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› BTF-LIGHTING WS2811 IC=RGB+IC Addressable Dream Color LED Strip Instruction Manual

BTF-LIGHTING WS28115M60LB65

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Model: WS28115M60LB65

INTRODUCTION

The BTF-LIGHTING WS2811 IC=RGB+IC Addressable Dream Color LED Strip offers flexible and vibrant lighting solutions for various indoor decoration needs. This 16.4FT strip features 60 LEDs per meter and 20 pixels per meter, providing dynamic chasing effects. It operates on DC12V and is IP65 splash-proof with a black PCB. Please note that an adapter or controller is not included and must be purchased separately.

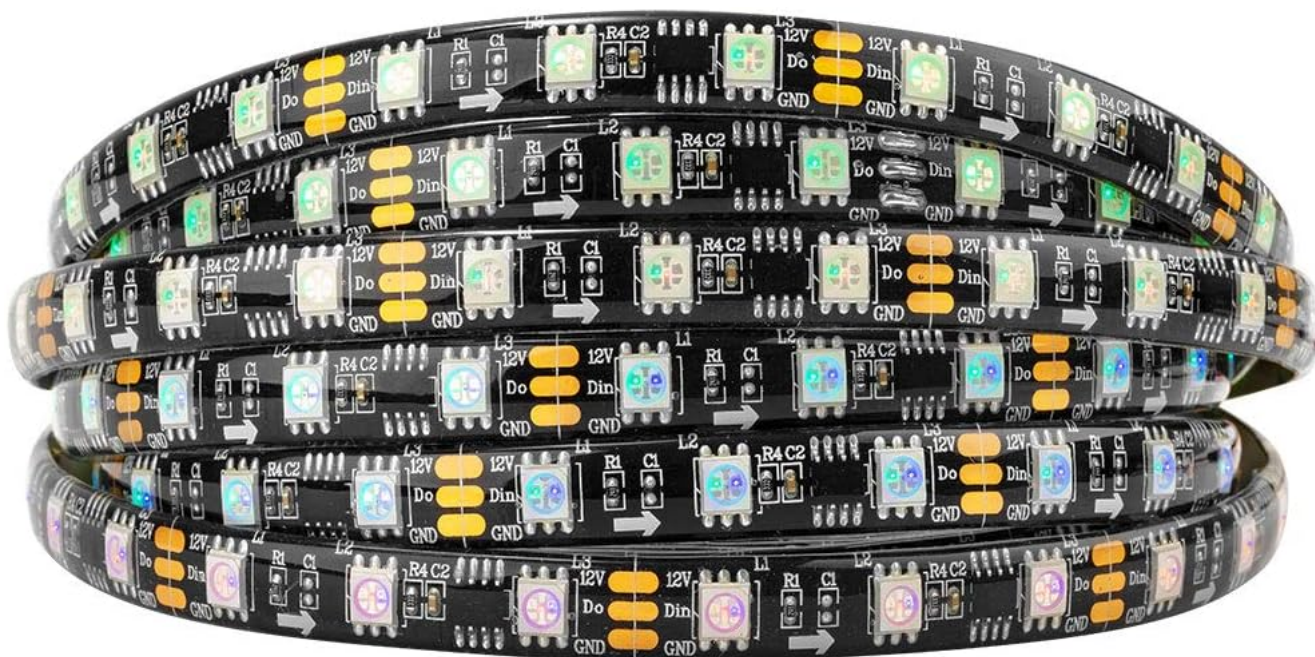


Figure 1: Coiled BTF-LIGHTING WS2811 LED Strip.

FEATURES

- **WS2811 IC Technology:** Each WS2811 IC controls three 5050SMD RGB LEDs, allowing for addressable full-color programming.
- **Customizable Length:** Every 3 LEDs can be cut without damaging the rest of the strip, offering flexibility for custom installations.

- **Flexible PCB Board:** Designed for easy bending and shaping to fit various spaces.
- **Easy Connectivity:** Features 3PIN JST-SM connectors on both ends for simple installation and series connection. Separate power/ground wires are included for voltage drop injection.
- **IP65 Splash Proof:** Silicone coating provides dust prevention and splash proofing, suitable for indoor use where it won't be exposed to direct rain or sun.
- **Dynamic Lighting Effects:** Capable of hundreds of lighting effects like curtain-up, flow water, raindrop, and jump flash when paired with a compatible controller.
- **Wide Application:** Ideal for LED screens, advertising boards, hotels, KTV, bars, and festive decorations.



Figure 2: Visual comparison of chasing color effects versus standard RGB lighting.

SETUP

Power and Controller Connection

The WS2811 LED strip requires a DC12V power supply and a compatible controller (not included). Ensure your power supply provides sufficient amperage for the length of your strip. A recommended power supply is DC12V10A. The strip works with various controllers such as K-1000C, SP611E, SP602E, RB3+SP630E, SP608E Music Bluetooth APP controller, SP530E, WT-SPI WiFi Alexa Controller, and DIY controllers like Raspberry Pi, R3, Mega, Arduino, etc.



Figure 3: Examples of compatible controllers (sold separately).

Wiring Diagrams

The strip has 3PIN JST-SM connectors on both ends. For longer runs or to prevent voltage drop, power injection may be necessary. Always ensure correct polarity when connecting.

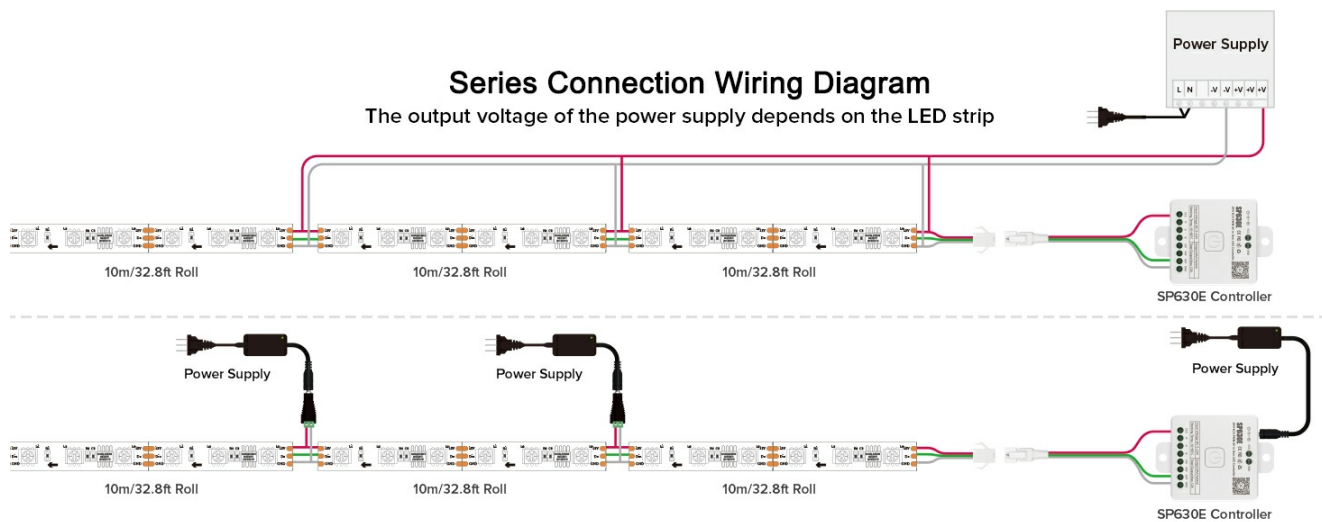


Figure 4: Series Connection Wiring Diagram. The output voltage of the power supply depends on the LED strip.

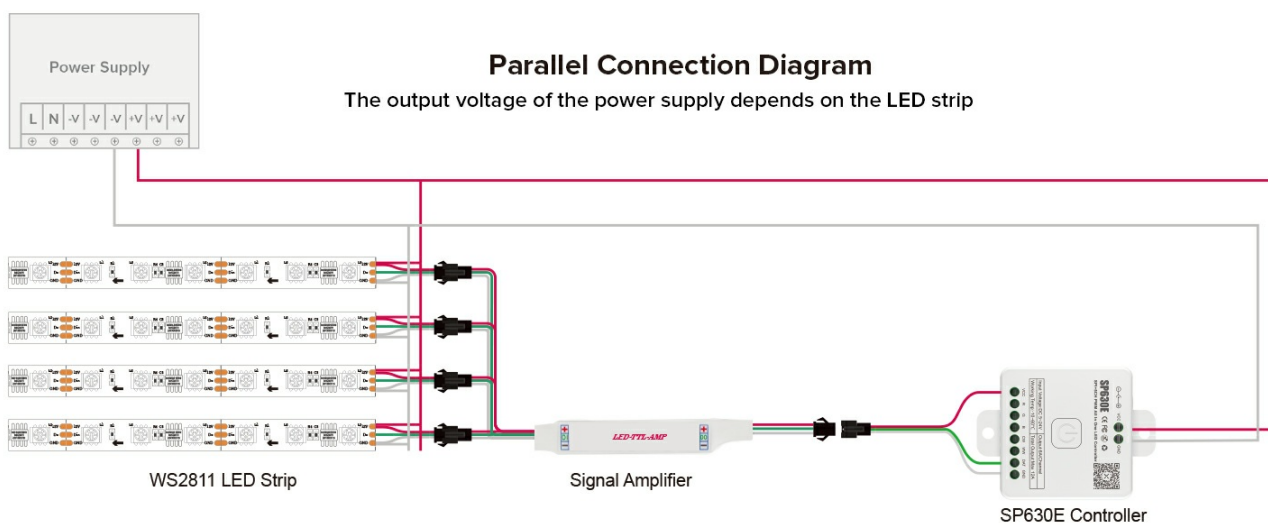


Figure 5: Parallel Connection Diagram. The output voltage of the power supply depends on the LED strip.

Mounting

For IP30/IP65 LED strips, there is adhesive tape on the back for convenient sticking to walls or other surfaces. For IP67 versions, fixing clips and screws are available (check product variant). Ensure the surface is clean and dry before applying adhesive.

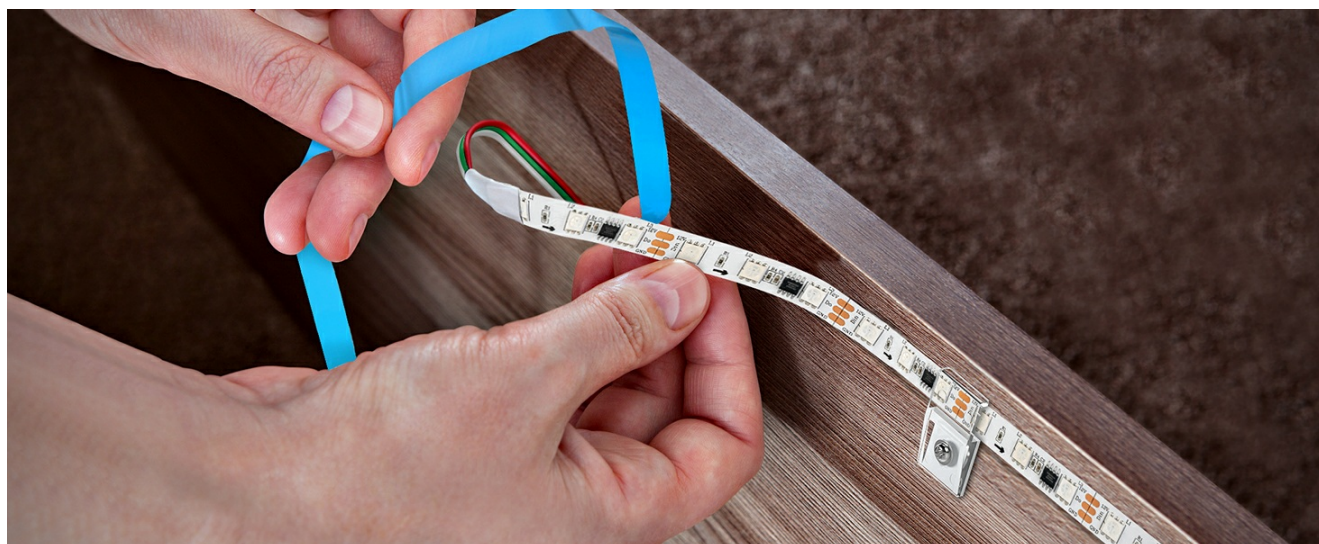


Figure 6: Applying the adhesive tape to the LED strip.



Figure 7: Connecting the power/data wires to the LED strip.

OPERATING

Once properly set up, the LED strip can be controlled via its compatible controller or associated mobile application. This allows for selection of various colors, dynamic modes, and customized lighting effects.

Simple and Easy-to-use

1. Built-in mic
2. Dynamic/static mode
3. Tuya Smart/BanlanX APP (Controller Sold Separately)



Figure 8: Simple and easy-to-use control via mobile applications.



- ✔ Open Source Software
- ✔ WLED APP/PC Control
- ✔ ESP8266/ESP32 DIY Controllers
- ✔ Controller Sold Separately

Figure 9: DIY control options for realizing various lighting effects.

Brightness Adjustment

Brightness can typically be adjusted from 1% to 100% via the controller or app, allowing you to set the perfect ambiance.

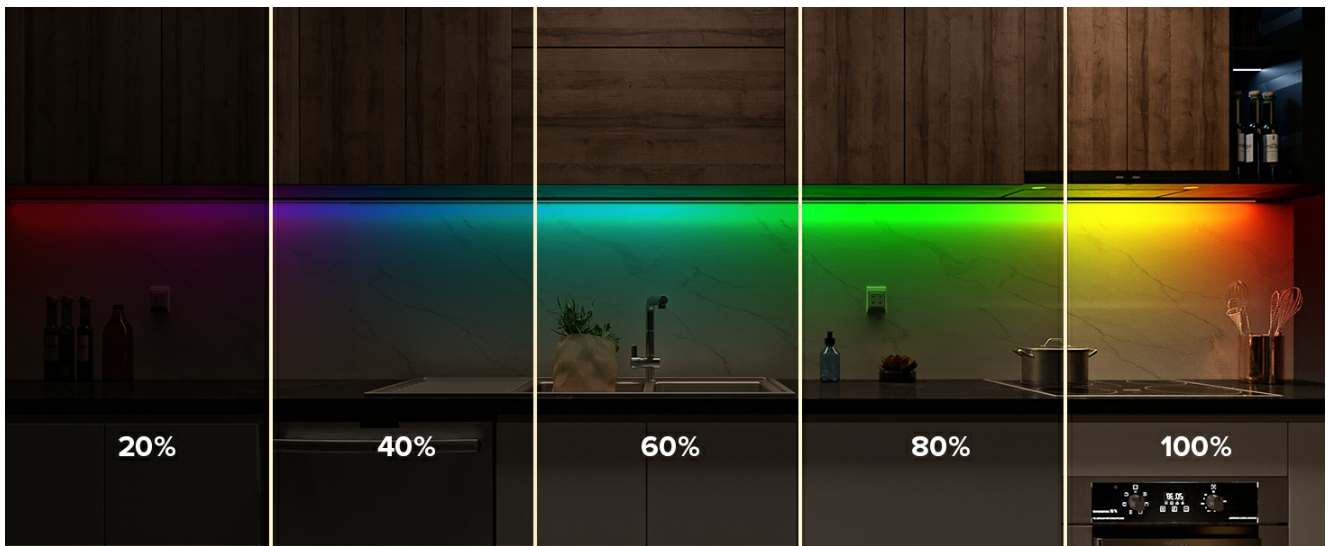


Figure 10: LED strip lighting demonstrating different brightness levels in a kitchen setting.

Example Applications



Figure 11: Examples of LED strip lighting used in different indoor environments.

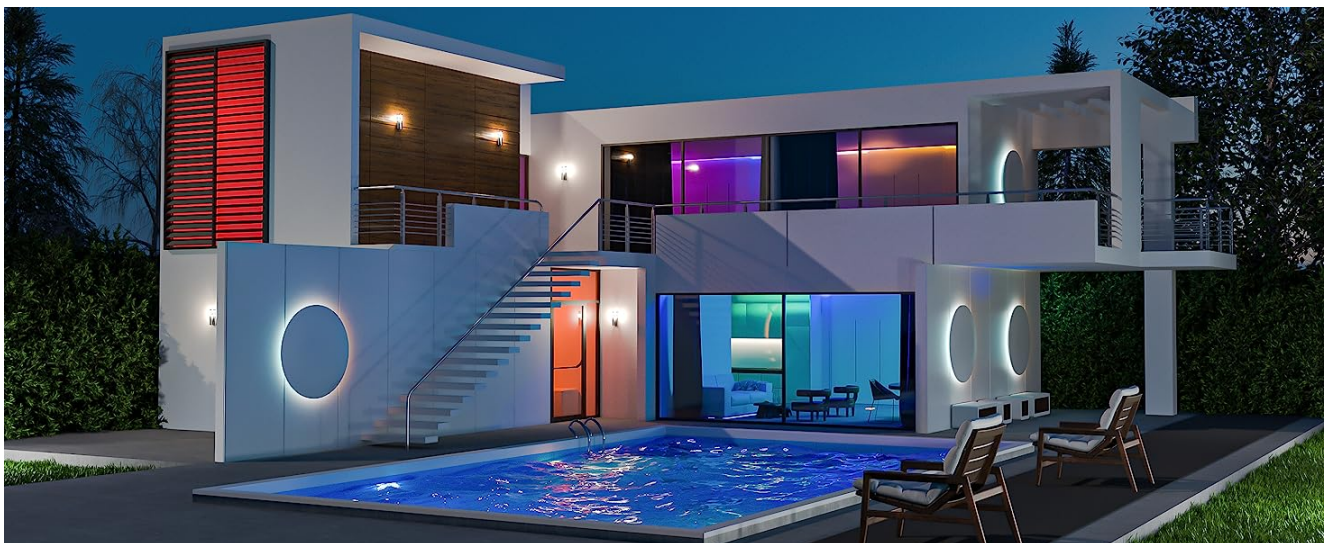


Figure 12: Example of LED strip lighting used for exterior home decoration.

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Video 1: Demonstration of the chasing color lighting effect.

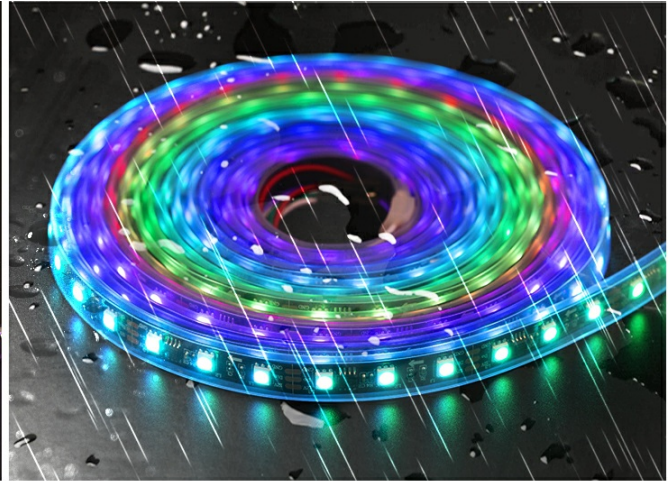
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MAINTENANCE

The IP65 rating indicates the strip is splash-proof and dust-resistant. It should not be exposed to rain or direct sunlight. The 3-PIN JST connectors are not waterproof and should be kept dry. For cleaning, gently wipe the silicone surface with a soft, damp cloth. Avoid harsh chemicals or abrasive materials.



IP65 Silicone Coating Waterproof



IP67 Silicone Sheathing Waterproof

Figure 13: Understanding IP ratings for LED strips.

TROUBLESHOOTING

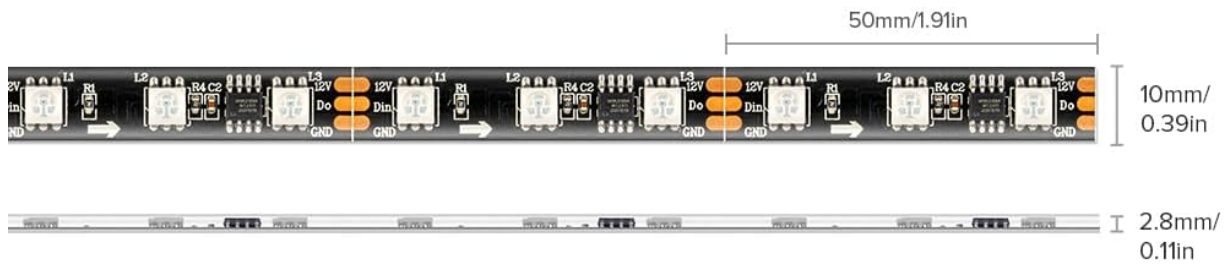
- **No Light:** Ensure the power supply is correctly connected and providing 12V. Check all connections, especially the 3-PIN JST connectors, for proper seating. Verify the controller is powered on and functioning.
- **Inconsistent Colors/Dimming at End:** This often indicates voltage drop. Ensure your power supply is adequate for the strip's length and consider injecting power at both ends for longer runs.
- **Incorrect Color Order:** Different manufacturers may have different color orders (e.g., BRG). If colors appear incorrect, check your controller's settings or software for color order configuration.
- **Smoke/Burning Smell:** Immediately disconnect power. This indicates an incorrect voltage or amperage supply, or a short circuit. Do not reconnect until the issue is identified and resolved.

SPECIFICATIONS

Attribute	Detail
Model Number	WS28115M60LB65
IC Type	WS2811 (1 IC controls 3 LEDs)
LED Type	5050SMD RGB
LED Density	60 LEDs/meter
Pixel Density	20 Pixels/meter
Length	16.4 FT (5 meters)
Voltage	DC12V

Water Resistance	IP65 (Splash Proof)
PCB Color	Black
Power Consumption (per LED)	0.1W (1 color), 0.2W (2 colors), 0.3W (3 colors/mixed white)
Included Components	1x 3 pin SM male connector (No power supply or controller)

IP65 DC12V WS2811 60LED/m



Notice: Power Supply, Controller Need To Be Purchased Separately



SP530E Wi-Fi Alexa
Bluetooth Controller



RB3+SP630E RF
Bluetooth Music Controller



SP602E Trigger
Controller



DR03W Tuya
WiFi Controller



WLED Controller



Raspberry Pi 3

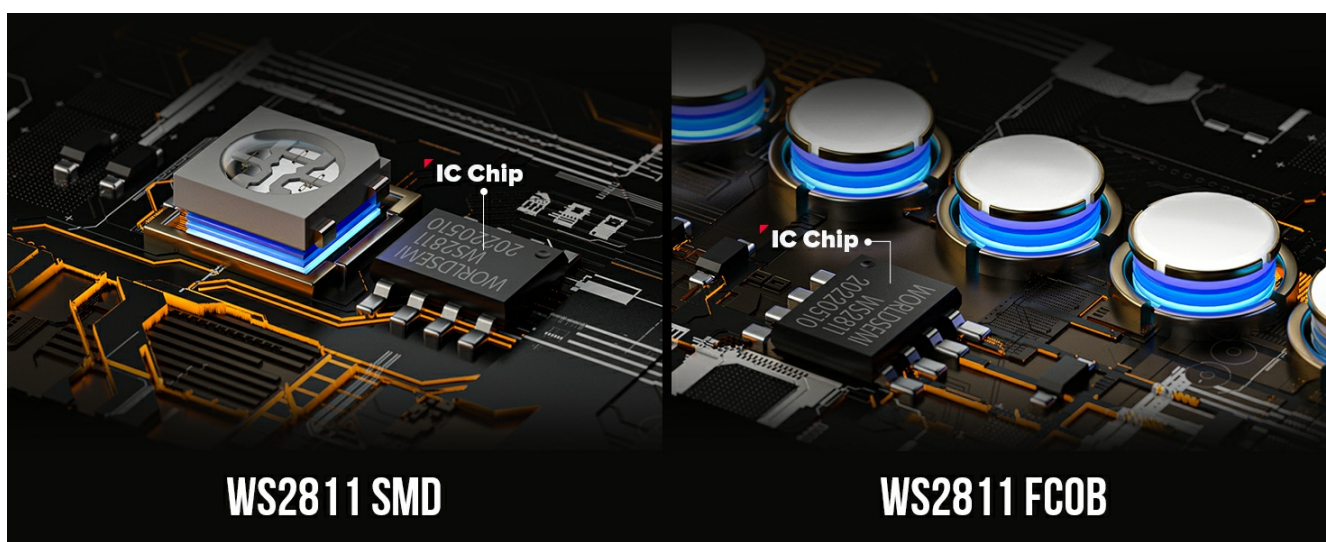


UNO R3



Other Controllers

Figure 14: Detailed dimensions and specifications of the LED strip.



WS2811 SMD

WS2811 FCOB

Figure 15: Comparison of WS2811 SMD and FCOB chip types.

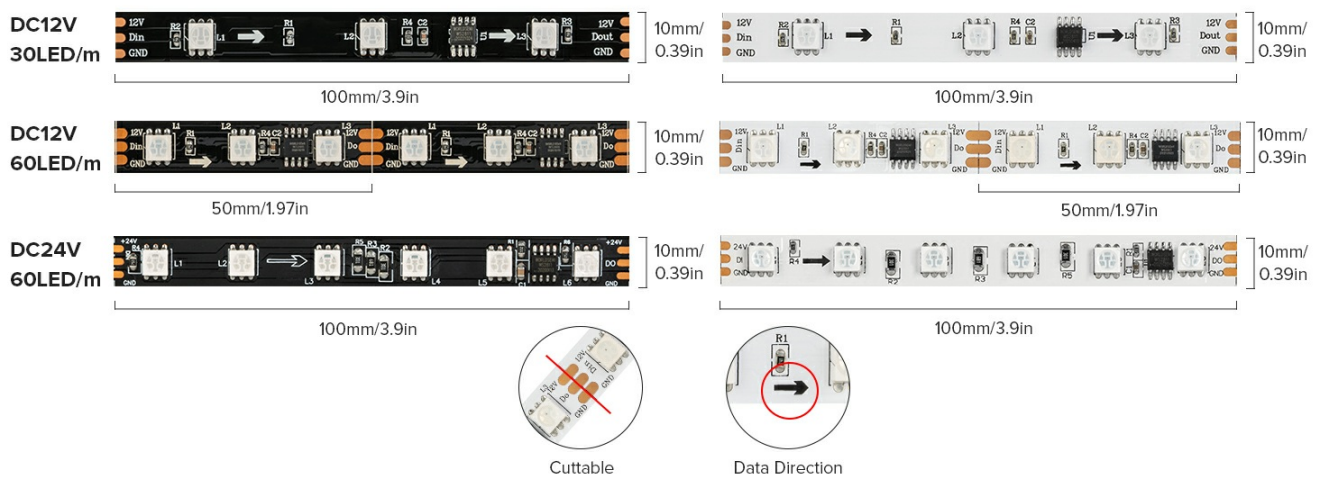


Figure 16: Various LED strip configurations and their cuttable sections.

WARRANTY AND SUPPORT

BTF-LIGHTING provides technical services and a 1-year warranty for this product. For any questions or technical assistance, a 24-hour online hotline is available for clients in the US.

For further support, please refer to the official product documentation or contact BTF-LIGHTING directly.

Certificate of Compliance (PDF): [Download PDF](#)

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Details

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