LDT-ZB-3CV-RGB-4A

Zigbee Three-Channel RGB LED Controller

A dedicated RGB constant-voltage LED controller for a compatible Zigbee 3.0 lighting network. Connect the strip channels in the order shown for this model; colour output types are not interchangeable.

Model specifications

Supply voltage	12-24 VDC
LED output	3-channel constant-voltage PWM
Lighting type	RGB
Maximum output current	4 A per channel
Rated input current	12.5 A
Maximum output power	3 x (48-96) W
Control inputs	Zigbee 3.0
Dimming	0-100%; 65536 levels
Dimming curve	Linear
PWM frequency	2 kHz
Published control distance	Up to 30 m, unobstructed; installation-dependent
Mesh routing	Up to 15 hops, as specified in the common guide
Operating temperature	-30 to +55 °C
Maximum case temperature	+85 °C
IP rating	IP20
Body dimensions	114 x 38 x 20 mm

A compatible Zigbee gateway is required for app/remote and voice control. This is not a Wi-Fi or proprietary RF receiver. The common technical reference illustrates five separate models; the own-code cover and specification table identify this product.

The following technical-reference pages retain the complete diagrams, dimensions, settings and installation instructions. Select the lighting variant stated on this cover; family diagrams may also illustrate other variants.

Zigbee 3.0

ZigBee 3.0 Constant voltage LED Controller


DIM


DUO


RGB


RGBW


RGB+DUO

CE RoHS

Features

- Used for control RGB, RGBW, RGB+DUO, color temperature or single color LED strip.
- DC power socket input and 1/2/3/4/5 channel constant voltage output.
- Control app cloud control, support color and brightness adjust, delay turn on/off, timer run, scene edit, music play, sleep wake-up and biorhythms function.
- Philips HUE APP control by connect with Philips HUE bridge.
- Voice control, support for Amazon Alexa, Google Assistant, Tmall Genie and Xiaodu voice assistant.
- Can relay and route to each other, up to 15 hops.
- Match with Zigbee 3.0 remote or scene panel control optional.

Technical Parameters

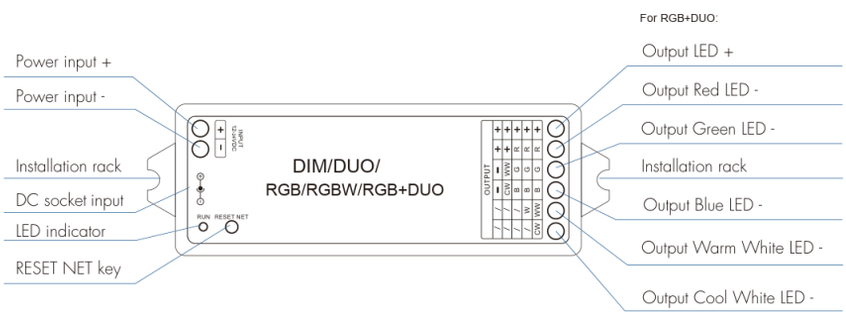
Input and Output					
Model No.	DIM	DUO	RGB	RGBW	RGB+DUO
Light type	Single color	CCT	RGB	RGBW	RGB+CCT
Output channel number	2	2	3	4	5
Input voltage	12-36VDC	12-36VDC	12-24VDC	12-24VDC	12-24VDC
Input current	10.5A	10.5A	12.5A	12.5A	15.5A
Output voltage	12-36VDC	12-36VDC	12-24VDC	12-24VDC	12-24VDC
Output current	2CH,5A/CH	2CH,5A/CH	3CH,4A/CH	4CH,3A/CH	5CH,3A/CH
Output power	2x(60-180)W	2x(60-180)W	3x(48-96)W	4x(36-72)W	5x(36-72)W
PWM Frequency	4KHz	4KHz	2KHz	2KHz	2KHz

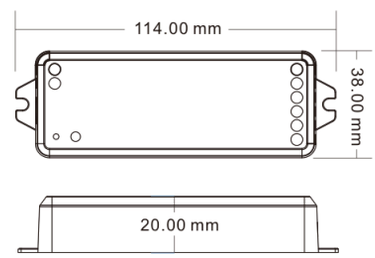
Dimming data	
Input signal	Zigbee 3.0
Control distance	30m (Barrier-free space)
Dimming gray scale	65536 (2^16) levels
Dimming range	0 -100%
Dimming curve	Linear

Safety and EMC	
EMC standard	EN IEC 55015/EN IEC 61547 ETSI EN 301 489-1/-3/-17
Safety standard	EN 61347-1/-2
Radio Equipment	ETSI EN 300 440 ETSI EN 300 328
Certification	CE RoHS
Warranty	
Warranty	5 years

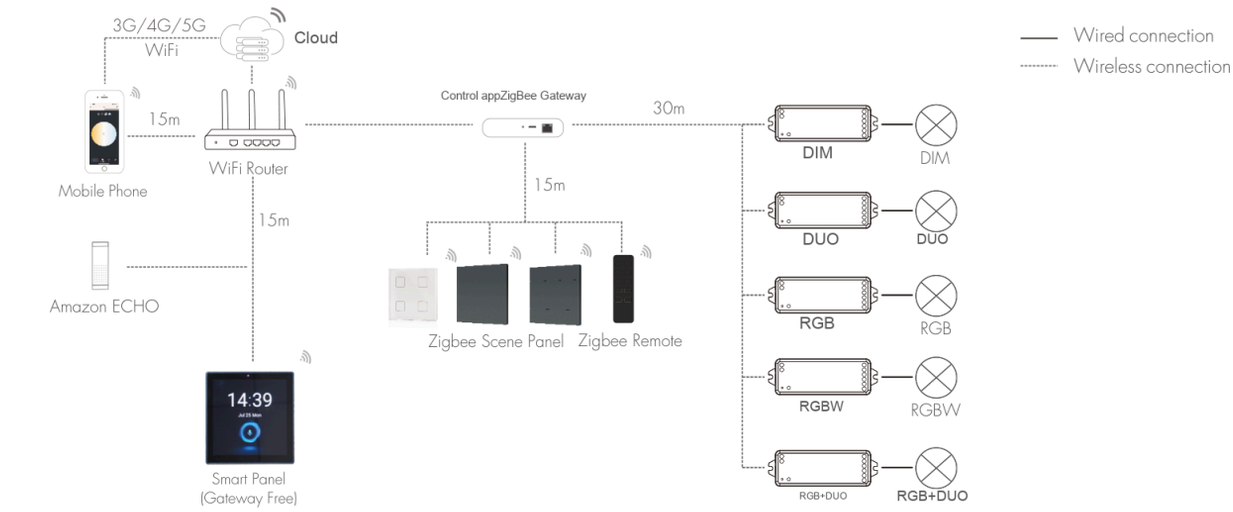
Package	
Size	L120 x W43 x H27mm
Gross weight	0.074kg
Environment	
Operation temperature	Ta: -30 °C ~ +55 °C
Case temperature (Max.)	T c:+85 °C
IP rating	IP20

Mechanical Structures and Installations





System Wiring



Note:

1. The above distance is measured in spacious (no obstacle) environment, Please refer to the actual test distance before installation.
2. Users must use the Control appZigBee gateway for remote control and voice control (The smart panel integrate Zigbee gateway function).

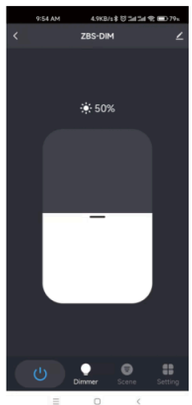
App Operating Instructions

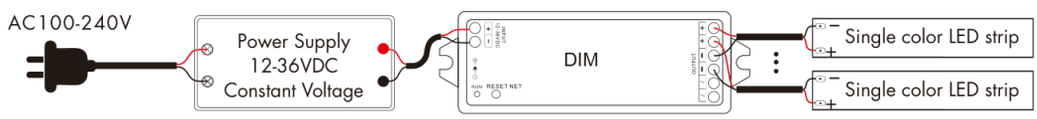
1. Network pairing

- Download the Control app and register an account, search and add the Control appZigbee gateway device.
- Quickly press the "RESET NET" button five times or repeat power on and off five times to clear the previous network connection, enter pairing mode with the output light breathes blinking.
- Under the gateway, search and add new device.
  If the network connection is successful, you can find ZB DIM, CCT, RGB, RGBW RGB+DUO in Control app.

2. Lighting control settings and wiring diagram

After pairing the light device, click the device and change brightness and color by touch brightness slide and color wheel.





Dimming:

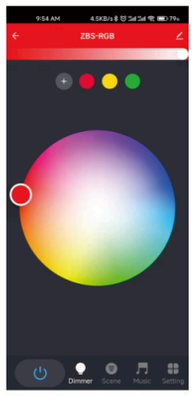
Touch brightness slide to adjust brightness.

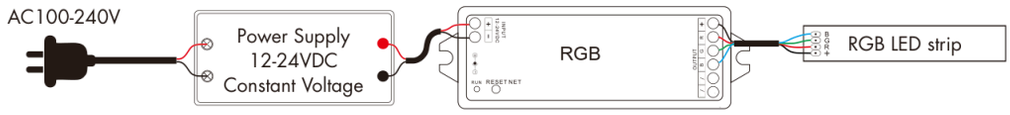




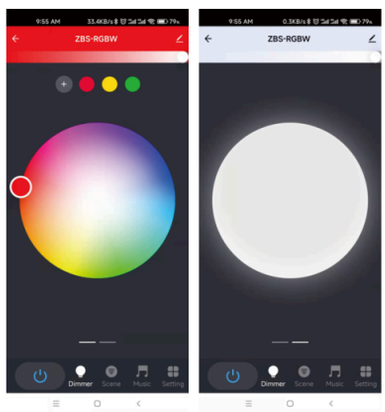
DUO dimming:

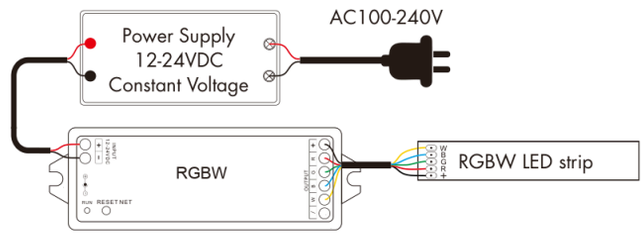
Touch color wheel to adjust color temperature.
Touch brightness slide to adjust brightness.
Up to 8 color shortcuts can be defined.



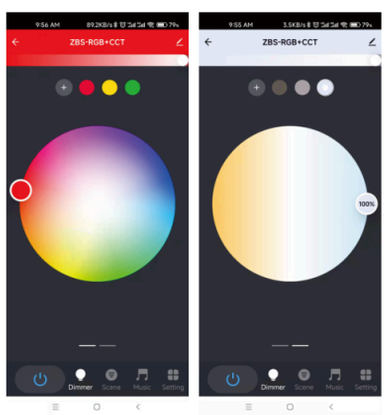


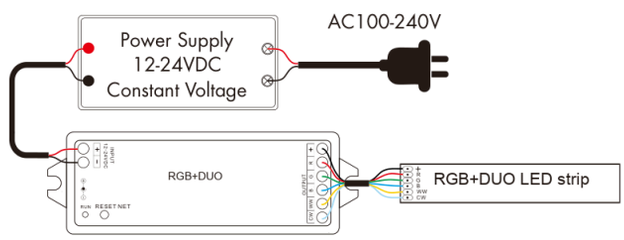
RGB dimming:
Touch color wheel to adjust static RGB color.
Touch brightness slide to adjust color brightness.
Up to 8 color shortcuts can be defined.



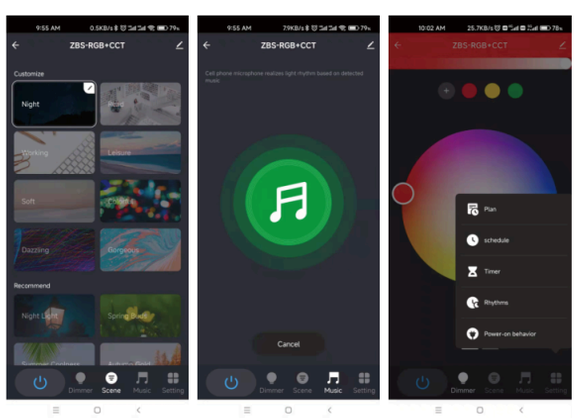


RGBW dimming :
Touch color wheel to adjust static RGB color.
Touch brightness slide to adjust RGB color brightness or W brightness.
Up to 8 color shortcuts can be defined.





RGB+DUO dimming :
Touch color wheel to adjust static RGB color or color temperature.
Touch brightness slide to adjust RGB color brightness or DUO brightness.
RGB and DUO all have up to 8 color shortcuts can be defined.



In “Scene”, there are 8 scene can be recalled or customized.
In “Music”, The music play can use smart phone music player or micro-phone as music signal input.
In “Setting”, there are Plan, Schedule, Timer, Biorhythms, Power-on behavior functions.

Available Zigbee 3.0 Remote and Scene Panel



DUO remote

DUO remote

Connect the remote, scene panel and LED controllers through the Zigbee gateway on Control app firstly.
There are 8 scenes in the Control app, which can be set to lighting scenes or linkage scenes.
Lighting scene is used for the overall control of multiple lamps, like the light adjustment of the entire room.
Linkage scene is used for linkage control of different equipment, such lamps and curtains on and off together.
After successful scene setting, you can use the remote and scene panel to control these LED controllers directly.



Scene panel

4 Scene Panel



Scene panel

4 Scene Panel



Scene panel

8 Scene Panel

Use of Smart Panel

- Connect the smart panel to WiFi network and open the Control app to scan the QR code to binding.
- On the Control app, under the smart panel, searching and adding one or more light devices.
- After adding light devices, users can set scene in the Control app, and these scenes will be automatically synced to the smart panel.
- After setting successfully, users can control lights by touch color slide and recall scene on the smart panel screen directly .

Main Screen



All Devices



Single color



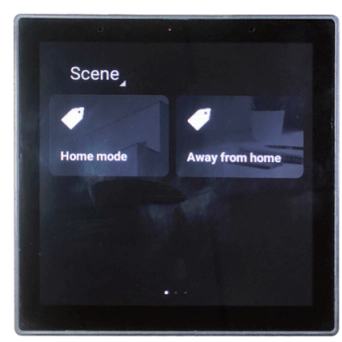
Color temperature interface



RGB/RGBW/RGB+DUO interface



Scene recall interface



Note:
1.The smart panel must use a 2.4GHz band router when connecting wireless networks.
2.Smart panel have Zigbee gateway function, no need for external gateway.
3.The smart panel connects up to 80 sub devices.