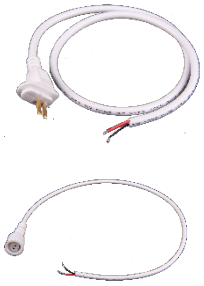
Installation Guide: LED Flex-Lite

LED Flex-Lite (Neon Red)

Flex-Lite Power Supply Unit



Flex-Lite Power Cords

Contents:

Carefully open the box and check contents. Contact Revolution Lighting if any items are missing.		
Qty. 1	**LED Flex-Lite Reel** ***[SKU #: (as ordered)]***	LED Flex-Lite Reel: 10-ft, 30-ft, or 50-ft spool
Qty. 1	**Power Supply Unit with Power Cord included** ***[SKU #: (as ordered)]***	Power Supply Unit (PSU) with one Power Cord (52000C-10A) for connecting to and powering various lengths of LED Flex-Lite (60W, 70W, 105W, or 180W)

Installation Notes & Precautions

- *Read all precautions, warnings, and instructions contained in this document.*
- Failure to follow NEC and applicable federal, state, and local codes or UL safety standards may cause serious injury, death, property damage, or product failure.
- *Installation should be done by a qualified electrician or signage installer.*
- Do not damage or destroy the conducting paths or LEDs within the Flex-Lite during assembly.
- Use proper cutting tool to make straight, smooth cuts.
- Cut Flex-Light only where indicated by the dotted lines printed on its side.
- Use proper grounding techniques to avoid electrostatic discharge during installation.
- *All Flex-Lite connections and possible water-entry points must be properly sealed with approved silicone glue and cured for 24 hours before use.*
- Use only with low-voltage 24VDC power source.
- Do not power LED Flex-Lite when coiled on reel.
- Always observe polarity for connections, positive (+) to positive and negative (–) to negative.
- Do not stare directly into the LED lights when illuminated.
- This light source is not intended as an emergency exit fixture or light.
- PSU operating input voltages: 120–277VAC
- PSU output voltage: 24VDC (Class 2)
- Use sufficient PSU wattage (W) for the total Flex-Lite length (L); Formula: W = (2.93 W/ft x L)/0.8.
- *Do not exceed 50 ft of Flex-Lite for a single PSU.*
- Do not bend Flex-Lite with a diameter of less than 2 in.
- Do not bend Flex-Lite in directions other than side-to-side.
- Do not twist Flex-Lite.
- Cut Flex-Lite only at designated places.
- Do not handle exposed LEDs when working with Flex-Lite.
- Operating temperature range: -13 ºF to 140 ºF.
- Not UL 48 for enclosed electric signage

Required Tools & Materials

- Cutting Shears (PVC pipe or anvil-style)
- Metal Cutting Saw
- Blunt-Nose Pliers
- #2 Phillips Screwdriver
- Measuring Tape
- Clear Silicone Glue (Revolution Lighting SKU 52000S-100 or Dow 9186)

STEP 1 – Turn Off Power

- Disconnect power to installation site.
  WARNING: Ensure that all power is off using a voltmeter or other method.

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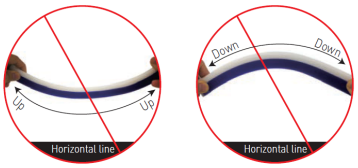
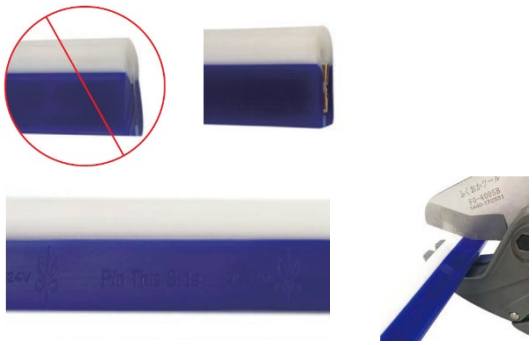
STEP 2 – Follow Precautions during Installation

- Do not twist LED Flex-Lite under any circumstances; doing so could damage the electrical circuit or LED chips.



- Do not bend LED Flex-Lite vertically under any circumstances; doing so could damage the electrical circuit or LED chips.

- LED Flex-Lite is designed to bend laterally along the light-surface plane; however, do not bend tighter than the minimal bending diameter of 2 in.

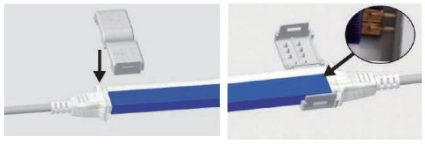


- LED Flex-Lite can be cut in increments of 2 in. When cutting, use a ratcheting hose/pipe cutter and cut along the designated line(s) of the LED Flex-Lite. Ensure that each cut is perpendicular to the Flex-Lite surface.

STEP 3 – Making Solder-Free Connections & Splices

Power-Cord Connections

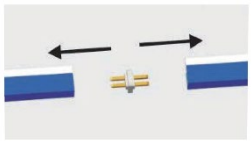
- To connect a power supply to the Flex-Lite, insert the pin side of the Power Cord Connector into the pre-cut Flex-Lite.
- *NOTE: Find the marked side of the Flex-Lite that has "Pin This Side." Insert pins so that they contact the back of the LED PCB copper pad.*



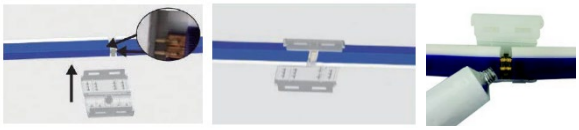
- Ensure that the entire crocodile-style fitting engages the ends of the Power Cord connector and Flex-Lite. Apply Silicone Glue to seal entire connection.
- After Silicone Glue is applied, snap close the crocodile-style fitting.

- Final Power-Cord assembly

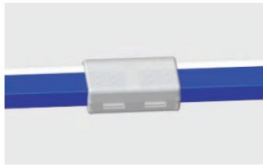
Linear-Splice Connections



- To splice two Flex-Lite ends together, fully insert the two exposed metal pins on one end of the Linear fitting into the pre-cut Flex-Lite end. *NOTE: Find the marked side of the Flex-Lite that has "Pin This Side." Insert pins so that they contact the back of the LED PCB copper pad.*
- Repeat this procedure at the other end of the splice connector to connect the second pre-cut Flex-Lite.

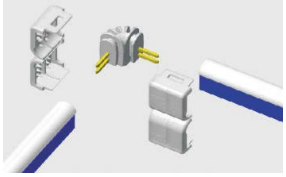


- Ensure that the entire crocodile-style fitting engages both ends of the Flex-Lite. Apply Silicone Glue to the fitting to seal entire connection.
- After Silicone Glue is applied, snap close the crocodile-style fitting.



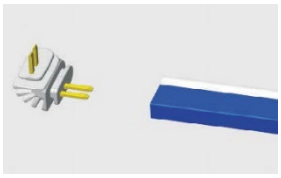
- Final Linear-Splice assembly

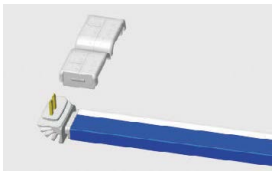
Elbow Splice for 90˚ Connections



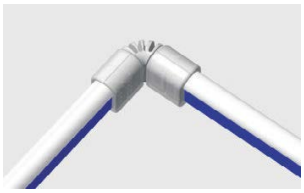
- To make a 90˚ connection between two ends of a Flex-Lite, insert one pin side of the Elbow Splice into the pre-cut Flex-Lite.

- *NOTE: Find the marked side of the Flex-Lite that has "Pin This Side." Insert pins so that they contact the back of the LED PCB copper pad.*



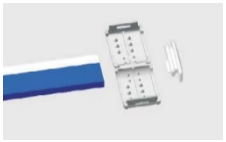


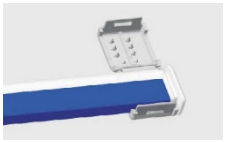
- Ensure that the entire crocodile-style fitting engages the Elbow Splice and the Flex-Lite. Apply Silicone Glue to the fitting to seal entire connection.
- After Silicone Glue is applied, snap close the crocodile-style fitting.
- Repeat this procedure at the other end of the Elbow Splice to connect to the second pre-cut Flex-Lite.



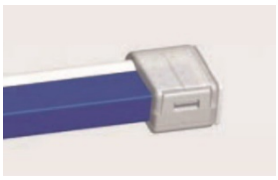
- Final Elbow-Splice assembly

End-Cap Connections



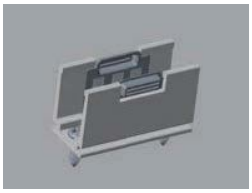


- To terminate a run of LED Flex-Lite, press the end piece of the End-Cap assembly onto the exposed LED PCB at the end of the Flex-Lite strip. (When installing an End Cap, make sure that the flat sides of the End-Cap assembly are aligned with the flat sides of the Flex-Lite strip.)
- Apply Silicone Glue into the newly formed joint between the Flex Lite and the end piece of the End Cap assembly.
- Apply Silicone Glue on End-Cap's crocodile-style fitting. Use enough Silicone Glue to create an unbroken waterproof seal when the crocodile-style fitting is closed over the Flex-Lite and end piece.
- After Silicone Glue is applied, snap close the crocodile-style fitting.

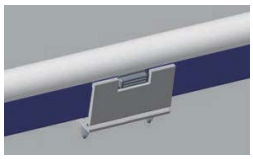


- Final End-Cap assembly

STEP 4 – Mounting-Channel Installations

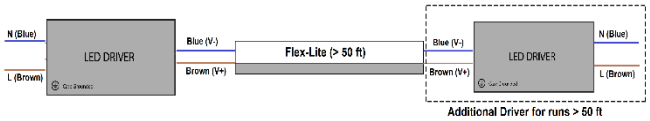


- Mounting Channels come in self-locking or standard models of two lengths (39.37" & 1.38") and are used for securing the Flex-Lite to a surface. Phillips-head screws are included with Mounting Channels. (Use Metal Cutting Saw to shorten or customize longer channels.)
- Use short Mounting Channels to secure Flex-Lite along curves and long Mounting Channels for longer straight runs.
- *Draw out and measure your installation first to determine the number, type, and location of all Mounting Channels and other Flex-Lite accessories before ordering. (See Flex-Lite installation example on page 4.)*



- Example of Flex-Lite secured in short, self-locking Mounting Channel

STEP 5 – Power-Supply Installation

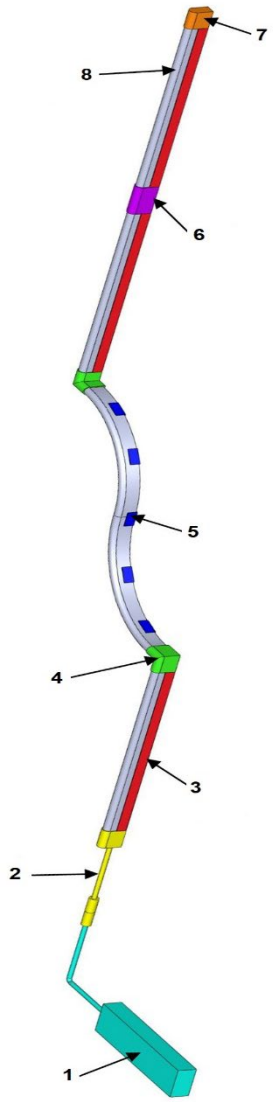


- Do not exceed 50 ft of Flex-Lite for a single power-supply unit. Patch-in an additional LED driver for runs longer than 50 ft, as shown above.
- All secondary wiring must comply with Article 725 of the 2002 National Electrical Code (NEC). Class 3 or PLTC wire can be used as a substitution of Class 2 wire. Please refer to NEC 725.61 "Cable Substitution Hierarchy".
- *NOTE: Using wire gauge narrower than 12AWG will result in increased voltage drop.*
- *NOTE: For wet locations, power supply units must be installed in NEMA 3R enclosure. Exit point of low-voltage wiring must be secured against water entry into box (rain-tight bushing, cord grip etc.)*
- *NOTE: For dry or damp locations, power supply must be installed in NEMA-1-rated enclosure OR inside of an all-metal enclosure or raceway.*
- *CAUTION: Wire colors can vary, depending on code and circumstances. Make sure that hot, neutral, and ground wires are correctly identified.*

STEP 6 – Turn On Power

- Switch power back on

Example Flex-Lite Installation Using Accessories



1 = Flex-Lite 24V Constant-Voltage Power Supply (1)
2 = Flex-Lite Quick-Connect Power Cord and Start Splice (1)
3 = Flex-Lite Mounting Channel, Long (3)
4 = Flex-Lite Elbow Splice, Solder-Free (2)
5 = Flex-Lite Mounting Channel, Short (5)
6 = Flex-Lite Linear Splice, Solder-Free (1)
7 = Flex-Lite End Cap, Solder-Free (1)
8 = Flex-Lite Accent and Signage LED Lighting Strip

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Warnings:

WARNING – Risk of fire or electric shock. Do not alter, relocate, or remove wiring, lampholders, ballasts or any other electrical component. If necessary, contact a qualified electrician for assistance.

WARNING – To prevent wiring damage or abrasion, do not expose wiring to exposed edges of sheet metal or other sharp objects.

WARNING – Always disconnect power for your safety when performing the luminaire modification steps below! In some cases, it may be necessary to test the power feed with the power connected. Only connect the power when doing the testing, then disconnect the power from the luminaire when performing the installation steps.

WARNING – Always follow local and regional NEMA Electrical codes. NEMA codes provide information on proper procedures, safety guidelines, proper tools, connection methods, and specifications on materials.

WARNING – Revolution Lighting Technologies, Inc. cannot and will not be liable for any modifications or results of modifications to electrical devices or luminaires. These instructions are provided as a reference. By using the included instructions, you are solely responsible for following all applicable electrical safety procedures, codes, methods, and materials. If you are unsure about any electrical modification or installation, please consult a licensed electrician or electrical contractor in your area.

Cautions:

CAUTION – Risk of Shock. Install in Dry or Damp Locations Only.

CAUTION – For wet locations, seal all possible water-entry points with the prescribed silicone glue; failure to do so may result in product failure.