FlexiBRITE

Installation Guide

FlexiBRITE is a UL recognized low voltage, long life, and flexible alternative to neon lighting. FlexiBRITE is available in Red, Orange, Yellow, Green and Blue in 2’ and 10’ lengths. All colors run on 12 VDC.

Tools Required

1. Wire stripper
2. Measuring tape
3. Drill
4. Screw driver or rivet tool
5. Utility knife - new or very sharp blade is critical

Standard Hardware and Supplies (UL listing may be required on certain items)

1. Butt splice connectors, 18-22 AWG (Bags of 25, SloanLED P/N 701386-25)
2. #6 Pan head screws or 1/8” rivets for mounting clips or track (Length and thread type depend on mounting surface, masonry inserts may be needed for brick or concrete walls)
3. Outdoor rated clear Silicone sealant.
4. AWG # 18, 2 conductor, PVC jacketed, NEC type Power Limited Tray Cable (PLTC) with UL listing. (100’ Roll is SloanLED part number 400299-1200)
5. AWG # 14, 2 conductors, PVC jacketed, NEC type Power Limited Tray Cable (PLTC) with UL listing. (100’ Roll is SloanLED part number 400301)
6. FlexiBRITE mounting clips (Bags of 25, SloanLED P/N 701572-25)
7. FlexiBRITE mounting track (Box of 10 5’ tracks, SloanLED P/N 701456-10)
8. FlexiBRITE Joint kit for sealing joints on indoor installations (Kit contains Loctite primer # 770, Loctite glue # 406, SloanLED P/N 701491-FB)
9. Conduit and J-Boxes for power supply installation as needed. (Appropriate UL listing is required.)

Bending FlexiBRITE

FlexiBRITE can bend in plane as tight as a 1” (25 mm) radius, and bend out of plane in a 6” (152 mm) radius or larger. **CAUTION! Bending FlexiBRITE tighter than a 6” radius out of plane, twisting FlexiBRITE or stretching FlexiBRITE can damage the lighting circuit board and cause non-warranty failure.**

In plane bend as small as 1”

Out of plane bend - 6” radius or greater

Cutting FlexiBRITE
FlexiBRITE can be cut to shorter lengths. All cut pieces can be used provided the cut is made on the cut line and each section has a set of wires for power hook up. Cut Marks are black lines that can be seen through one side of the extrusion. Red, Orange and Yellow FlexiBRITE have cut lines on 2" (51 mm) increments. Blue and Green FlexiBRITE have cut lines on 1" (25 mm) increments. Use a sharp utility knife to make a clean cut. **All ends must be sealed**. Wherever possible use 10' (3 m) lengths for longer runs, and 2' (0.6 m) lengths for shorter runs to minimize the number of joints that have to be sealed.

Connecting FlexiBRITE
When connecting FlexiBRITE pieces together ensure that the polarity is correct by connecting Red-to-Red and Black-to-Black. (NOTE: Hold wires finger tight when stripping. If wires are not held in place they may break free from FlexiBRITE extrusion.) Both parallel and series connections of FlexiBRITE are allowable as long as the maximum allowable total length is not exceeded.

Trim open wires
Any wire loops that have been cut, but are not being used for an electrical connection must be trimmed flush with extrusion and covered with a bead of silicone.

Mounting FlexiBRITE
FlexiBRITE can be mounted to any surface that will accommodate conventional fasteners. FlexiBRITE mounting track is recommended for straight runs of flexibrite. The mounting track comes in boxes of ten 5' pieces (SloanLED P/N 701456-10). For script letters and free form shapes use FlexiBRITE mounting clips (SloanLED P/N 701572-25 in bags of 25).

Mounting track: Cut mounting track to required lengths and fasten to surface with #6 pan head screws. Make all electrical connections for FlexiBRITE using butt splice connectors and coat these connections with liquid electrical tape or silicone. When pressing FlexiBRITE into the mounting track, a little soapy water on the back of the FlexiBRITE tubing will lubricate it and help it push in.

Mounting clips: Place mounting clips wherever necessary to shape the FlexiBRITE to the desired contour. Fasten the clips to the mounting surface using #6 pan head screws or 1/8" rivets. For added security, a clear chain tie can be used with the mounting clips to cinch FlexiBRITE into place (SloanLED P/N 701653-100, in bags of 100).

Sealing exposed ends (REQUIRED for outdoor applications)
FlexiBRITE 10' and 2' lengths do not come with end caps already applied. **Apply end caps to all exposed ends. Any exposed ends without end caps will lead to failure of FlexiBRITE.**

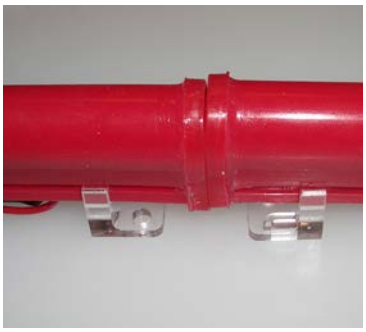
Sealing Exposed Ends - Required for Outdoor Applications

Step 1: FlexiBRITE cut marks are on the side of the extrusion. Cut marks every two inches: Red, Orange and Yellow. Cut marks every one inch: Green and Blue. Any cut section will light provided there are wires for power hook-up.

Step 2. Gather required tools, clear Dow Corning 737 silicone sealant or equivalent, and necessary end caps (SloanLED P/N 701597-.R-10 for red or 701597-C-10 for clear.

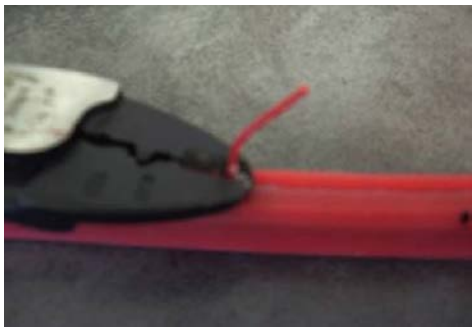
Step 3. Apply silicone to inside of end cap to be bonded. Ensure that enough is used to cover entire surface area of the inside of the end cap and at least half of its depth.

Step 4. Press end cap onto end of FlexiBRITE extrusion, clean off silicone residue and allow to cure. **NOTE:** Silicone will take at least 24 hours to fully cure. It can cure in place on an installation as long as it is not disturbed while curing.



Step 5 Butt ends together and use mounting clips as needed to keep them lined up.

Step 6. Use UL Listed butt splices to complete the electrical connection to the next piece of FlexiBRITE or the power supply if needed. Seal connection with Liquid Electrical Tape or Silicone



Step 7. Trim Open Wires: Any wire loops that have been cut, but are not being used for an electrical connection must be trimmed flush with extrusion and covered with a bead of silicone.

Optional Joint Sealing - for Indoor Applications Only
For indoor applications that require a seamless joint, follow the procedure below.

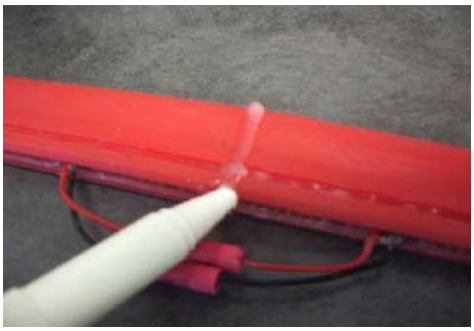
Step 1: FlexiBRITE cut marks are on the side of the extrusion. Cut marks every two inches: Red, Orange and Yellow. Cut marks every one inch: Green and Blue. Any cut section will light provided there are wires for power hook-up.

Step 2: Coat the face of both pieces to be bonded together with Primer. Any area not primed, will not bond. The primer will dry in less than 15 seconds and is active for 1 hour. (Joint kit: SloanLED P/N 701491-FB)

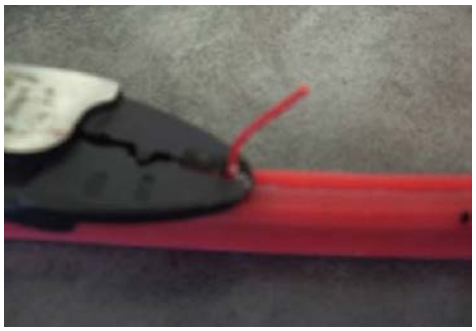
Step 3: Apply a layer of glue to the face of one piece of FlexiBRITE.
(Joint kit: SloanLED P/N 701491-FB)

Step 4. Align and press the pieces firmly together, hold for 30 seconds until glue dries. The bond must be sealed around the entire perimeter.

Step 5. Use UL Listed butt splices to complete the electrical connection to the next piece of FlexiBRITE or the power supply if needed. Seal connection with Liquid Electrical Tape or Silicone.



Step 7. Seal the joint with clear Silicone. Gaps in the seal at this joint will allow moisture to enter and may cause the modules to fail.



Step 7. Trim Open Wires: Any wire loops that have been cut, but are not being used for an electrical connection must be trimmed flush with extrusion and covered with a bead of Silicone.

Power Supply Connection
Connect the output on the power supply to the beginning of FlexiBRITE leg. Connect the red wire of the power supply output to any available red wire on the FlexiBRITE leg and connect the black power supply output wire to any available black FlexiBRITE wire. SloanLED power supplies have Class 2 DC outputs.

12 VDC Power Supply capacity chart for FlexiBRITE

		Input		Output		Maximum feet (Meter)
Power Supply	**Part # (Each)**	**Nominal Input Voltage**	**Input Current**	**Power Output**	**Output Current**	**All Colors** (Red, Orange, Yellow, Green, Blue)
Self-Contained 20	701680	120/240 V	0.3 A	20 W	1.5 A	6 (2)
Mod 60	701507-Mod	120/240 V	1.0 A	60 W	4.5 A	20 (6)
Mod 60-277	701507-Mod277	277-347 V	0.5 A	60 W	4.5 A	20 (6)
Quad 240*	701494	120 V	3.6 A	240 W	4.5 A / Leg	80 (24)
Power used per Foot (Meter) in Watts: 2.8 (9.2)						

*Quad 240 has four output legs; footages expressed are total (divide by four for footage per leg)

It is recommended that the current be checked on each power supply output after loading is complete. The current drawn by each leg should not exceed the current rating on the power supply label. If the measured current does exceed the rated current, reduce the length of FlexiBRITE on that leg until the current is below the rated output.

Routing Secondary Wires
When wiring the secondary outputs of the power supply, all routing through walls must be sealed with outdoor rated caulk to protect the sign and building from water damage and the cable from chafing. The PLTC used for power supply leads and jumpers can be routed through walls, inside and outside without conduit. It is recommended that all connections be enclosed in a UL listed junction box with strain relief.

Extension of Power Supply Leads
If a longer lead wire from the power supply to FlexiBRITE chain is needed, an extension can be used. The extension should be kept as short as possible (under 15 feet for 18 AWG UL Listed PLTC or under 50 feet for 14 AWG UL Listed PLTC).

WARNING: CHECK POLARITY
After all wire routing is complete and the lighting modules are connected to the power supply, RECHECK THE POLARITY OF ALL CONNECTIONS. They must be RED-TO-RED AND BLACK-TO-BLACK throughout the entire system. Reverse polarity connections may damage the LEDs and void the product warranty.

Note: For power supply installation instructions check the manual packaged with your power supply or check online at www.SloanLED.com

Troubleshooting:

Entire Sign or leg with FlexiBRITE does not light after complete installation.	Check the connection from the power supply lead to the FlexiBRITE chain. Make sure the polarity of the connections made at the power supply lead and at any jumper wire connection is correct. All connections should be red-to-red and black-to-black.
Still does not light.	Using a voltmeter check the output voltage of the power supply. The output voltage should be 12.0 VDC ± 0.5 VDC. If there is no output voltage, have a licensed electrician check input voltage. Make sure the power supply is hooked up correctly and getting primary power. If the power supply is hooked up correctly and getting primary power and there is still no output voltage, replace the power supply with a new one.
The beginning of a FlexiBRITE leg lights, but the entire leg does not light or lights intermittently.	The primary cause of a portion of a FlexiBRITE leg not lighting or lighting intermittently is a bad connection between the length that lights and the length that doesn't light. Check this connection and ensure correct polarity.
Small segment of a length of FlexiBRITE does not light, but the rest of length lights.	FlexiBRITE is designed so if one segment fails, it will not cause the entire sign or leg to go out. If one segment is not lighting, but the remainder of the length of FlexiBRITE is lighting, remove and replace the segment, or replace length with a new one.

FlexiBRITE Part #	Description
701499-R-10	10' (3 m) red FlexiBRITE
701499-R-2	2' (0.6 m) red FlexiBRITE
701499-O-10	10' (3 m) orange FlexiBRITE
701499-O-2	2' (0.6 m) orange FlexiBRITE
701499-Y-10	10' (3 m) yellow FlexiBRITE
701499-Y-2	2' (0.6 m) yellow FlexiBRITE
701499-G-10	10' (3 m) green FlexiBRITE
701499-G-2	2' (0.6 m) green FlexiBRITE
701499-B-10	10' (3 m) blue FlexiBRITE
701499-B-2	2' (0.6 m) blue FlexiBRITE

UL Labeling:
FlexiBRITE is also a UL Recognized Sign Component under UL48 File #E215393.

The most common way FlexiBRITE is labeled for UL is for it to be used as a UL Recognized Sign Component. The FlexiBRITE is a UL Recognized Sign Component and the Power Supplies provided by SloanLED are UL Recognized Sign Components. When they are properly installed in a sign by a UL sign shop, the shop can apply its UL label to the whole assembly.

SloanLED® Leaders in LED Technology

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