



LDM-2.4G-RGBCCT-SPI-16B-00

SPI Five-Channel RGBCCT LED Controller

5-channel / Stepless Dimming / 2.4G Remote Control



- Pairing with RF 2.4G remote control.
- Smooth dimming, flicker-free.
- Built-in 52 dynamic and static modes, including flowing water, running light, jumping, fading, and single color.
- Synchronization: One remote control can synchronously control multiple controllers.

TECHNICAL DETAILS

Product No. LDM-2.4G-RGBCCT-SPI-16B-00

Input and Output

Input Voltage	12-24VDC
Input Current	3A
Output Voltage	12-24VDC
Output Current	2.7A
Output Power	72W(Max)

Dimming Parameters

Input Signal	RF 2.4GHz
Remote Control Range	20m(Barrier-free space)
Dimming Method	SPI (Return-to-Zero Code Protocol)
Dimming Range	1-100%
Output Type	Constant Current

Safety and EMC

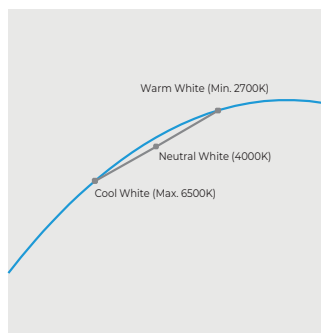
EMC Standard (EMC)	EN IEC 55015, EN IEC 61547
Safety Standard (LVD)	EN61347
Radio Equipment (RED)	EN301 489, EN 300 440

Environment

Operating Temperature	Ta: -20 °C ~ +40°C
Case temperature (Max.)	Tc: +65 °C

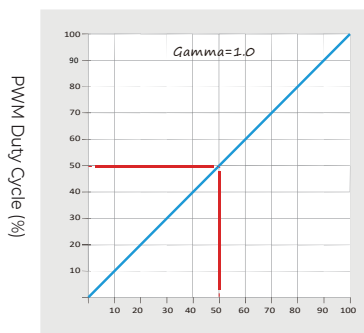
LIGHT DISTRIBUTION

Linear Dual-Color Temperature Adjustment



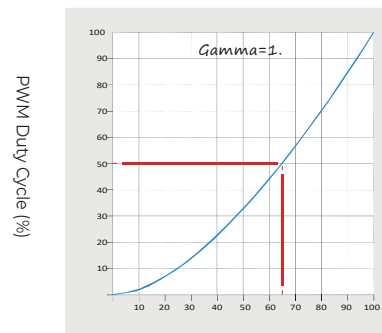
Recommended CCT Range

Dimming Curve for CCT



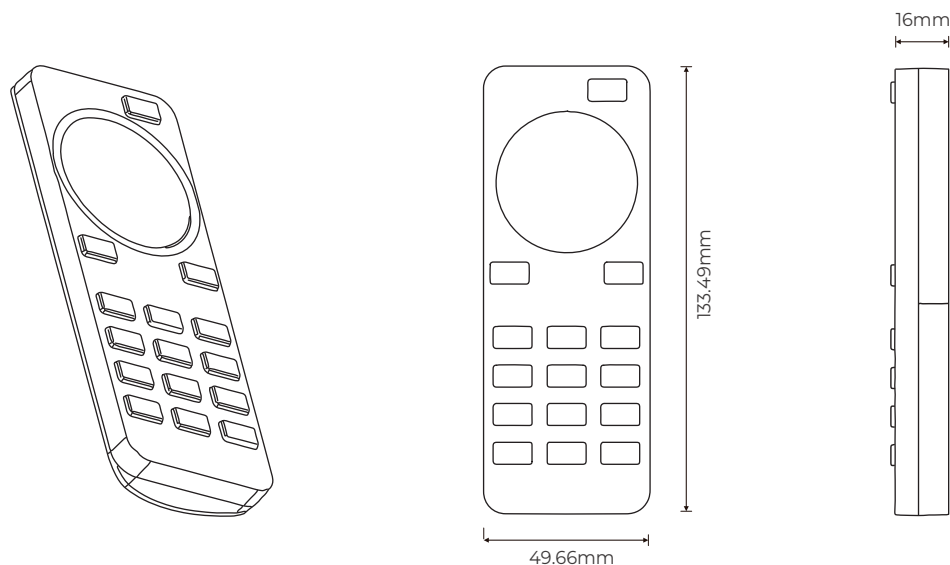
Brightness (%)

Dimming Curve for RGB

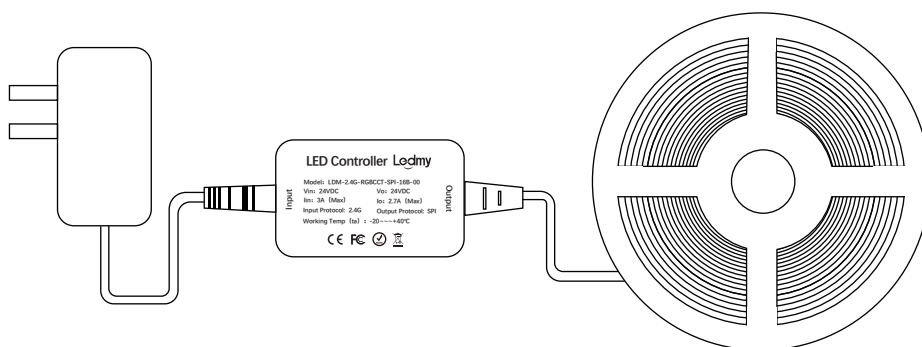


Brightness (%)

DIMENSION



MECHANICAL STRUCTURE AND INSTALLATION



REMOTE CONTROL PAIRING

Pairing:

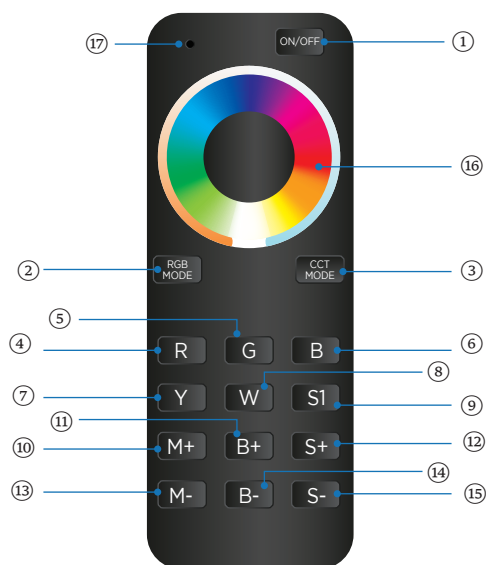
Within 60 seconds of controller power-on, press and hold the remote control's pairing button for more than 3 seconds. The light will flash twice quickly to indicate successful pairing.

R → Pairing Button **G** → Clear Pairing Button

Deletion (Clearing Codes):

1. Press and hold the remote control's clear code button for 3 seconds. The light will flash three times quickly to indicate successful code clearing for that remote.
2. Alternatively, power-cycle the controller three times rapidly; the light will flash three times quickly to indicate that all paired remote controls have been successfully deleted.

BUTTON FUNCTION DESCRIPTION



- ① Turn lights ON/OFF.
- ② Short press: Enter color palette RGB Mode. Long press: Enter Custom Color Mode.
- ③ Short press: Enter color palette CCT Mode. Long press: Enter Cycle Playback Mode.
- ④ Short press: Red light. Long press: Enter remote control pairing mode. (Pairing Button)
- ⑤ Short press: Green light. Long press: Clear remote control codes. (Clear Pairing Button)
- ⑥ Short press: Blue light. Long press: Enter Pixel Count Adjustment Mode (effective for addressable RGB controllers).
- ⑦ Short press: Yellow light.
- ⑧ Short press: White light.
- ⑨ Short press: Recall saved effect. Long press: Save current color.
- ⑩ Mode+: Short press to switch to the next mode (forward).
- ⑪ Brightness+: Short press to increase brightness by one level (10 levels total).
- ⑫ Speed+: Short press to increase speed by one level (10 levels total).
- ⑬ Mode-: Short press to switch to the previous mode (backward).
- ⑭ Brightness-: Short press to decrease brightness by one level (10 levels total).
- ⑮ Speed-: Short press to decrease speed by one level (10 levels total).
- ⑯ Touch to change RGB color or Color Temperature (CCT). Press the RGB or CCT button to switch between the RGB color wheel and the CCT color bar.
- ⑰ Remote Control Indicator Light

Custom Color Setting Mode Instructions:

- Long press the RGB button to enter the Custom Color Setting Mode.
- In this mode, press any one of the R, G, B, W, Y buttons. After selecting a color, press B+ or B- to adjust its brightness freely.
- Continue by pressing any of the remaining four color buttons among the five (R, G, B, W, Y), then use B+ or B- again to adjust its brightness.
- Repeat this process to mix and adjust multiple colors until a satisfactory custom color is achieved.
- Press the RGB button again to exit the Custom Color Setting Mode.
- In this state, long press S1 to save the currently set custom color. Next time, a short press of S1 will directly activate this saved lighting effect.

Pixel Count Adjustment Mode Instructions

- Long press the B button for 5 seconds to enter the Pixel Count Setting Mode. The light will turn green.
- Short press R: Set to 1 pixel.
- Short press B: Set to 50 pixels.
- Short press Y: Set to 100 pixels.
- Short press W: Set to 200 pixels.
- Press B+ or B- to increase or decrease the count by 1 pixel, respectively.
- Press the B button again to exit the Pixel Count Setting Mode.

Mode List

No.	Name	No.	Name
1	Circular Rainbow Flow	11-22	Flashing
2	Rainbow Flow Gradient	23	Rainbow Jump
3	Rainbow Segment Flow	24-28	Color Block Run
4	Rainbow Gradient	29-33	Single Color + CCT Gradient
5	Color Temperature Gradient	34-43	Single Color Breathing
6-10	Monochrome Tail-chasing Flow	44-52	Single Color Static

Troubleshooting and Diagnosis

Issue	Possible Cause	Solution
The light won't turn on.	1. No power 2. Incorrect wiring	1. Replace the power supply 2. Check the wiring connections
Uneven brightness along the strip	1. Output wires are too long 2. Insufficient power supply capacity	1. Shorten the wire length or use loop power supply 2. Replace with a higher-power supply
Remote control not responding	1. Remote control battery is dead 2. Out of operating range 3. Not paired	1. Replace the battery 2. Reduce the distance 3. Re-pair the remote

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

RF Exposure Information

The device has been evaluated to meet general RF exposure requirement.

The device can be used in portable exposure condition, compliance with exposure requirements.

This equipment should be installed and operated with minimum distance 0 mm between the radiator & your body.

SHENZHEN LEDMY CO.,LTD

+86(755)27658410 sales@ledmy.com

Marketing Center: Room1503-1505, Block 2, Excellence City, Zhongkang Road, Futian District, Shenzhen City, Guangdong Province, PRC 518049.

DONGGUAN Manufacturing Center: LEDMY Industrial Park, Tongren Road, Longbeiling Industrial Zone, Tangxia Town, Dongguan City, Guangdong Province, PRC 523715.

JIANGMEN Manufacturing Center: NO. 3 Huahui Road, Waihai Street, Jianghai District, Jiangmen City, Guangdong Province, China, PRC 529000.