

## Installation & Troubleshooting Guide

This document is an installation guide for the Sunbound LumiLite System. It includes how to setup, wire and connect the major components of our system. We take users through each step of installation, and give recommendations for how to best complete a professional installation. Each project comes with LED Lights, drivers, mounting hardware and connectors. These are the basic components to the LumiLite System, and we provide several accessories to ensure a beautiful lighting effect.

### Major Components



Custom Lighting  
SB-C-X-X-XX



Drivers  
SB-D-XX-XX



Dimmers  
SB-DIM-XX



Controllers  
SB-CON-XXXX



Remotes  
SB-REM-XXXX

### Wire & Connectors



In Wall Wire (18AWG)  
SB-W-18-XX



Brackets & Screws  
SB-ACC-BRA-X



Butt Connectors  
SB-C-BC



Terminal Strips  
SB-C-TS



Junction Boxes  
SB-C-JB



**It is recommended that this installation be performed by a qualified installer or electrician.**

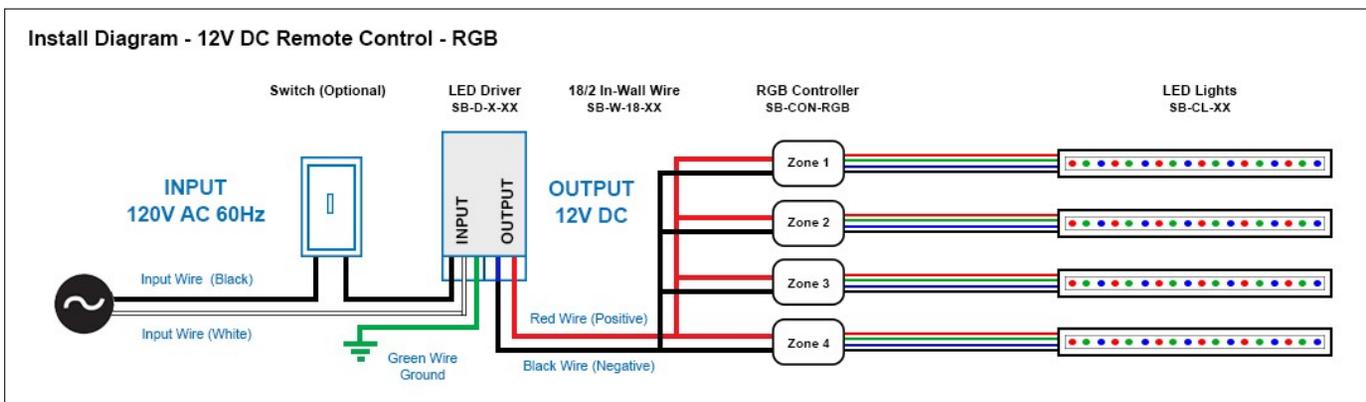
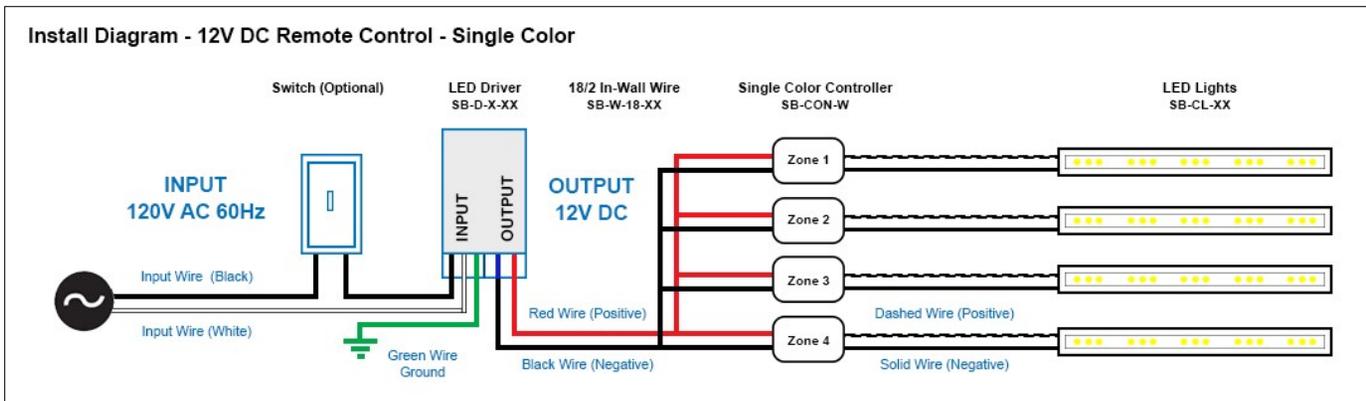
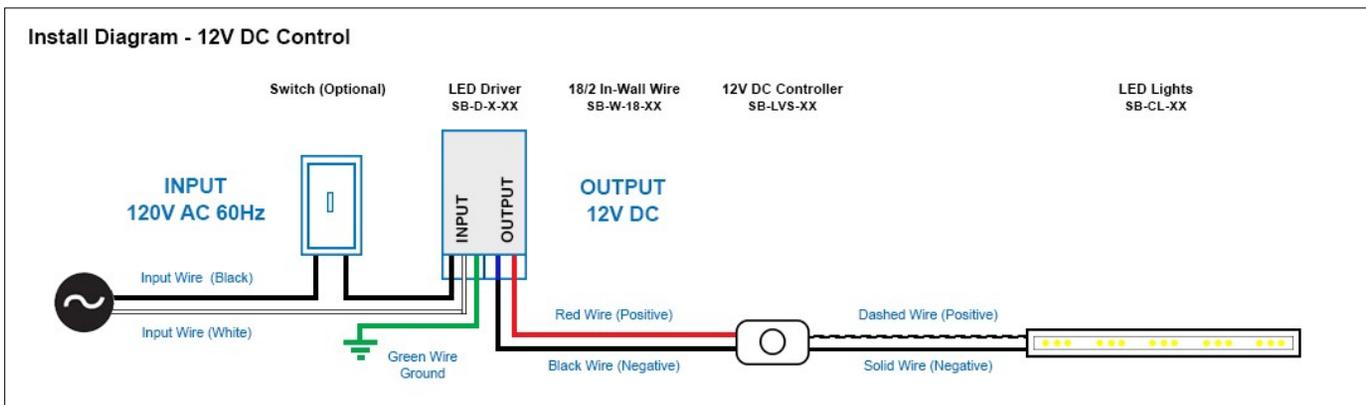
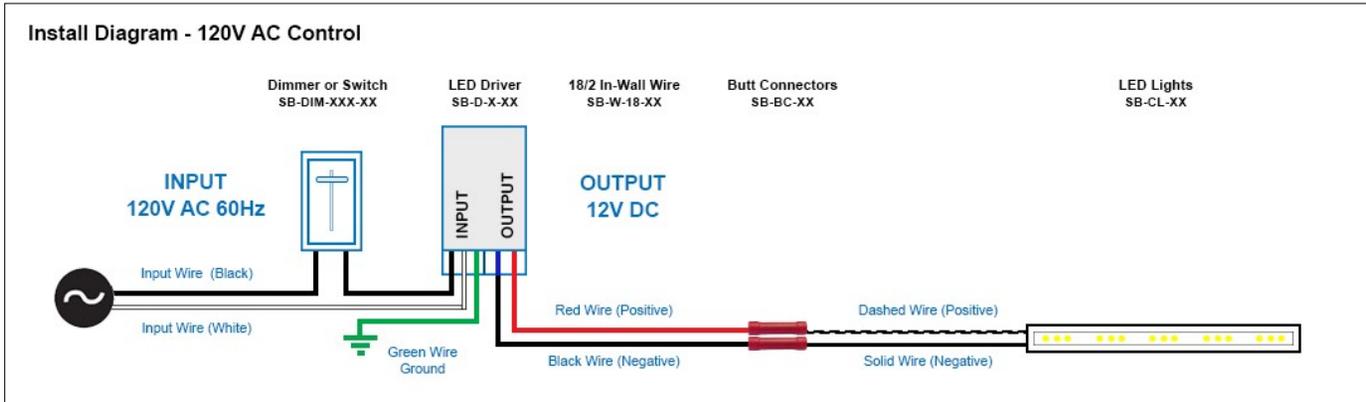
**Failure to observe these conditions may result in damages, injury or death.**

**Follow all municipal and/or national building codes when installing this product.**

Note: Each and every project is unique. Your project may dictate an entirely different installation approach, which makes your installation unique. If you have questions regarding your installation please contact Sunbound Lighting Technical Support or your electrical contractor.

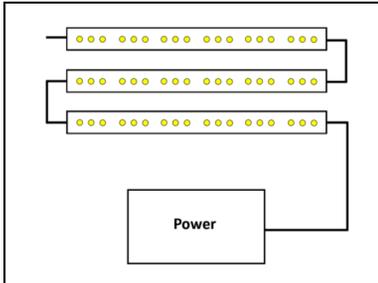
## Wiring Methods

See the following wire diagrams below for proper installation method.



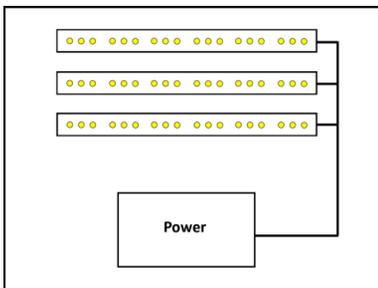
## Connection Types

There 2 ways to connect lights into the Sunbound LumiLite System:



### Series Connection:

Recommended for connecting under 10 feet of LED lights in a row. Each lighting path should stay within 10 feet; otherwise there could be a decline in brightness and a shorter LED lifetime.



### Parallel Connection:

Recommended for connections over 10 feet of LED. Parallel configuration allows you to connect multiple series of lights together without risk of losing LED brightness.

## Avoid Voltage Drop

“Voltage drop” is a drop in voltage caused by too much resistance in the lights and/or wire over long runs. Too much lighting and/or too much wire (too small a gauge) will cause a drop. Below are recommendations to avoid voltage drop.

- Place the driver in a location that is closer to the lights, within 20ft.
- Install the LED lighting in parallel connections (home runs) from the power source.
- Do not connect more than 12ft of LED lights in a series connection (voltage drop will occur).
- Ensure applicable AWG wire is installed between driver and fixture.
- Dimmers will trim voltage down, causing an output less than 12VDC. Performance will not be affected if the LED strip fixture is receiving 10.5-12.5VDC.

Recommended Wire Gauge - From Transformer To Lights

Total Feet of Lights	Wire Gauge (AWG)	Max wire Length	Total Feet of Lights	Wire Gauge (AWG)	Max Wire Length
1 ft	18	96 ft	11 ft	18	14 ft
2 ft	18	48 ft	12 ft	18	12ft
3 ft	18	32 ft	13 ft	18	10 ft
4 ft	18	24 ft	14 ft	14	18 ft
5 ft	18	20 ft	15 ft	14	16 ft
6 ft	18	16 ft	16 ft	14	15 ft
7 ft	18	14 ft	17 ft	14	14 ft
8 ft	18	12 ft	18 ft	14	13 ft
9 ft	18	10 ft	19 ft	14	12 ft
10 ft	18	15 ft	20 ft	14	10 ft

## Mounting

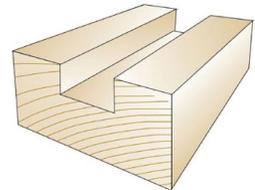
### For Surface Mounted Frames (Slim, Ultra Slim, Crescent, Pyramid)

- Using the included mounting brackets and screws, securely fasten the light to the cabinet or fixture
- Connect wire to feed wire (parallel) or to next light series) using provided connectors



### For Recessed Frames (Groove, Deep Groove, Angle Groove)

- Route a channel into the fixture or cabinet using a recommended router bit
- Groove Frames are designed for a frictionless fit, no adhesive needed
- Deep Groove and Angle Groove may require some adhesive in the channel
- Drill a pilot hole out the side or back of the fixture, feed the wire through the pilot hole



## Connections



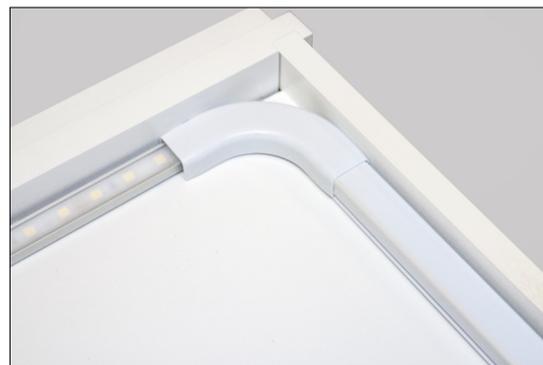
Install With Terminal Strip



Install With Butt Connector



Install With Conceal Track



## Installation Knowledge

### Connecting to AC

Installation should be done by a licensed electrician. Make sure the circuit breaker is completely off before connecting and always take safety measures during installation. Our dimmable transformers are directly hard-wired to 120V AC current, and have an output of 12V DC. If the lights are connected directly to AC voltage, they will immediately be damaged and possibly cause a fire risk. Please read transformer installation instructions carefully. Sunbound Lighting is not liable for improper installation.

### Connecting To DC

Direct Current is strict with regard to polarity. If the polarity of the DC voltage is reversed, the lights will not work but will not cause damage. The positive and negative wires must be correctly connected throughout the installation. The lights may fail to turn on if connected improperly. Keep this in mind when you are connecting your lights with recommended connectors. If your lights fail to turn on, inspect the wiring to make sure the wire is not cut, pinched, broken or the polarity is reversed. As a general rule, the positive wire has a dashed line, or writing on it. If . This is a common mistake, always double check to make sure positive (dashed line) and negative (solid color wire) are lined up correctly when troubleshooting.

### Flickering

There could be several reasons why your lights are flickering. The most common occurrence is due to an incompatible dimmer switch, the minimum and maximum dimmer loads not met, or a defective driver. If you are using a dimmer not provided by Sunbound, ensure it is CFL/LED compatible. Also see dimmer switch specs for minimum load requirements. Check the output voltage of the driver, and ensure the output reads between 10V-12V without any load. Lastly, make sure all the wiring is correct. If excess flickering is still apparent, please contact technical support.

### Overloading

Ensure the driver is not overloaded. Always de-rate the driver 20% from its labeled rating. Ensure there is not a short circuit occurring. If the breaker continues to trip after reset then contact technical support as the driver may be defective.

### Dimming

If you are powering your lights with a standard wall dimmer you must use an LED/CFL compatible dimmer switch, which connects from the AC 120V input into the dimmable transformer. We also have low voltage switching options available. Our drivers are compatible with a range of dimmers from different manufacturers, depending on your driver model. Please visit our resources page for a full list of dimmers that work with your specific model.

### Operating Temperature

LED chips produce very little heat. However, the electronic circuit board that powers the LEDs does produce heat. For this reason Sunbound lights are designed with an aluminum heat sink housing, which decreases running temperature and increase LED performance. The typical temperature range for crescent and pyramid frames should be from 90°-110°F. Groove and slim frames generate more heat due to the low profile design, so they can get up to 120°F. If LEDs are hot to the touch, they are being overpowered due to improper circuitry or a defective driver.