevent cracking the plastic.

Letters, such as a C, E, or F, may require additional support in areas not touching the raceway.

If mounting letters direct onto a wall, and drain holes are located at the bottom edge of the back, the opening must be a minimum of 1/2" from the mounting surface and the 1/2" clearance should be maintained between the drain openings and the mounting surface. Always follow all NEC, local and UL codes.

### LED Modules

Each LED module has been secured to the formed back with double faced tape. Approx. every other module has also been further secured with a plastic support block. Should you need to reposition or move any LED modules, break off the block with pliers, reposition modules, and re-tape to letter back. Further secure module sides and wires with silicone.

### Secure Letter Faces

The faces of GemLite Channel letters will need to be secured to the backs with painted screws. Small holes have been pre-drilled into each letter face & back for screws use.

After letter backs are installed and wiring is complete, place faces over backs and secure with screws.

**Caution:** Do NOT over tighten screws as this may crack the letter face.

Use all supplied (UL required) face screws, as plastic will expand and contract with exposure to heat and sun. If certain portions of the face are not secured to the back, they may warp when heated.

Some installations may require the sealing of faces to backs. Typically, this is done with silicone.

Use care to not get any silicone on the letter faces as this will create dark spots when the letters are lit.



## LED Troubleshooting Guide

### Blinking LEDs:

Blinking LEDs: Too many LEDs connected to a given power supply.

Reduce the number of letters or modules attached to your power supply.

### LEDs in one or more letters will not light:

LEDs will not light: Too many LED modules are connected to a given power supply.

Reduce the number of letters or modules attached to your power supply.

Check letter connections. Make sure pigtailed wires are properly wired to power supply line.

Make sure all Red (+) wires are connected together and to the Red (+) wire of the power supply.

Make sure all Black (-) wires are connected together and to the Black (-) wire of the power supply.

Check AC input connection and/or check circuit breaker.

### One LED module is Dark (not lit):

You may have a bad module. Check lighting of letter with face covered to determine impact of one dark LED.

If the face is too dark or visible shadows exist, additional LEDs may have to be added to the letter.

### See light shadows in the letter face:

Ensure that all modules are secured to the backs of the formed channel cans.

If a module has come loose, press it back down and secure with additional DF tape and/or silicone.

### Some LEDs appear dim:

Ensure that the overall length of the LED system does not exceed the maximum load.

Ensure that the length of supply wire is equal to or below the recommended remote distance. GE Tetra LEDs systems are rated for damp location use by UL, but should still be protected from exposure to moisture.

**Caution:** Plugging LEDs direct into 110V will destroy them.  
Use ONLY Class 2 Power Supplies

## Electrical Contractor Required



It is recommended that all electrical connections be performed by a licensed electrical contractor. Always follow proper OSHA LOTO (Lockout/Tagout) and NEC practices and procedures.

### RISK OF ELECTRIC SHOCK:

- Turn power OFF before inspection, installation or removal.
- Properly ground any Power Supply enclosures.
- Shut off power at fuse box or circuit breaker before install.

### RISK OF FIRE:

- Use only UL approved supply wires, minimum 18 AWG.
- Follow all NEC and Local Electrical Codes.
- Use only UL approved wire for input connection. Min. 1.02mm.

### Prepare Electrical Wiring (Electrical Requirements)

- The grounding and bonding of the LED Driver shall be done in accordance with NEC Article 600.

Always understand and follow all National Electric Codes (NEC) and local electrical codes.

All power supplies must be wet location rated, Class 2 rated with UL listed letters.

## Entrepreneur en électricité AVERTISSEMENTS obligatoires!

Il est recommandé que toutes les connexions électriques doivent être faites par un maître électricien.

Toujours suivre OSHA LOTO (verrouillage/étiquetage) et NEC pratiques et procédures appropriées.

### RISQUE DE CHOC ÉLECTRIQUE : RISQUES D'INCENDIE :

Coupez l'alimentation avant l'inspection, l'installation ou la suppression.

- Utilisez uniquement UL approuvé fils d'alimentation,
- Terre correctement tous les boîtiers alimentation minimum de 18 AWG.
- Coupez l'alimentation de la boîte à fusible ou le disjoncteur avant d'installer.
- Suivez toutes NEC et les codes électriques locaux.
- Utilisez uniquement UL fil pour l'entrée approuvé

Préparer le câblage électrique (Spécifications électriques) de connexion. Taille minimale 1,02 mm

- La mise à la terre et la liaison du conducteur de LED doivent être effectués en conformité avec l'article NEC 600.

Toujours comprendre et suivre toutes les codes NEC (National Electric) et les codes électriques locaux.

Toutes les alimentations doivent être classé endroit humide, classe 2 avec UL lettres.

