

Available Models¹

12 VDC

- STW-B-A22K90-O16D-08L5M-12V
- STW-B-A27K90-O16D-08L5M-12V
- STW-B-A30K90-O16D-08L5M-12V
- STW-B-A40K90-O16D-08L5M-12V
- STW-B-A50K90-O16D-08L5M-12V

24 VDC

- STW-B-A22K90-O32D-08L5M-24V
- STW-B-A27K90-O32D-08L5M-24V
- STW-B-A30K90-O32D-08L5M-24V
- STW-B-A40K90-O32D-08L5M-24V
- STW-B-A50K90-O32D-08L5M-24V

SAMPLE PART NUMBER BREAKDOWN

STW-B-A22K90-O16D-08L5M-12V

Series	Strip Type	CCT	CRI	LED Type	LEDs/Segment	IP Rating	Width	Density	Length	Voltage
STW-B	A	22K	90	O	16	D	08	L	5M	12V
Weatherproof	Single White	22K: 2200K 27K: 2700K 30K: 3000K 40K: 4000K 50K: 5000K	90+	COB	16: 16 LEDs/seg 32: 32 LEDs/seg	IP65	8mm	512 LEDs/m	5 meters	12V: 12VDC 24V: 24VDC

Overview

The Even-Glow® Series LED COB strip light uses a high density of chip-on-board (COB) LEDs to create a smooth, dotless line of light. The superior design will not show visible dots or hot spots without additional diffusers, making it an ideal low-profile solution for reflective surfaces such as granite countertops and tile floors in narrow spaces. The protective silicone sleeve allows the strip to be installed in wet locations exposed to splashes or sprays of water. Improved flexibility can wrap light along edges and curved surfaces.

Features

- COB LEDs create a dotless line of light without a diffuser
- Lowest profile solution for dot-free light
- 90+ CRI for quality color rendering
- Silicone sleeve prevents water ingress

Product Details

- Class 2 Max Run: 16.4ft (12V), 29.5ft (24V)
- Cut segments: -1.2in. (12V), 2.4in. (24V)
- Connection: 5.5mm x 2.1mm female barrel connector
- Includes male pigtail adapter with 22 AWG pigtail
- IP65, Suitable for Wet Locations
- Strip Width: 10mm

Certifications and Compliances

- UL Listed - UL 2108 (IFDR)
- CE Compliant



Applications

- Backlighting
- Decks
- Outdoor Accent Lights
- Outdoor Kitchens
- Patios
- Reflective Surfaces
- Toe Kick Lighting
- Under-Cabinets

Warranty

- 5-year warranty



Installation Instructions

1. Plan Your Layout

Identify COB strip placement, including how long each run will be and where to place the power supply. Depending on how evenly you want the light to appear, decide on a straight run, center feed, loop-back, or multi-leg. Hidden placements like under cabinets or inside coves produce indirect illumination for ideal lighting results.

2. Match the Power Supply

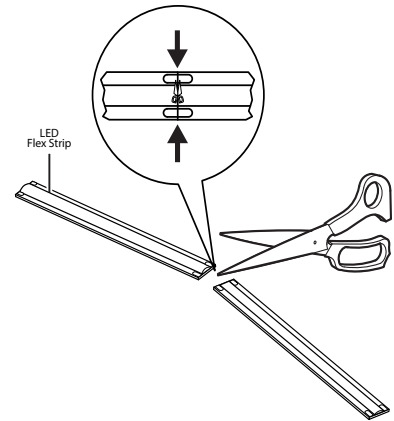
First, calculate the total strip wattage by multiplying the total strip length by the power used per foot for the total strip wattage. Next, use the following formula to determine the minimum necessary wattage of your power supply

$$\text{Total Strip Wattage} / 0.80 = \text{Minimum Power Supply Wattage}$$

Round up to the nearest wattage, and this number will provide you with the 20% wattage overhead required to maintain power supply longevity.

3. Cutting the Strip

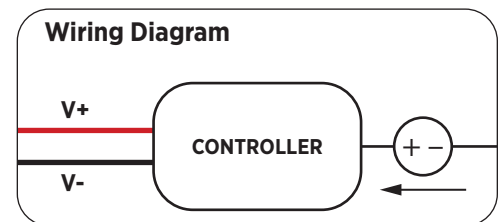
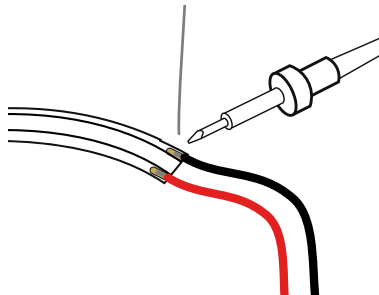
If you need to cut the strip to a custom length, unroll the strip and find the marked cut points, usually between copper pads. Make sure the strip is not powered when cutting. Use sharp scissors to cut only on these lines. Cutting anywhere else can break the circuit.



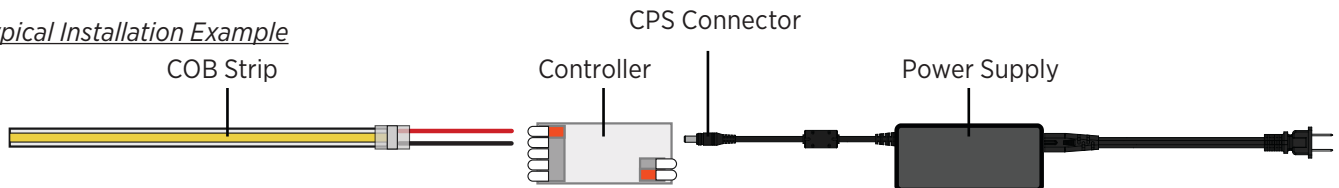
4. Connecting the Strip (Soldering)

To connect cut sections of LED strips to a power supply or controller, wires can be soldered directly to the copper pads. Use longer jumper wires instead of bending the strip for corners or gaps.

Note: Illustrations show wiring for single-color strip. Follow specific wiring diagram for strip and controller type.



Typical Installation Example

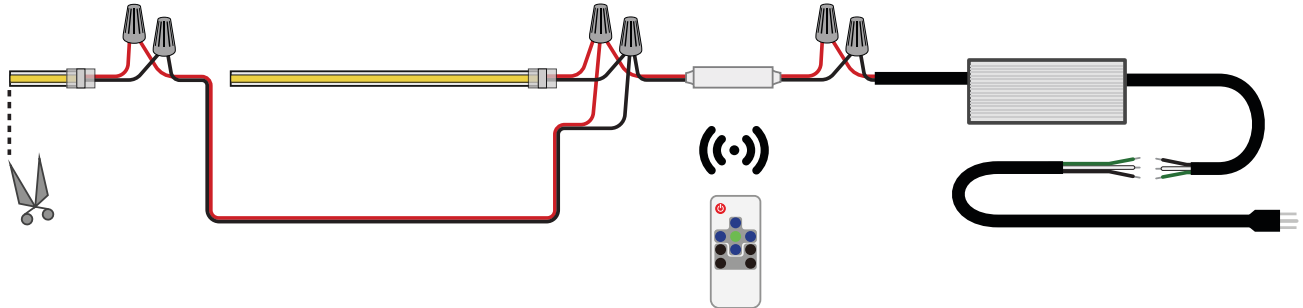


Installation Instructions (cont.)

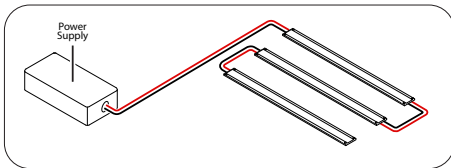
5. Extend the Wiring

Use the lowest gauge wire that's practical for your setup, based on the total current draw and length of the run. As a general guideline, 22 AWG is suitable for short, low-power runs, while 18 AWG or lower is recommended for longer runs or higher-powered strips. Keep the wiring short where possible and double-check polarity. Longer runs can lead to voltage drop and dimming at the far end of the strip.

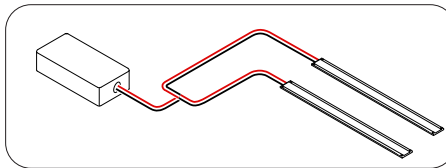
Extended Power Wire Installation Example



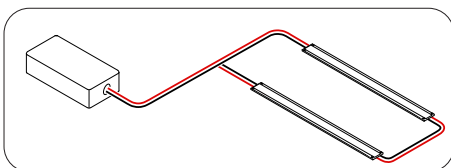
Straight Run Layout



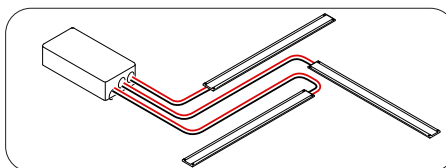
Center Feed Layout



Loop-back Layout



Multi-leg Layout



Voltage Drop

As current travels through the strip, resistance in the circuit causes a drop in voltage over the length of the strip, leading to dimmer light at the far end. Wire length and total power draw of the circuit influence the amount of voltage drop. To reduce it, keep wire lengths short, use thicker gauge wire, or split the power feed (center-feed or loop-back).

6. Prepare the Surface

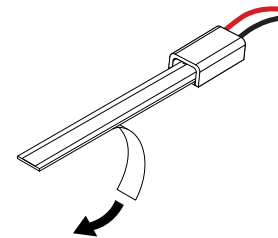
Wipe the mounting area with alcohol or another cleaner that removes dust, oils, and residue. The strong 3M™ adhesive backing is intended for a single application.

7. Connect to Power and Test

Connect the wires from the strip or connector to the output side of the power supply or controller. Match the positive and negative sides. If you're unsure, use a multimeter. If using a dimmer or switch, install it according to the product's installation instructions. Before mounting, test the strip to make sure all sections light up properly and there are no connection issues.

8. Mount the Strip

Peel the paper from the adhesive backing and press the strip firmly into place. Work slowly from one end to the other to avoid bubbles or wrinkles. To prevent damage to the circuit, avoid bending the strip sharply or folding it over itself. Use flexible connectors for any sharp turns or difficult areas.



Even-Glow COB LED Strips

Single White COB Strip Light Specifications

SPECIFICATIONS					
MODEL	STW-B-AxK90-O16D-08L5M-12V				
PHOTOMETRIC					
Color Temperature*	2200K	2700K	3000K	4000K	5000K
Lumens per Foot	232 lm/ft	271 lm/ft	284 lm/ft	287 lm/ft	311 lm/ft
Efficacy	76 lm/W	89 lm/W	93 lm/W	94 lm/W	102 lm/W
CRI	90+				
Beam Angle	160°				
ELECTRICAL					
Operating Voltage	12 VDC				
Current Draw per Foot	254 mA/ft				
Current Draw	4.2A				
Wattage	50 Watts				
Wattage per Foot	3.1 W/ft				
Dimmer Type	PWM				
MECHANICAL					
Max Run (Class 2)	16.4ft (5m)				
Minimum Cut Length	31mm (1.22in.)				
LEDs per Segment	16				
PCB Width	8mm (0.31in.)				
Strip Width	10mm (0.39in.)				
Length	16.4ft (5m)				
LED Density	156 LEDs/ft				
LED Type	COB (chip-on-board)				
LED Lifetime	50000 hours				
ENVIRONMENTAL					
IP Rating	IP65				
Environmental Rating	Suitable for Wet Locations, Waterproof				
Ambient Operating Temperature	-20 to 60°C (-4 to 140°F)				

*Single color LEDs as ordered



Even-Glow COB LED Strips

Single White COB Strip Light Specifications

SPECIFICATIONS					
MODEL	STW-B-AxK90-O32D-08L5M-24V				
PHOTOMETRIC					
Color Temperature*	2200K	2700K	3000K	4000K	5000K
Lumens per Foot	232 lm/ft	271 lm/ft	284 lm/ft	287 lm/ft	311 lm/ft
Efficacy	76 lm/W	89 lm/W	93 lm/W	94 lm/W	102 lm/W
CRI	90+				
Beam Angle	160°				
ELECTRICAL					
Operating Voltage	24 VDC				
Current Draw per Foot	128 mA/ft				
Current Draw	2.1A				
Wattage	50 Watts				
Wattage per Foot	3.1 W/ft				
Dimmer Type	PWM				
MECHANICAL					
Max Run (Class 2)	29.5ft (9m)				
Minimum Cut Length	62mm (2.44in.)				
LEDs per Segment	32				
PCB Width	8mm (0.31in.)				
Strip Width	10mm (0.39in.)				
Length	16.4ft (5m)				
LED Density	156 LEDs/ft				
LED Type	COB (chip-on-board)				
LED Lifetime	50000 hours				
ENVIRONMENTAL					
IP Rating	IP65				
Environmental Rating	Suitable for Wet Locations, Waterproof				
Ambient Operating Temperature	-20 to 60°C (-4 to 140°F)				

*Single color LEDs as ordered

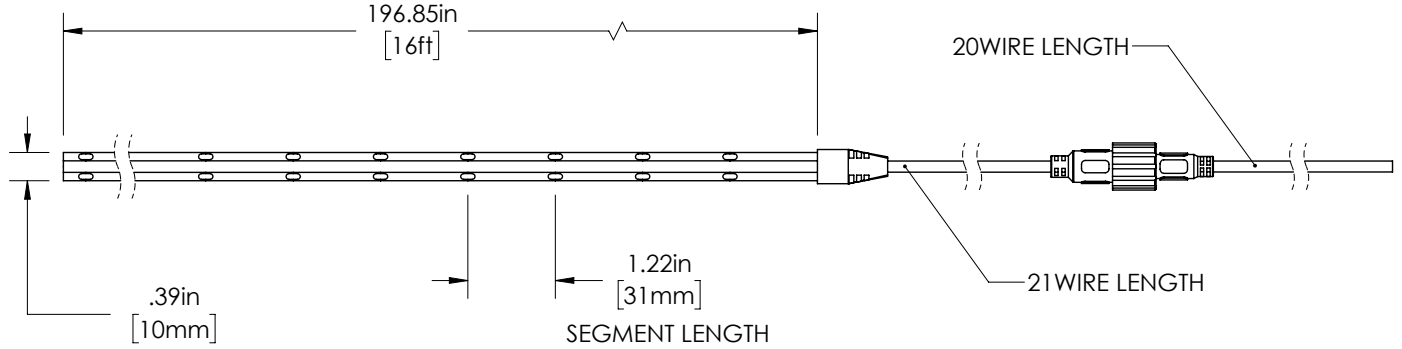


Even-Glow COB LED Strips

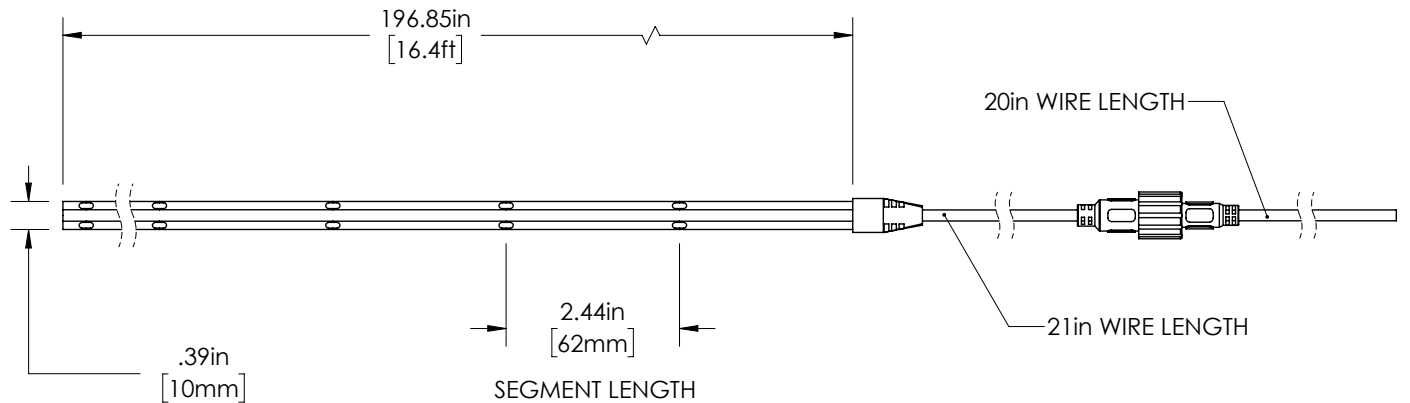
Single White COB Strip Light Specifications

Dimensional Drawings

STW-B-AxK90-016D-08L5M-12V

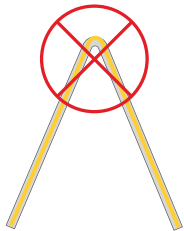


STW-B-AxK90-032D-08L5M-24V

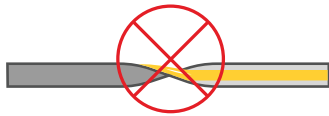


Note: Strip thickness -0.19in. (4.8mm)

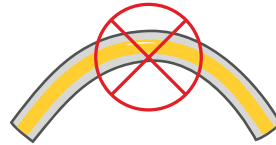
Strip Flexibility



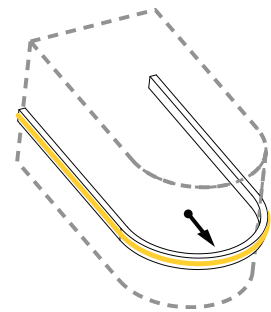
Bending strips at sharp angles will damage circuit traces and void warranty.



Twisting strips will damage circuit traces and void warranty.



Bending strips on horizontal plane will damage circuit traces and void warranty.



Minimum bending radius $\geq 1.97in.$ [50mm]

