

seeed studio

INDUSTRIAL PRODUCT DATASHEET

COB LED DIY Kit for Seeed Studio XIAO

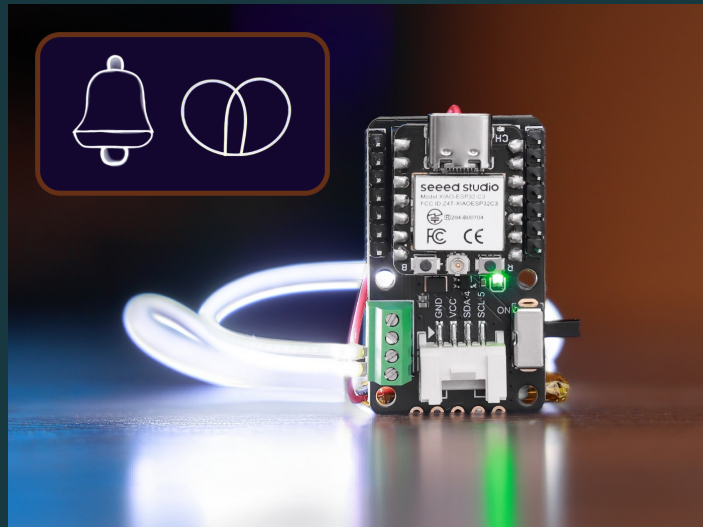
Ultra-flexible 1mm 360° Cool White COB LED strips with 7-channel hybrid output for creative DIY projects and model upgrades.

SKU

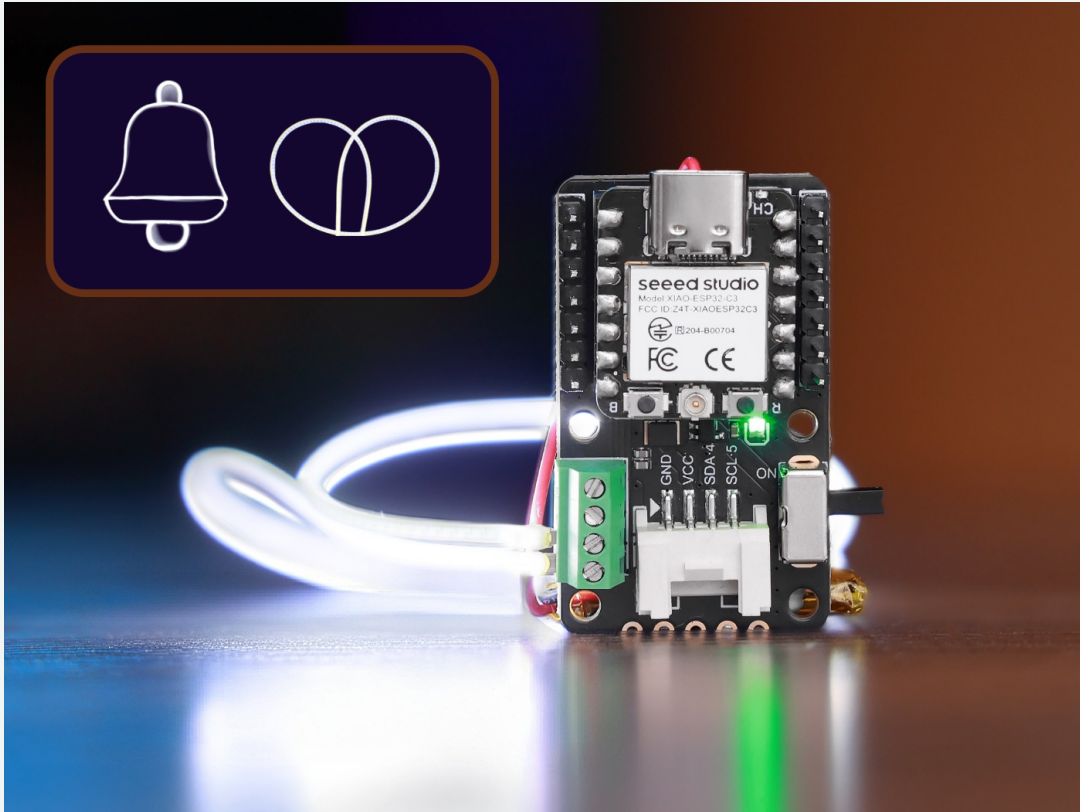
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Overview



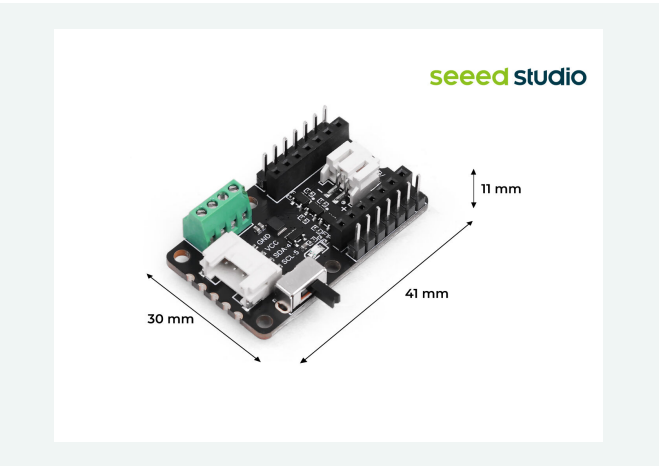
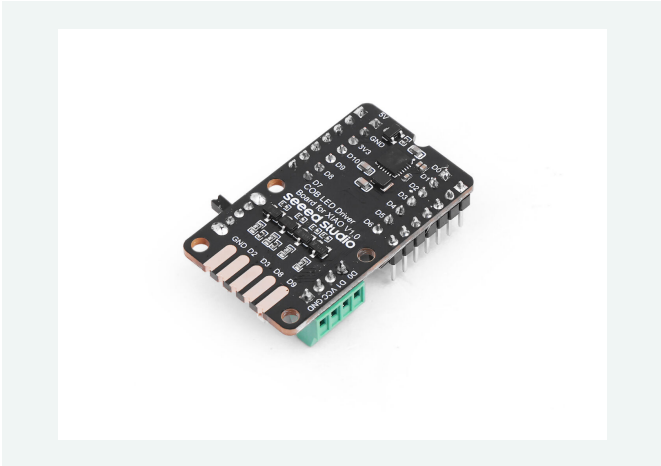
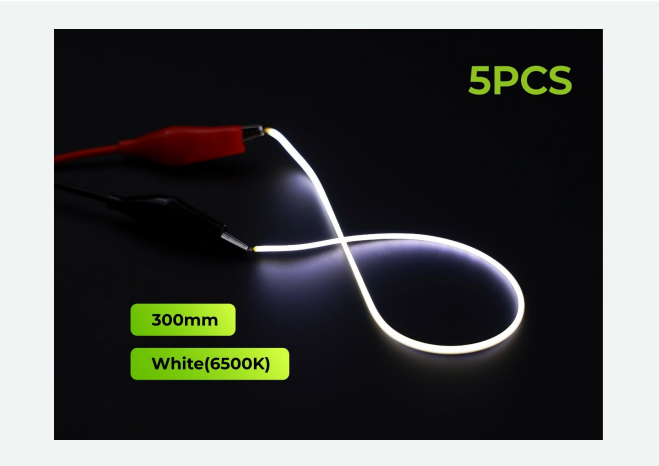
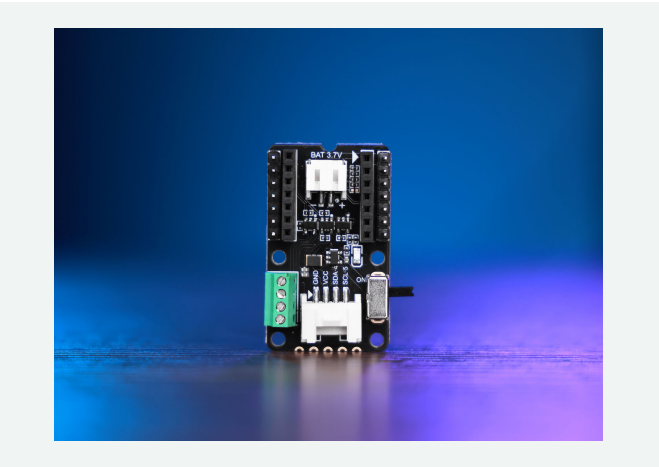
The COB LED DIY Kit for Seeed Studio XIAO features ultra-flexible 1mm COB LED strips delivering 360° 6500K Cool White light with CRI>80, driven by a 7-channel hybrid output (3 high-power 300mA and 4 dimmable 80mA channels) for versatile lighting effects. It supports single and double-ended strip designs with hardware current limiting tuned for safe 3V operation, ideal for 3D printed model decoration, ambient lighting, and DIY electronic crafts.

Key Features

Power Supply: When driving **all channels** simultaneously, the total current may exceed the limit of a standard computer USB port (causing flickering or dimming). In this case, please connect a **3.7V Li-Po battery** or use a **5V/2A USB wall adapter**.

- **Adapted for 1mm 3V COB LED Strips:** The kit provides a selection of **5 different types of flexible COB strips** (1mm width) to suit various project needs. The onboard hardware current limiting is specifically tuned to match the electrical characteristics of these 3V strips, providing Makers with a safe, stable experience.
- **Strategic 7-Channel Hybrid Output:** Efficiently manages your entire lighting setup with a single board. It features 3 High-Power Channels (300mA) for bright main lighting and 4 Dimmable Channels (80mA) for delicate breathing or fading effects. One board handles it all—keeping your main lights bright and your effects dynamic.
- **1mm Ultra-Flexible & 360° Cool White:** The kit features filaments crafted from flexible FPC and Silicone Phosphor, boasting an ultra-narrow 1mm width and delivering a 360° full-angle glow. They emit a crisp 6500K Cool White light with CRI >80, providing accurate color rendering and a continuous, dot-free linear aesthetic—far superior to traditional rigid LEDs.
- **Versatile Single & Double-Ended Designs:** The kit supports two structural options to match your layout. Single-Ended strips allow for clean wiring in tight blind spots. Double-Ended strips feature conductive connectors on both ends to ensure uniform voltage distribution for consistent brightness.

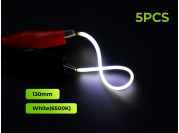
Product Gallery



Specification

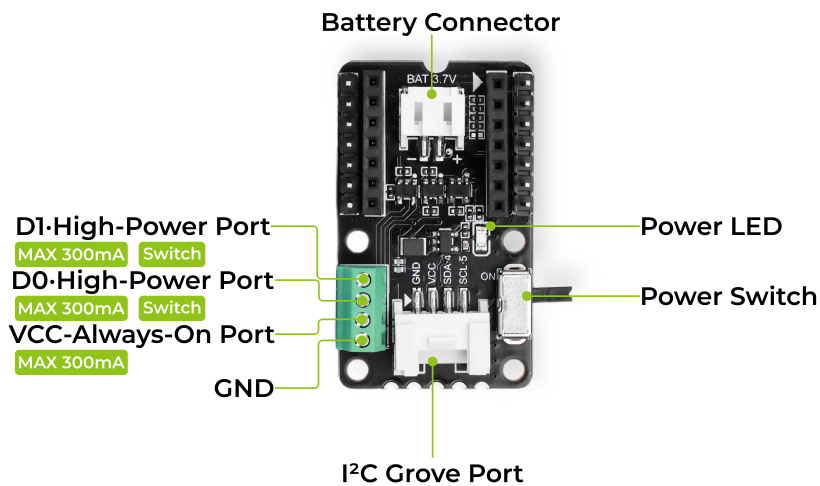
Parameter	Specification
COB LED Power Support	DC 3V

Power Input	5V/1A USB (via XIAO) <i>Note: A 5V/2A+ wall adapter is recommended for full-load operation.</i>
	3.7V Li-Po Battery (via onboard Battery Port)
3x High-Power Ports (Screw Terminals)	3 Channels Output
	Drive Capability: Max 300mA/channel
	Control Logic: 1x Always-On + 2x GPIO Switch (D0,D1)
	<i>Note: On/Off Switch Only, NO PWM Support</i>
4x Low-Power Ports (Bottom Pads)	4 Channels Output
	Drive Capability: Max 80mA/channel
	Control Logic: Fully Dimmable (PWM) via D2, D3, D8, D9
	<i>Note: Active LOW logic</i>
Onboard	Grove I ² C Connector x1
	Power Switch x1
	Power LED x1
	Battery Connector x1
Supported XIAO	XIAO RP2040、XIAO RP2350、XIAO nRF52840、XIAO ESP32-C3/C6/S3、XIAO RA4M1、XIAO MG24
Dimensions	30mm*41mm*16mm(With a Seeed Studio XIAO)

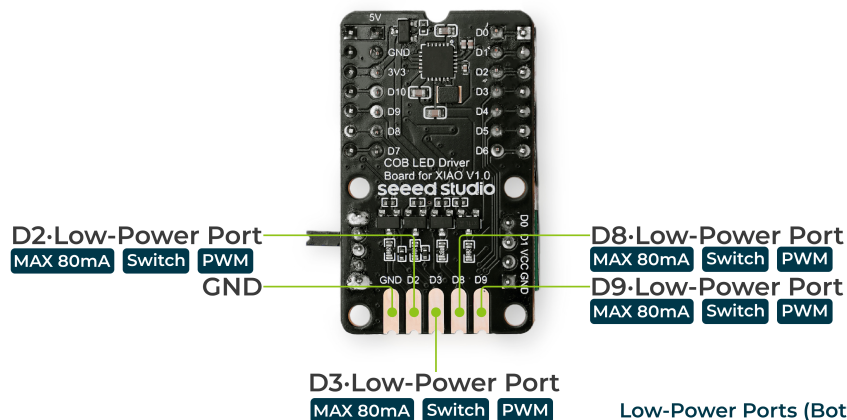
Product	Name	Length	Operating Current	Cumulative Flux
	Double Ended COB LED Strip - 38mm White 6500K(10PCS) Flexible 3V Filament	38mm	100mA (Recommended)	N201m (@100mA)
	130mm Flexible COB LED Filament (White) - High Brightness for Sabers & Neon	130mm	300mA (Recommended)	N251m (@300mA)

	300mm Flexible COB LED Filament (White) - High Brightness for Sabers & Neon	300mm	300mA (Recommended)	N 5 0 1 m (@ 3 0 0 m A)
	Single Ended Cuttable COB LED Strip - 110mm White DIY Custom Length	110mm	100mA (Recommended)	¥ 2 3 1 m (@ 2 0 0 m A)
	Single Ended Cuttable COB LED Strip - 300mm White DIY Custom Length	300mm	100mA (Recommended)	¥ 2 2 1 m (@ 1 0 0 m A)

Hardware Overview



- High-Power Ports (Screw Terminals)
- Capability: Max 300mA/ch.
 - Switch ON/OFF ONLY (D0&D1) .
 - Note: Do NOT use PWM (analogWrite).



- Low-Power Ports (Bottom Pads)
- Capability: Max 80mA/ch.
 - Supports PWM Dimming.
 - Switch ON/OFF.
 - Note: Active LOW logic.

Applications

- 3D Printed Model Decoration
- Creative Ambient Lighting
- DIY Electronic Crafts
- Model Kit Upgrades

Resource Links

- <https://www.seeedstudio.com/COB-LED-DIY-Kit-for-Seeed-Studio-XIAO.html>

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