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Even-Glow COB LED Strips

Single White COB Strip Specifications

Project _____ Date _____

Notes _____

COB2-IP65-90CRI-5m

Voltage 24 VDC | COB LEDs | High CRI 90+ | IP65 | 5yr WARRANTY

Available Models[1]

- ☐ STW-B-A27K90-O24D-08F5M-24V
- ☐ STW-B-A30K90-O24D-08F5M-24V
- ☐ STW-B-A40K90-O24D-08F5M-24V
- ☐ STW-B-A50K90-O24D-08F5M-24V

SAMPLE PART NUMBER BREAKDOWN **STW-B-A27K90-O24D-08F5M-24V**

Series	Strip Type	CCT	CRI	LED Type	LEDs/Segment	IP Rating	PCB Width	Density	Length	Voltage
STW-B	A	27K	90	O	24	D	08	F	5M	24V
Weatherproof	Single White	27K: 2700K 30K: 3000K 40K: 4000K 50K: 5000K	90+	COB	24 LEDs/seg	IP65	8mm	480 LEDs/m	5 meters	24 VDC

Overview

The COB Series LED strip light uses a high density of chip-on-board (COB) LEDs to create a smooth, dotless line of light without a diffuser. It is ideal for applications on or around reflective surfaces such as granite countertops and tile floors. The strip provides up to 244 lm/ft, totaling 4000 lumens, of white light. The waterproof IP65 rating allows installation in wet locations such as patios and decks. Easily customize the strip using the cut segments every 1.97 inches. Flexible construction and 3M™ adhesive backing make it easy to install on flat or round surfaces and edges.

Features

- COB LEDs create a dotless line of light without a diffuser
- Flexible, cuttable, 3M™ adhesive-backed for easy install
- High density design with 146 LEDs/ft
- 90+ CRI for accurate color rendering
- IP65 rated for wet locations

Product Details

- Includes pigtail adapter with weatherproof connector
- Cut segment length: 1.97in. (50mm)
- Class 2 Max Run: 36.1ft (11m)
- Strip Width: 10mm
- 0-100% PWM dimmable
- 24 VDC input

Certifications and Compliances

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

UL LISTED CE

Applications

- Backlighting
- Building Exteriors and Facades
- Decks
- Outdoor Accent Lights
- Outdoor Kitchens
- Patios
- Reflective Surfaces
- Toe Kick Lighting
- Under-Cabinets

Warranty

- 5-year warranty

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[1]Contact customer service if interested in other options.

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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

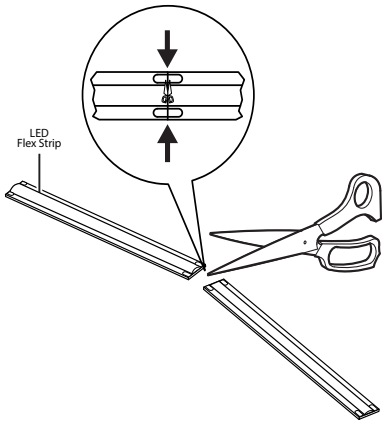
First, calculate the total strip wattage by multiplying the total strip length by the power used per foot for the total strip wattage. Next, use the following formula to determine the minimum necessary wattage of your power supply

Total Strip Wattage / 0.80 = 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

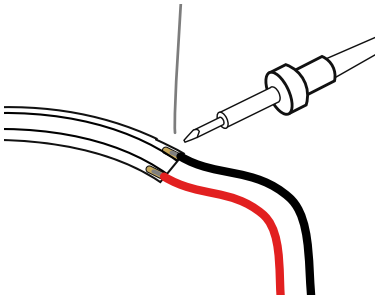
If you need to cut the strip to a custom length, unroll the strip and find the marked cut points, usually between copper pads. Make sure the strip is not powered when cutting. Use sharp scissors to cut only on these lines. Cutting anywhere else can break the circuit.

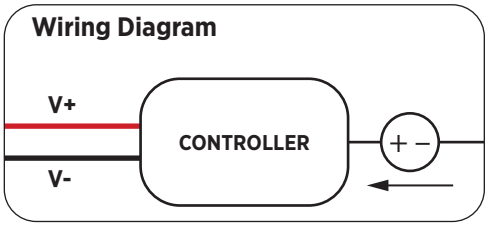


4. Connecting the Strip (Soldering)

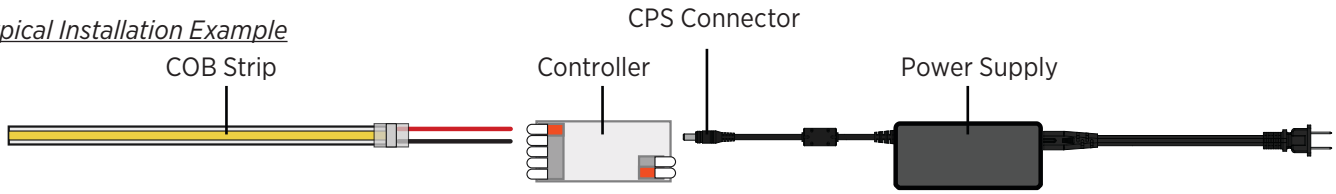
To connect cut sections of LED strips to a power supply or controller, wires can be soldered directly to the copper pads. Use longer jumper wires instead of bending the strip for corners or gaps.

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





Typical Installation Example



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NOTE: *Use appropriate connectors, installation supplies, and waterproofing measures to maintain waterproof rating for wet location installation.*

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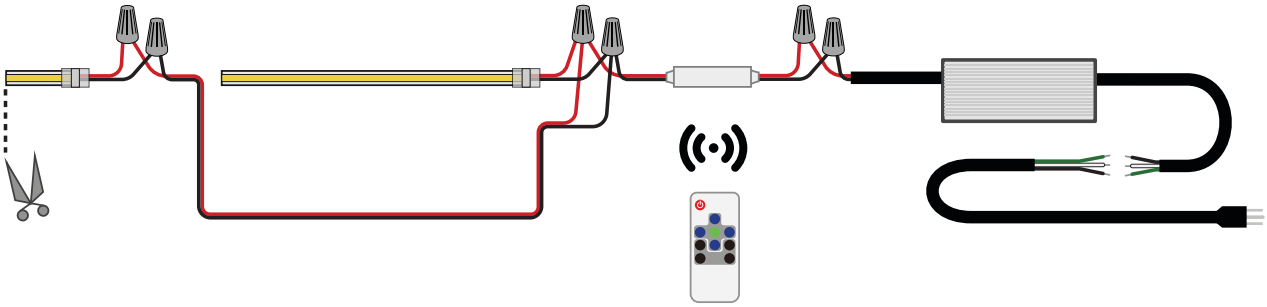
Installation Instructions (cont.)

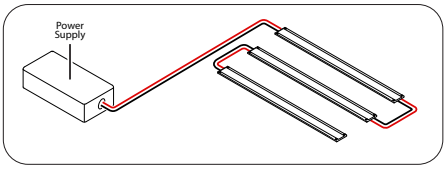
5. Extend the Wiring

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.

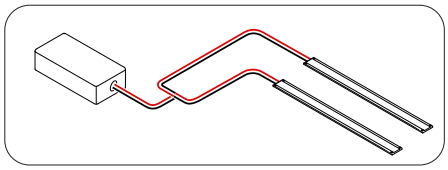
Extended Power Wire Installation Example



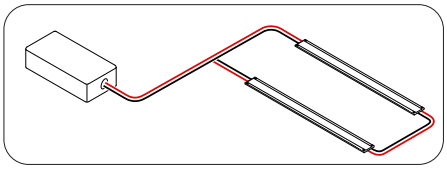
Straight Run Layout



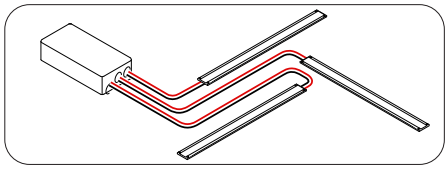
Center Feed Layout



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

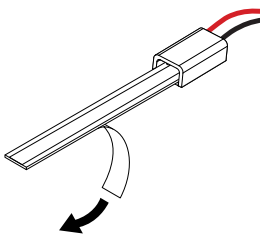
Wipe the mounting area with alcohol or another cleaner that removes dust, oils, and residue. The strong 3M™ adhesive backing is intended for a single application.

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.



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SPECIFICATIONS				
Model | STW-B-	**A27K90-O24D-08F5M-24V**	**A30K90-O24D-08F5M-24V**	**A40K90-O24D-08F5M-24V**	**A50K90-O24D-08F5M-24V**
PHOTOMETRIC				
Color Temperature	2700K	3000K	4000K	5000K
Lumens Per Foot	220 lm/ft	232 lm/ft	244 lm/ft	244 lm/ft
Efficacy	90 lm/W	95 lm/W	100 lm/W	100 lm/W
CRI	90+			
Beam Angle	160°			
ELECTRICAL				
Operating Voltage	24 VDC			
Current Draw per Foot	104 mA/ft			
Current Draw	1.7A			
Wattage per Foot	2.4 W/ft			
Wattage	40 Watts			
Dimmer Type	PWM			
MECHANICAL				
Max Run (Class 2)	36.1ft (11m)			
Minimum Cut Length	50mm (1.97in.)			
LEDs per Segment	24			
Length	16.4ft (5m)			
Strip Width	10mm (0.39in.)			
LED Density	146 LEDs/ft			
LED Type	COB (chip-on-board)			
LED Lifetime	50000 hours			
Input Connection Type	Pigtail, Weatherproof Connector			
ENVIRONMENTAL				
IP Rating	IP65			
Environmental Rating	Suitable for Wet Locations, Waterproof			
Ambient Operating Temperature	-20 to 60°C (-4 to 140°F)			

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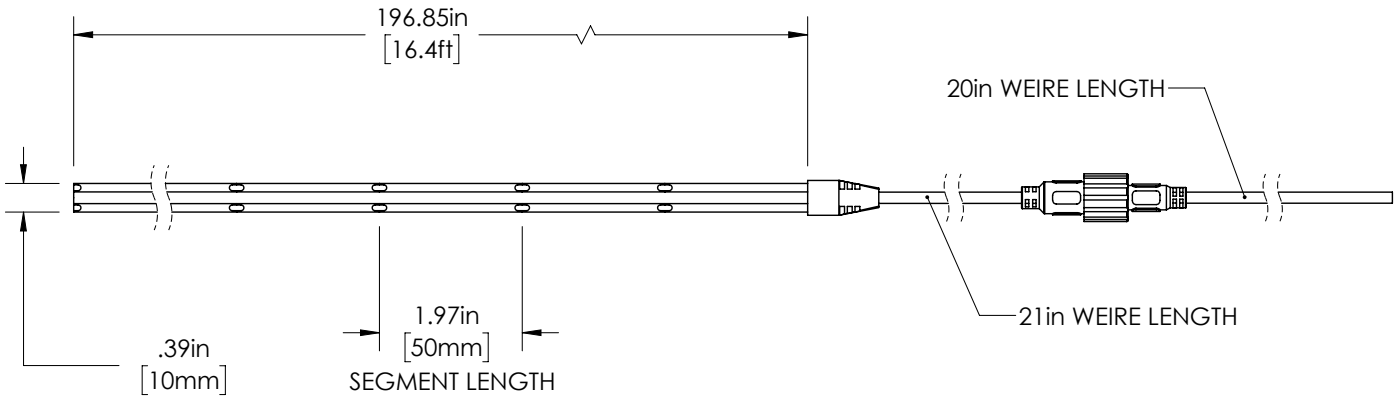
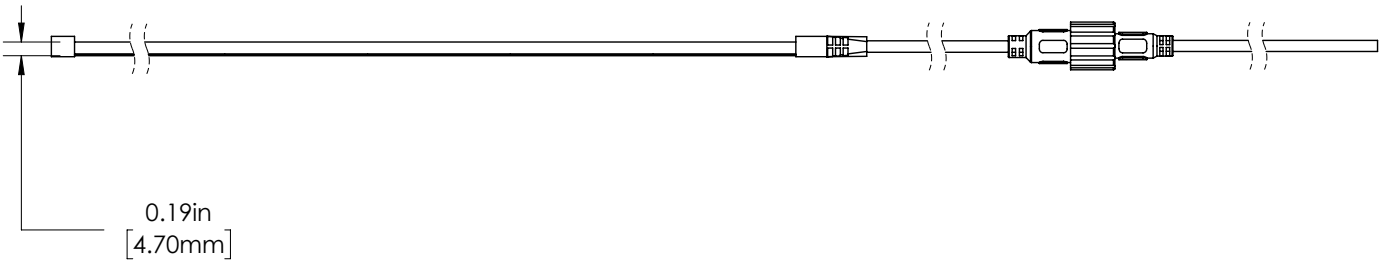
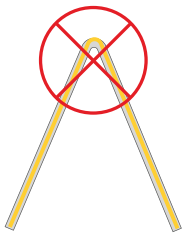
Dimensional Drawings

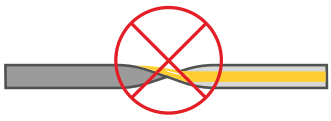




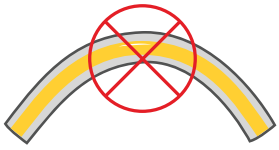
Strip Flexibility



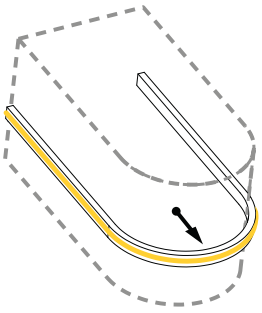
Bending strips at sharp angles will damage circuit traces and void warranty.



Twisting strips will damage circuit traces and void warranty.



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



Minimum bending radius ≥ 1.97in. [50mm]

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