

# Tetra<sup>®</sup> Contour LS

## LED Lighting System

(GEXNLBL-1, GEXNLGL-1, GEXNLRD-1, GEXNL65-1, GEXNL32-1)



### BEFORE YOU BEGIN

Read these instructions completely and carefully.

#### ⚠ WARNING/AVERTISSEMENT

##### RISK OF ELECTRIC SHOCK:

- Disconnect power at fuse box or circuit breaker before servicing or installing product.
- Properly ground Tetra<sup>®</sup> power supply.

##### RISK OF FIRE:

- Use only Tetra<sup>®</sup> supply wire to make connection from Tetra<sup>®</sup> power supply to Tetra<sup>®</sup> LED strip.
- Use only approved wire for input/output connection. Minimum size 18 AWG (0.82mm<sup>2</sup>)
- Follow all local codes.

##### RISQUES DE DÉCHARGES ÉLECTRIQUES

- Coupez l'alimentation électrique à la boîte de fusibles ou au disjoncteur avant l'entretien ou l'installation du produit.

- Assurez-vous de correctement mettre à terre l'alimentation électrique Tetra<sup>®</sup>.

##### RISQUES D'INCENDIE

- N'utilisez que le fil d'approvisionnement Tetra<sup>®</sup> pour faire la connexion entre l'alimentation Tetra<sup>®</sup> et la bande DEL Tetra<sup>®</sup>.
- N'utilisez que des fils approuvés pour les entrées/sorties de connexion. Taille minimum 18 AWG (0.82mm<sup>2</sup>).
- Respectez tous les codes locaux.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**Note:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### Save These Instructions

Use only in the manner intended by the manufacturer. If you have any questions, contact the manufacturer.

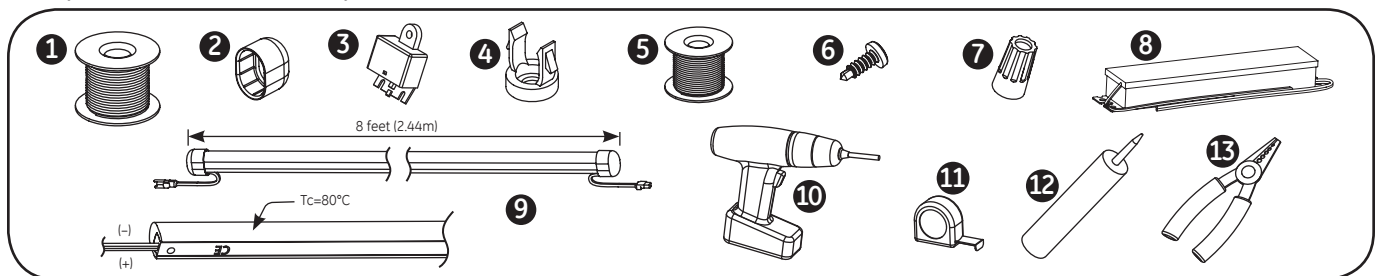
### Prepare Electrical Wiring



#### Electrical Requirements

- Limited to use in dry and damp locations.
- The grounding and bonding of the LED Driver shall be done in accordance with National Electric Code (NEC) Article 600.
- Follow all National Electric Codes (NEC) and local codes.
- These products are only suitable for connection to a circuit from a Class 2 power source. These products have not been evaluated for use when connected to a power source that does not comply with Class 2 voltage and energy limited supplies.

### Components and Tools required:



1 UL approved 18 AWG (0.82mm<sup>2</sup>) supply wire

2 End Caps

3 Weather Boxes

4 Light Guide Mounting Clips

5 22 AWG (0.33mm<sup>2</sup>) tie-wire

6 #6, #8 or #10 (M2, M3 or M4) self drilling pan headed screws

7 UL approved twist-on wire connectors fitting both 18 and 20 AWG wire (0.82mm<sup>2</sup>, 0.52mm<sup>2</sup>)

8 Tetra<sup>®</sup> 24 Volt Power Supply

9 Tetra<sup>®</sup> Contour LS

10 Cordless drill

11 Tape measure

12 Electrical grade silicone

13 Wire stripper/cutter



imagination at work

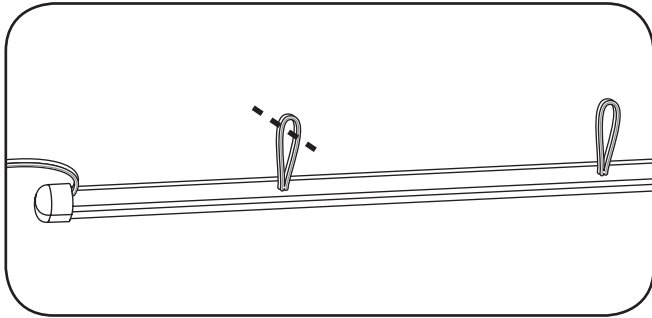
## Planning

For planning the layout, measure the perimeter of the building and divide by 8 ft. (2.44m) to determine the required quantity of Tetra Contour LS systems. See table below for guidelines about cutting resolution. For seamless designs, accessories are available for straight runs and 90 degree corners.

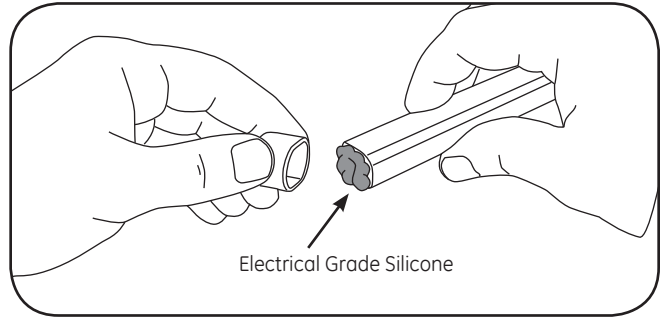
**NOTE:** Do not use more than one suffix code for each respective application, as mixing suffix codes may result in appearance variation. Suffix code can be found on the packaging label.

**Cutting Resolution Table**

SKU	Color	Cutting Resolution
GEXNLRD-1	Red	8 inches (203 mm)
GEXNLGL-1	Green	8 inches (203 mm)
GEXNLBL-1	Blue	8 inches (203 mm)
GEXNL65-1	White	8 inches (203 mm)
GEXNL32-1	Warm White	8 inches (203 mm)



- 1 If it is necessary to cut the Tetra Contour LS for a better fit, refer to the Cutting Resolution table above.



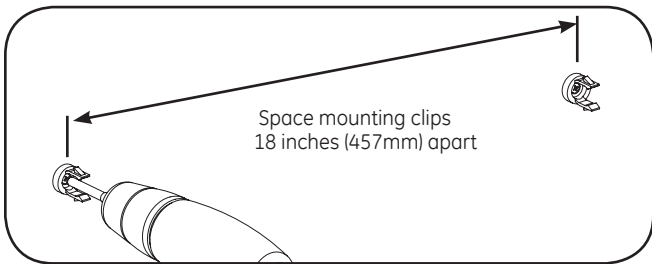
- 2 If Tetra Contour LS sections are cut, apply electrical grade silicone to exposed cut and attach end cap.

### **⚠ CAUTION**

**Risk of damage.** Must use electrical grade silicone.

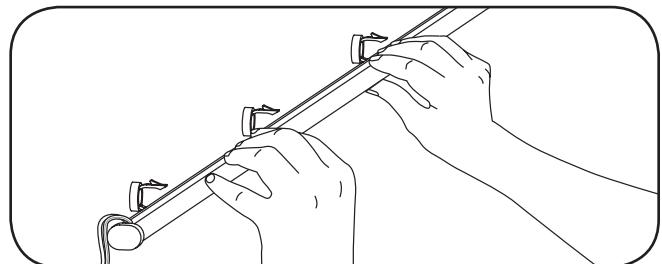
## Attaching Contour Sections

**NOTE:** Tetra Contour LS is intended for straight runs.



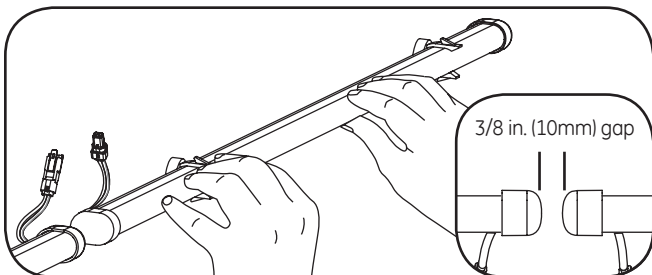
- 1 Install one mounting clip at each end and then a minimum of one mounting clip every 18 inches (457mm).

**NOTE:** Standard neon mounting hardware can also be used.

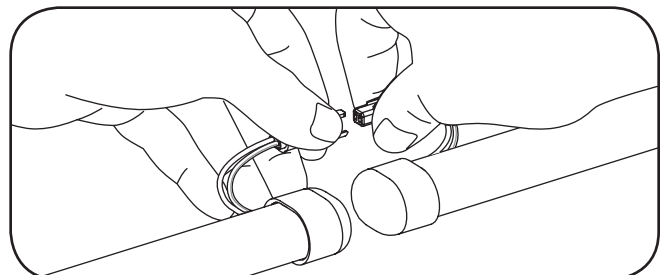


- 2 Starting from one end, attach the Tetra Contour LS to the mounting clips. Secure light guide by twisting tie-wire around the mounting clip and light guide.

**NOTE:** Wires can be concealed by tucking wires between mounting clips and Tetra Contour LS system.



- 3 Continue attaching all the sections to the remaining mounting clips, leaving a 3/8 inch (10mm) gap between sections to allow for expansion or contraction.

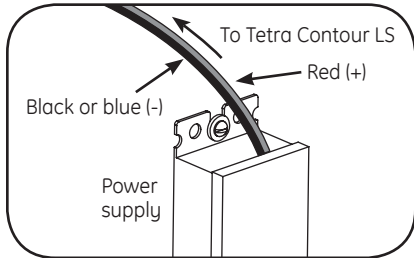


- 4 Plug together all adjacent Tetra Contour LS sections and tuck wires behind.

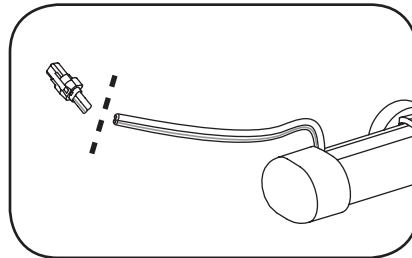
# Electrical Connections

Must be used with Tetra 24 Volt Power Supplies. Refer to the **Power Supply Installation** Instructions for more information on the power supply.

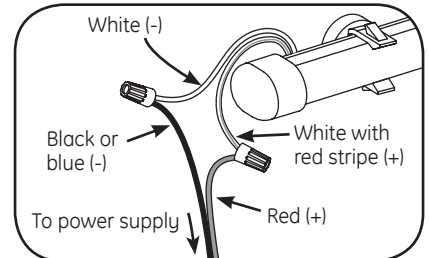
**⚠ WARNING**  
**Risk of electrical shock.** Turn power OFF before inspection, installation or removal.



- 1** Run a wire from the power supply to a section of Tetra Contour LS.  
**NOTE:** Power supply connection must be contained in an acceptable UL/NEMA enclosure.

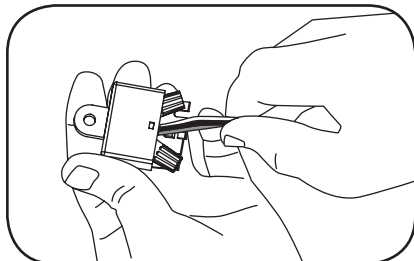


- 2** Cut off the quick connector on the Tetra Contour LS that you are connecting to the power supply.

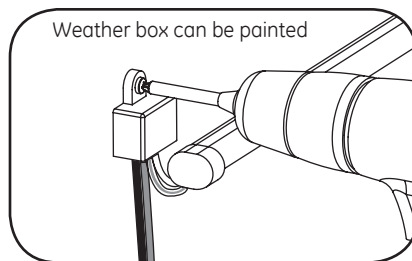


- 3** Using twist-on wire connectors, connect the white wire with red stripe (+) from the LED strip to the red wire (+) of the power supply. Connect the white wire (-) from the LED strip to the black or blue wire (-) of the power supply.

**NOTE:** Grounding and bonding must be done in accordance with National Electrical Code (Article 600). See power supply instructions.

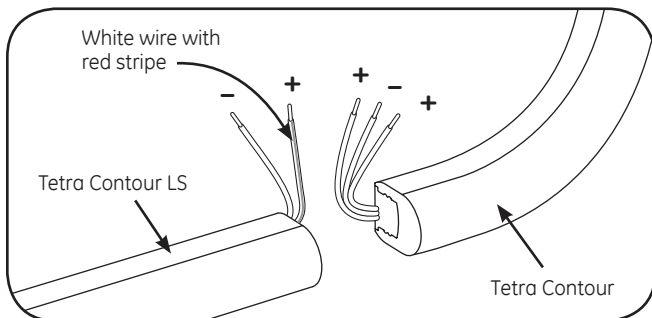


- 4** Insert wire connectors into weather box. Fill with electrical grade silicone and close box.

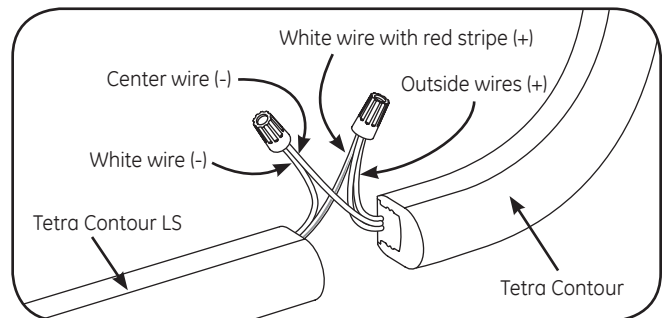


- 5** Secure the weather box using a #6 or #8 (M2 or M3) screw.  
**NOTE:** When using twist-on connectors, weather box is required for all outdoor electrical connections.

## Optional—Attaching Tetra Contour LS to Tetra Contour



- 1** When connecting Tetra Contour LS to Tetra Contour, separate wires and identify conductors as positive (+) and negative (-). Strip ends back 0.5 in. (12mm).



- 2** Splice the white wire with red stripe (+) of Tetra Contour LS to the two outside wires (+) of Tetra Contour and splice the white wire (-) of Tetra Contour LS to the center wire (-) of Tetra Contour.

**NOTE:** Weather box is required for all outdoor electrical connections.

## Retrofit Instructions

- (Existing Signs Only)** Prior to installation, survey the site for information regarding power and accessibility inside and outside the building. Ensure that the branch circuit supplying the existing transformer or ballast will be within the voltage ratings of the new LED power supply, and have a current rating not exceeding 20A, or that permitted by applicable local, state, or country electrical codes (whichever is less).
- (Existing Signs Only)** Remove the existing lighting equipment to be replaced, such as neon tubing or fluorescent tubes; and associated transformers and ballasts. Care should be taken not to break the existing neon or fluorescent tubes.  
**NOTE:** Follow all federal and local regulations when disposing of neon tubing, fluorescent tubes, transformers and ballasts.
- (Existing Signs Only)** If removal of the existing lighting equipment eliminates the disconnect switch, as required by applicable local, state, or country electrical codes; a new disconnect switch must be installed.
- (Existing Signs Only)** Make sure the removal of lighting equipment does not compromise the integrity of the sign body (i.e. water intrusion). Fill in all holes 0.5 in. (13 mm) or smaller with the appropriate amount of rated caulk or sealant. For holes greater than 0.5 in. (13 mm), use an aluminum or zinc coated steel patch with rivets and sealant.
- Determine the necessary footage of Contour to illuminate sign.
- A Tetra® 24VDC Class 2 Power Supply, as listed below, must be used with this retrofit kit. Determine the number of Tetra® Class 2 Power Supplies required to power the footage of Contour required to illuminate the sign using the loading chart below, so as not to overload the Tetra® Class 2 Power Supply chosen.
- Follow the instructions above to properly mount the LED modules.
- Connect the DC output of the power supply to the LED modules using the Electrical Connections instructions above.
- Connect the power unit to the supply in accordance with the applicable local, state, and country electrical codes, and the instructions found in the power supply installation guide.
- If required, the disconnect switch shall be installed by qualified personnel, in accordance with applicable local, state, and country electrical codes.

## Troubleshooting

Symptom	Solution
All LEDs are OFF	Check AC input connection and/or check circuit breaker Check wire connection(s) at the Tetra Contour LS section and power supply for improper termination(s) or short circuits. Properly terminate or replace the wire connection(s). Check that connections are the white wire with red stripe (+) of the LED strip to the red wire (+) of the power supply and the white wire (-) of the LED strip to the black or blue wire (-) of the power supply.
Some LEDs appear dim	Ensure the overall length of the Tetra Contour LS does not exceed the maximum load. Ensure the length of supply wire is equal to or below the recommended remote mounting distance. Make sure that all LED light engines have the same suffix code (suffix code is located on the box label).
Some of the sections are not illuminated	Check wire connection(s) at the Tetra Contour LS section and power supply for improper termination(s) or short circuits. Properly terminate or replace the wire connection(s). Check that connections are the white wire with red stripe (+) of the LED strip to the red wire (+) of the power supply and the white wire (-) of the LED strip to the black or blue wire (-) of the power supply.

## Specifications

### Maximum Loading per Tetra® 24 VDC Power Supply

SKU	Rating	20W	80W	100W	180W
		Power Supply <i>Note: Load shall not exceed 0.83A</i>	Power Supply <i>Note: Load shall not exceed 3.3A</i>	Power Supply <i>Note: Load shall not exceed 4.1A</i>	Power Supply <i>Note: Load shall not exceed 3.8A per each (of 2) output channels</i>
GEXNLRD-1	24VDC, 1.30W/ft. (Strip) 1.53W/ft. (System)	14 ft. (4.27 m)	58 ft. (17.68 m)	69 ft. (21m)	65 ft. (19.81 m) per output channel 130 ft. (39.62 m) per power supply
GEXNLBL-1, GEXNLGL-1	24VDC, 1.73W/ft. (Strip) 2.03W/ft. (System)	11 ft. (3.35 m)	44 ft. (13.41 m)	52 ft. (15.85 m)	48 ft. (14.63 m) per output channel 96 ft. (29.26 m) per power supply
GEXNL65-1, GEXNL32-1	24VDC, 3.17W/ft. (Strip) 3.73W/ft. (System)	6 ft. (1.83 m)	24 ft. (7.3 m)	29 ft. (8.8 m)	27 ft. (8.2 m) per output channel 54 ft. (16.4 m) per power supply

### Maximum Remote Mounting Distance

	18 AWG/0.82 mm <sup>2</sup> Supply Wire	16 AWG/1.31 mm <sup>2</sup> Supply Wire	14 AWG/2.08 mm <sup>2</sup> Supply Wire	12 AWG/3.31 mm <sup>2</sup> Supply Wire
20W Power Supply	20 ft./6.1 m	-	-	-
80W Power Supply	20 ft./6.1 m	30 ft./9.1 m	50 ft./15.2 m	86 ft./26.1 m
100W Power Supply	20 ft./6.1 m	30 ft./9.1 m	50 ft./15.2 m	86 ft./26.1 m
180W Power Supply	20 ft./6.1 m	30 ft./9.1 m	50 ft./15.2 m	86 ft./26.1 m

This product is intended solely for the use of non-residential signage lighting and is not intended for use in any other applications.

Conforms to the following standards:



GE Lighting • 1-888-MY-GE-LED (1-888-69-43-533) • [www.gelighting.com](http://www.gelighting.com)

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