



SKYDANCE V3-LWZ Zigbee and RF 3 In 1 LED Controller User Manual

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SKYDANCE

SKYDANCE V3-LWZ Zigbee and RF 3 In 1 LED Controller



The Zigbee & RF 3 in 1 LED Controller is a versatile device that can be used for controlling RGB, color temperature, or single color LED strips. It has a DC12-48V input and three channel constant voltage output. It can be controlled via Tuya APP cloud control, Philips HUE control, or voice control. It also has a push dim and four PWM frequency feature.

Product Features

- 3 in 1 function, used for control RGB, color temperature or single color LED strip.
- LVD RED DC12-48V input, 3 channel constant voltage output.
- Tuya APP cloud control, support on/off, RGB color, color temperature and brightness adjust, delay turn on/off light, timer run, scene edit and music play function.
- Philips HUE APP control by connect with Philips HUE bridge.
- Voice control, support amazon ECHO and TmallGenie smart speaker.
- Match with RF 2.4G remote control optional.
- User need set light type by press key before Tuya APP network connection and match RF remote of the same light type.
- Each V3-L(WZ) controller can also work as Zigbee-RF converter, then use Tuya APP to control one or more RF LED controller or RF LED dimming driver synchronously.
- Light on/off fade time 3s selectable.
- Connect with external push key to achieve on/off and 0-100% dimming function.
- Logarithmic or linear dimming curve selectable.
- PWM frequency 500Hz, 2KHz, 8KHz or 16KHz selectable.
- Over-heat/Over-load/Short circuit protection, recover automatically.

Product Technical Parameters

- Input voltage: 12-48VDC
- Input current: 18.5A
- Output voltage: 3 x (12-48)VDC
- Output current: 3CH,6A/CH
- Output power: 3 x (72-288)W
- Dimming data: Tuya APP + RF 2.4GHz + Push Dim
- Control distance: 30m (Barrier-free space)
- Dimming gray scale: 4096 (2^{12}) levels
- Dimming range: 0 -100%
- Dimming curve: Logarithmic or linear
- PWM Frequency: 500Hz, 2KHz, 8KHz, 16KHz
- Safety and EMC: ETSI EN 301 489-1 V2.2.3, ETSI EN 301 489-17 V3.2.4, EN 62368-1:2020+A11:2020, ETSI EN 300 328 V2.2.2, CE, EMC, LVD, RED
- Warranty: 5 years
- Protection: Reverse polarity, Over-heat, Over-load, Short circuit
- Environment: Operation temperature: -30 OC ~ +55 OC, Case temperature (Max.): +85OC, IP rating: IP20
- Weight: Net weight: 0.108kg, Gross weight: 0.130kg

Product Usage Instructions

The Zigbee & RF 3 in 1 LED Controller can be used to control RGB, color temperature or single color LED strips. It can be controlled via Tuya APP cloud control, Philips HUE control or voice control. Follow the steps below to use the device:

1. Set light type by pressing the key before Tuya APP network connection and match RF remote of the same light type.
2. Connect the device to power input and output LED strips to the respective output terminals.
3. Download the Tuya APP and connect the device to your Wi-Fi network by following the instructions provided in the user manual.
4. Once connected, you can use the Tuya APP to control on/off, RGB color, color temperature, brightness adjust, delay turn on/off light, timer run, scene edit and music play function.
5. You can also control the device using Philips HUE APP by connecting it to Philips HUE bridge.
6. Voice control is supported via Amazon ECHO and TmallGenie smart speaker.
7. To achieve on/off and 0-100% dimming function using external push key, connect the external push key to the device as per the instructions provided in the user manual.
8. You can select logarithmic or linear dimming curve and PWM frequency 500Hz, 2KHz, 8KHz or 16KHz as per your requirement.
9. The device has over-heat/over-load/short circuit protection, which recovers automatically.

Features

- 3 in 1 function, used for control RGB, color temperature or single color LED strip.
- DC12-48V input, 3 channel constant voltage output.
- Tuya APP cloud control, support on/off, RGB color, color temperature and brightness adjust, delay turn on/off

light, timer run, scene edit and music play function.

- Philips HUE APP control by connect with Philips HUE bridge.
- Voice control, support amazon ECHO and TmallGenie smart speaker.
- Match with RF 2.4G remote control optional.
- User need set light type by press key before Tuya APP network connection and match RF remote of the same light type.
- Each V3-L(WZ) controller can also work as Zigbee-RF converter, then use Tuya APP to control one or more RF LED controller or RF LED dimming driver synchronously.
- Light on/off fade time 3s selectable.
- Connect with external push key to achieve on/off and 0-100% dimming function.
- Logarithmic or linear dimming curve selectable.
- PWM frequency 500Hz, 2KHz, 8KHz or 16KHz selectable.
- Over-heat / Over-load / Short circuit protection, recover automatically.

Technical Parameters

Input and Output

- Input voltage: 12-48VDC
- Input current: 18.5A
- Output voltage: 3 x (12-48)VDC
- Output current: 3CH,6A/CH
- Output power: 3 x (72-288)W
- Output type: Constant voltage

Safety and EMC

- EMC standard (EMC): ETSI EN 301 489-1 V2.2.3 ETSI EN 301 489-17 V3.2.4
- Safety standard(LVD): EN 62368-1:2020+A11:2020
- Radio Equipment(RED): ETSI EN 300 328 V2.2.2
- Certification: CE,EMC,LVD,RED

Environment

- Operation temperature: Ta: -30 OC ~ +55 OC
- Case temperature (Max.): T c: +85OC
- IP rating: IP20

Dimming data

- Input signal: Tuya APP + RF 2.4GHz + Push Dim
- Control distance: 30m(Barrier-free space)
- Dimming gray scale: 4096 (2^{12}) levels
- Dimming range: 0 -100%

- Dimming curve: Logarithmic or linear
- PWM Frequency: 500Hz, 2KHz, 8KHz, 16KHz

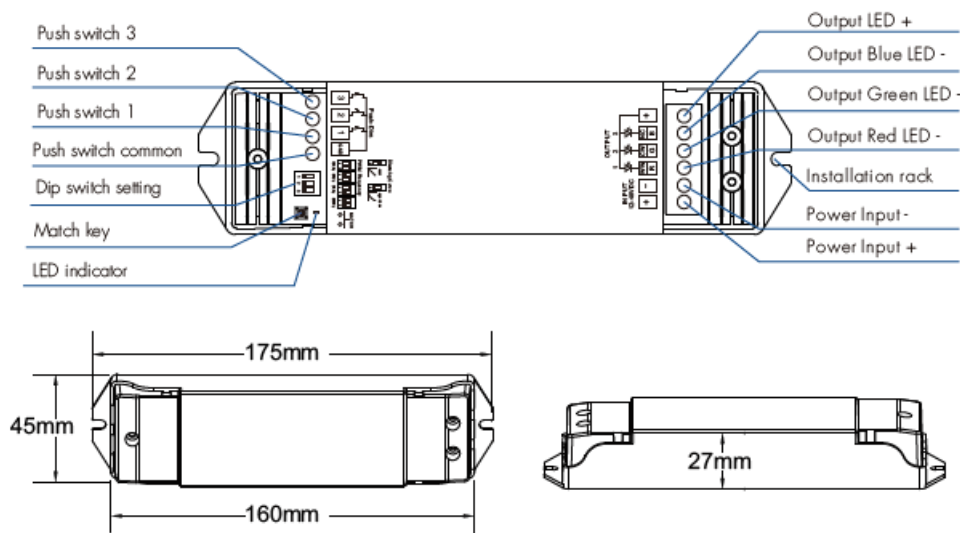
Warranty and Protection

- Warranty: 5 years
- Protection: Reverse polarity Over-heat Over-load Short circuit

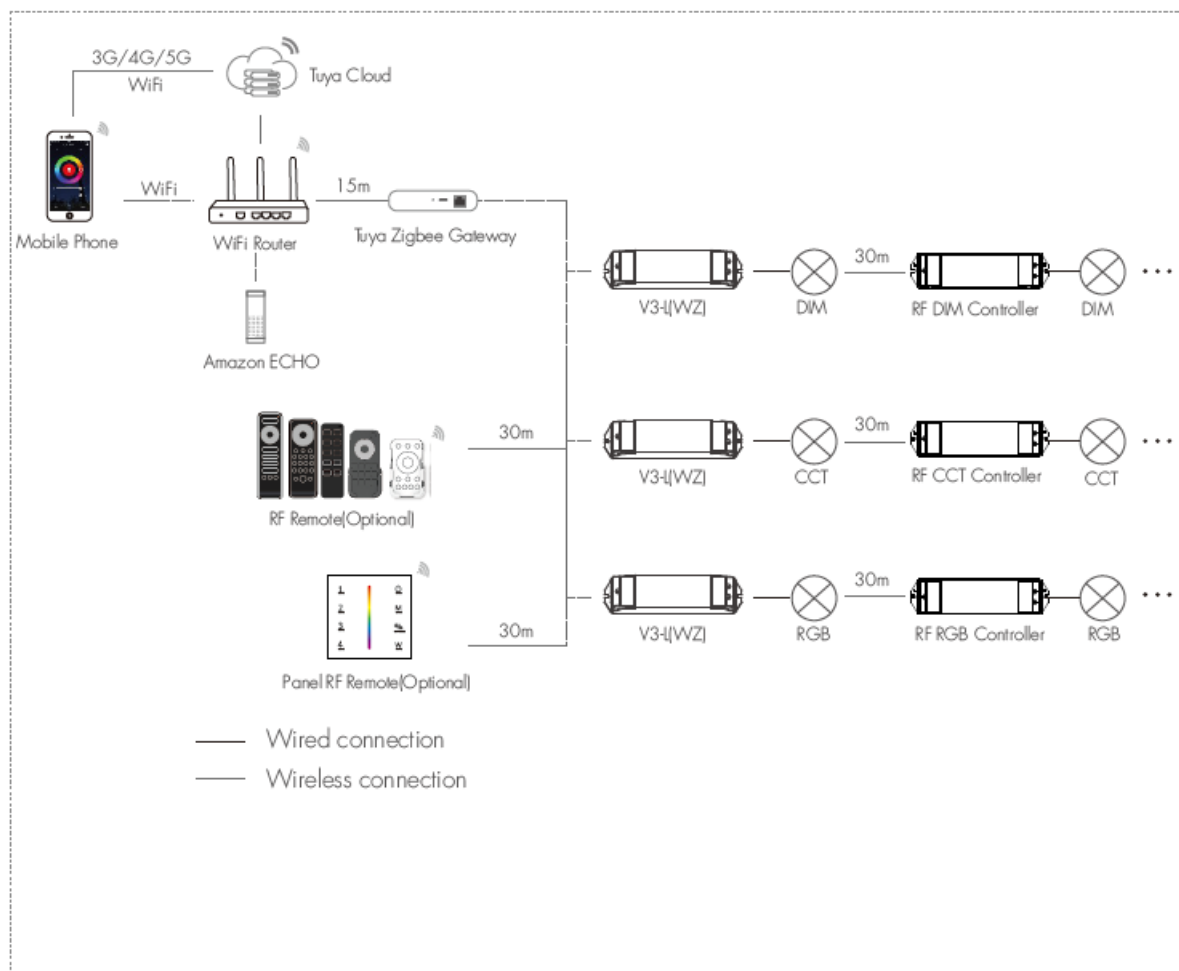
Weight

- Net weight: 0.108k g
- Gross weight: 0.130k g

Mechanical Structures and Installations



System wiring

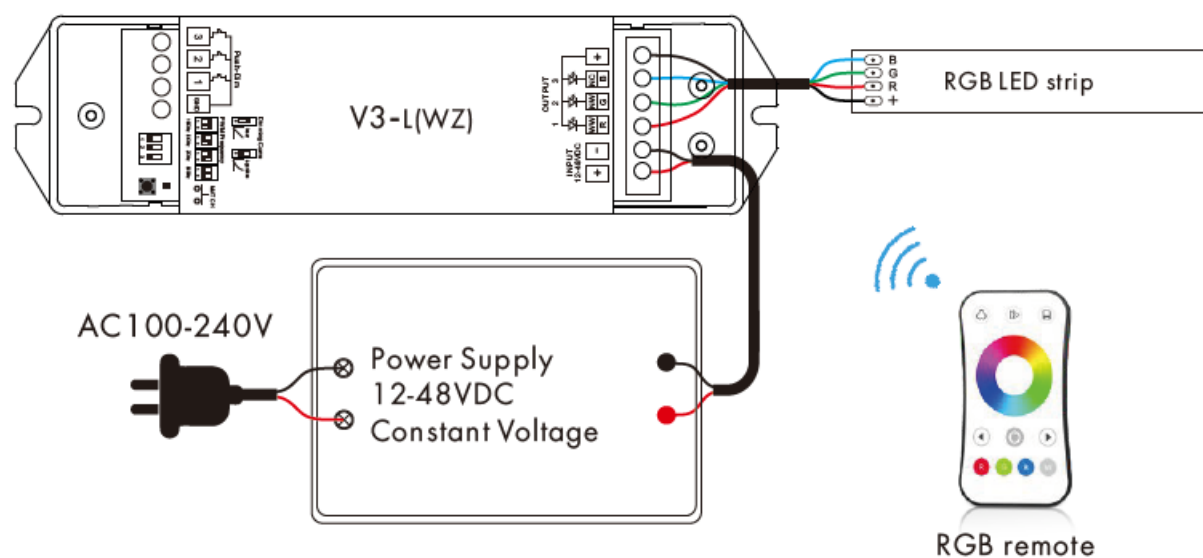


Note

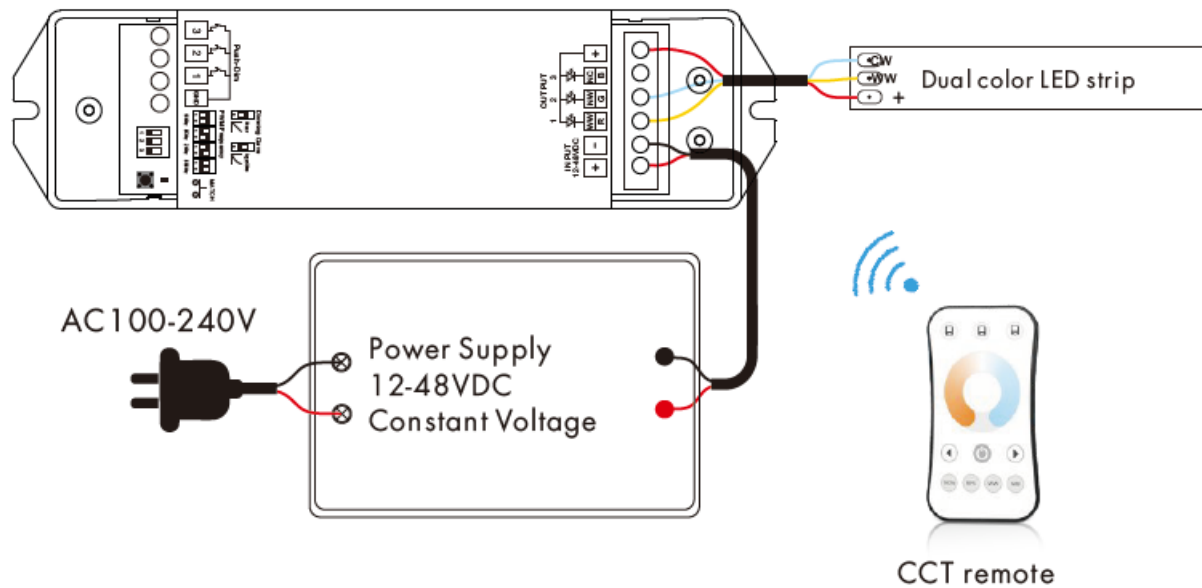
1. The above distance is measured in spacious (no obstacle) environment, Please refer to the actual test distance before installation.
2. Users must use the Tuya Zigbee gateway to realize remote control and voice control.

Wiring Diagram

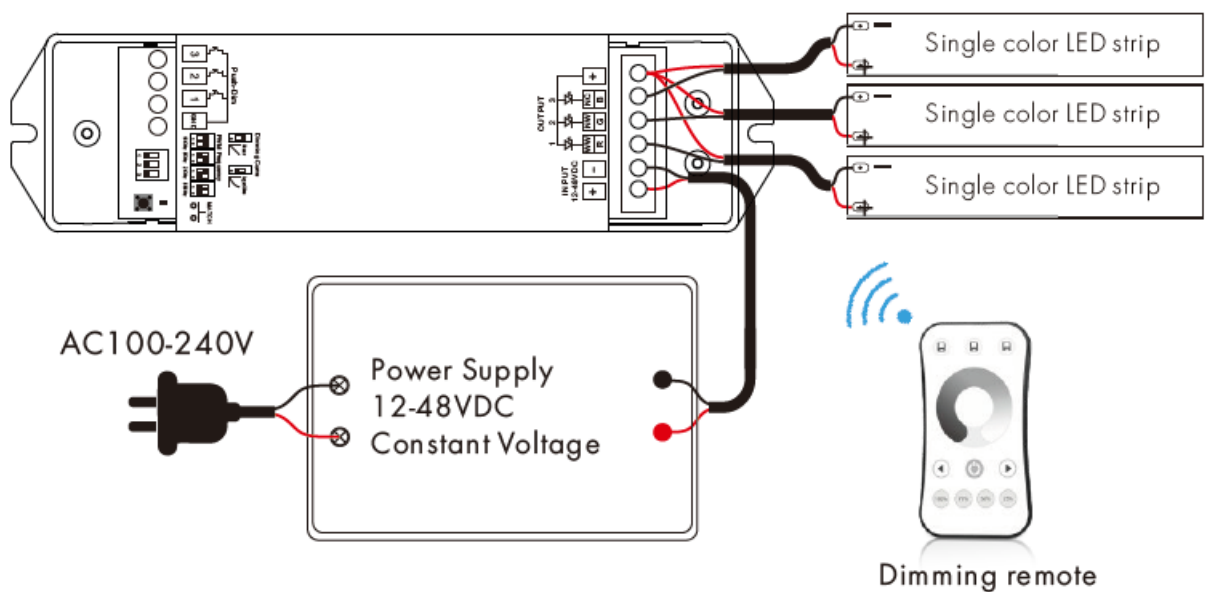
- V3-L(WZ) for RGB



- V3-L(WZ) for dual color



- V3-L(WZ) for single color



Note

1. After changed the light type by DIP switch, please redo the tuya APP cong operation.
2. For RGB+CCT or CCT light type, continuous power on and off will change 3 levels color temperature (WW, NW and CW) in sequence.
3. Switch off the power, then switch on power, repeat again. Immediately short press match key 3 times, the light on/off time will change between 3s and 0.5s.

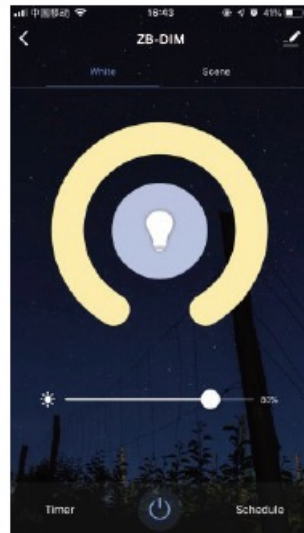
Tuya APP network connection

- Press and hold Match key for 5s, or push twice Match key fastly: Clear previous network connection, enter config mode, the blue LED indicator fast flash, the output LED will flash 10 times.

- Repeat power on and off for 5 consecutive times, also clear previous network connection, enter config mode, the output LED will flash 10 times.
- If Tuya APP network connection succeed, the blue LED indicator will stop flash, and in Tuya APP, you can find ZB-RGB device (or other DIM, CCT).

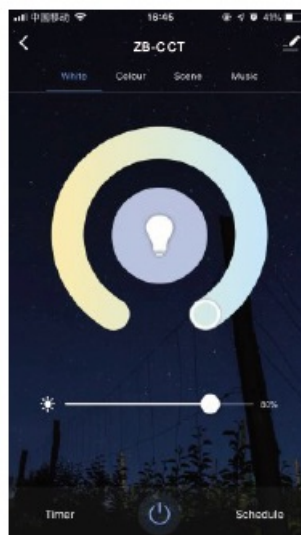
Tuya APP interface

White interface



- For DIM type: Touch brightness slide to adjust brightness.
- For RGB type: Touch brightness slide, get RGB mixed white firstly, then to adjust white brightness.

Color temperature interface



- For CCT type: Touch color wheel to adjust color temperature. Touch brightness slide to adjust brightness.

Colour interface



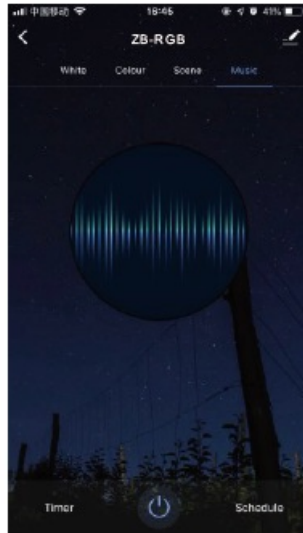
- For RGB type: Touch color wheel to adjust static RGB color.
- Touch brightness slide to adjust color brightness.
- Touch saturation slide to adjust color saturation, namely gradient from the current color to white(RGB mixed).

Scene interface



- The 1-4 scene is static color for all light type. the inner color of these scene can be editable.
- The 5-8 scene is dynamic mode for RGB type, such as green fade in and fade out, RGB jump, 6 color jump, 6 color smooth.

Music, Timer, Schedule



- The music play can use smartphone music player or micro-phone as music signal input.
- The Timer key can turn on or turn off light in the next 24 hours.
- The Schedule key can add multiple timers to turn on or turn off light according to different time periods.

Scene interface

- The 1-4 scene is static color for all light type. the inner color of this scene can be editable.
- The 5-8 scene is dynamic mode for RGB type, such as green fade in and fade out, RGB jump, 6 color jump, 6 color smooth.

Push-Dim control

- Long press one Push key and Match key at the same time to select 3 kinds light type, and each light type will have different push key function.
- Long press 1 key and Match key 2 seconds, set as single color type.
- Long press 2 key and Match key 2 seconds, set as dual color type.
- Long press 3 key and Match key 2 seconds, set as RGB type.
- After the light type is set, please repeat the network configure operation by Tuya APP.

Single color	1 key	Short press turn on/off 1/2/3 channel, long press 1-6s dim up/down
	2 key	Unvalid
	3 key	Unvalid
Dual color	1 key	Short press turn on/off light, long press 1-6s dim up/down
	2 key	Short press 3 levels color temperature (WW, NW, CW), long press 1-6s color temperature up/down
	3 key	Unvalid
RGB	1 key	Short press turn on/off light, long press 1-6s dim up/down
	2 key	Short press change dynamic mode, long press 2s to set speed (1-10 levels)
	3 key	Short press change static RGB color (24 levels), long press 1-6s adjust saturation

RGB dynamic mode list

No.	Name	No.	Name
1	RGB jump	6	RGB fade in and out
2	RGB smooth	7	Red fade in and out
3	6 color jump	8	Green fade in and out
4	6 color smooth	9	Blue fade in and out
5	Yellow cyan purple smooth	10	White fade in and out

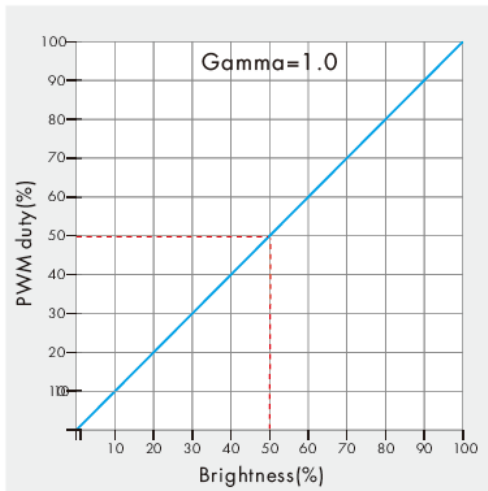
PWM frequency setting



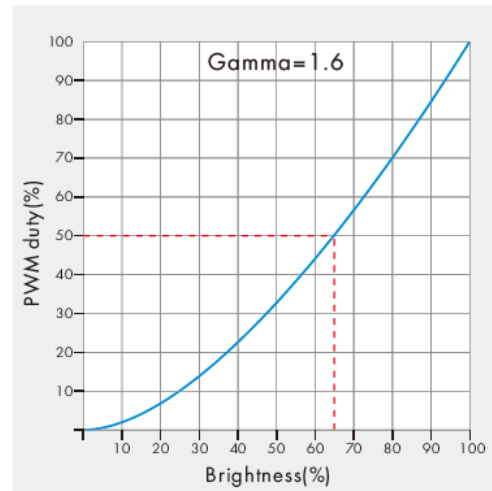
We can select four PWM frequency: 500Hz, 2KHz, 8KHz or 16KHz. Higher PWM frequency, will cause lower output current, higher power noise, 1 2 1 2 1 2 1 2 but more suitable for camera(No flickers for video).

Dimming curve setting

Linear dimming curve



Logarithmic dimming curve



V3-L(WZ) match remote control (Optional)

End user can choose the suitable match/delete ways. Two options are offered for selection:

Use the V3-L(WZ)'s Match key

Match

Short press match key of V3-L(WZ), immediately press on/off key (single zone remote) or zone key (multiple zone remote) on the remote. The LED indicator fast flash a few times means match is successful.

Delete

Press and hold match key of V3-L(WZ) for 10s, The LED indicator fast flash a few times means all matched remotes were deleted.

Use Power Restart

Match

Switch off the power of V3-L(WZ), then switch on power, repeat again. Immediately short press on/off key (single zone remote) or zone key (multiple zone remote) 3 times on the remote. The light blinks 3 times means match is successful.

Delete

Switch off the power of V3-L(WZ), then switch on power, repeat again. Immediately short press on/off key (single zone remote) or zone key (multiple zone remote) 5 times on the remote. The light blinks 5 times means all matched remotes were deleted.

V3-L(WZ) work as Zigbee-RF converter to match RF LED controller or dimming driver

End user can choose the suitable match/delete ways. Two options are offered for selection

Use the controller's Match key

Match

Short press match key of the controller, immediately press on/off key on the Tuya APP. The LED indicator fast flash a few times means match is successful.

Delete

Press and hold match key of the controller for 5s, The LED indicator fast flash a few times means match was deleted.

Use Power Restart


Match

Switch off the power of the controller, then switch on power, repeat again. Immediately short press on/off key 3 times on the Tuya APP. The light blinks 3 times means match is successful.

Delete

Switch off the power of the controller, then switch on power, repeat again. Immediately short press on/off key 5 times on the Tuya APP. The light blinks 5 times means match was deleted.

Documents / Resources

	SKYDANCE V3-LWZ Zigbee and RF 3 In 1 LED Controller [pdf] User Manual V3-LWZ Zigbee and RF 3 In 1 LED Controller, V3-LWZ, Zigbee and RF 3 In 1 LED Controller, R F 3 In 1 LED Controller, 3 In 1 LED Controller, LED Controller, Controller
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