

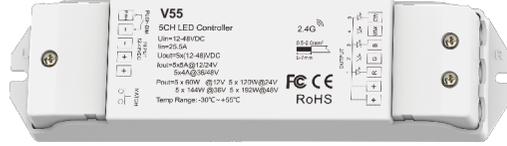
V55

5 Channel RGB+CCT LED RF Controller

RF RGB+CCT

Features

- 5 in 1 function, used for control RGB, RGBW, RGB+CCT, color temperature or single color LED strip.
- Match with RF 2.4G single zone or multiple zone remote control.
- One RF controller accept up to 10 remote control.
- 4096 levels 0-100% dimming smoothly without any flash.
- When control RGB, RGBW, RGB+CCT light, built in 10 dynamic mode, include jump or gradual change style.
- Auto-transmitting function: Controller automatically transmit signal to another controller with 30m control distance.
- Synchronize on multiple number of controllers.
- Connect with external push switch to achieve on/off and 0-100% dimming function.
- PWM frequency 1KHz, 2KHz, 4KHz or 8KHz selectable.
- Light on/off fade time 3s selectable.

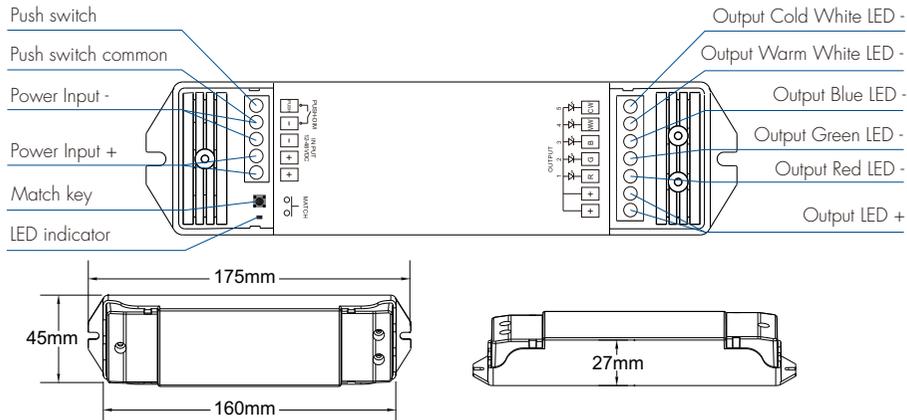


FC CE RoHS

Technical Parameters

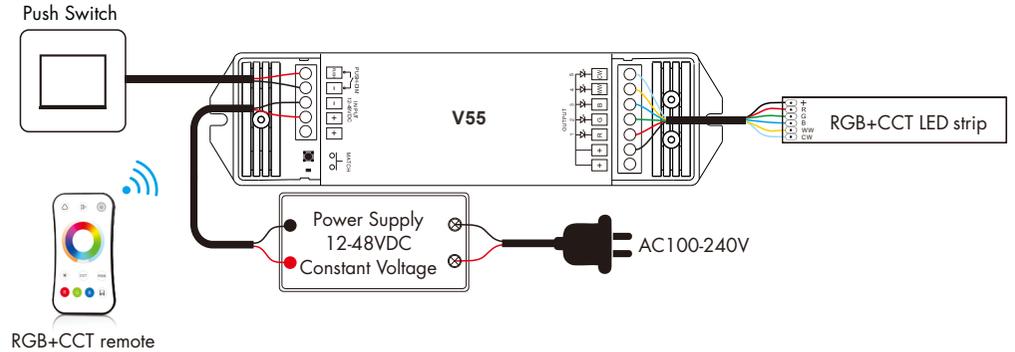
Input and Output		Dimming data		Safety and EMC	
Input voltage	12-48VDC	Input signal	RF 2.4GHz + Push Dim	EMC standard	EN IEC 55015/ EN IEC 61547 ETSI EN 301 489-1/-3
Input current	25.5A	Control distance	30m(Barrier-free space)	Safety standard	EN 61347-1/-2
Output voltage	5 x (12-48)VDC	Dimming gray scale	4096 (2^12) levels	Radio equipment	ETSI EN 300 440
Output current	5A/CH@12-24V 4A/CH@36-48V	Dimming range	0-100%	Certification	CE RoHS FCC
Output power	5x60W@12V 5x120W@24V 5x144W@36V 5x192W@48V	Dimming curve	Logarithmic	Environment	
Output type	Constant voltage	PWM frequency	1000Hz (default)	Operation temperature	Ta: -30°C ~ +55°C
Warranty and Protection		Package		Case temperature(Max.)	Tc: +85°C
Warranty	5 years	Size	L178 x W50 x H38mm	IP rating	IP20
Protection	Reverse polarity, Short circuit	Gross weight	0.150kg		

Mechanical Structures and Installations



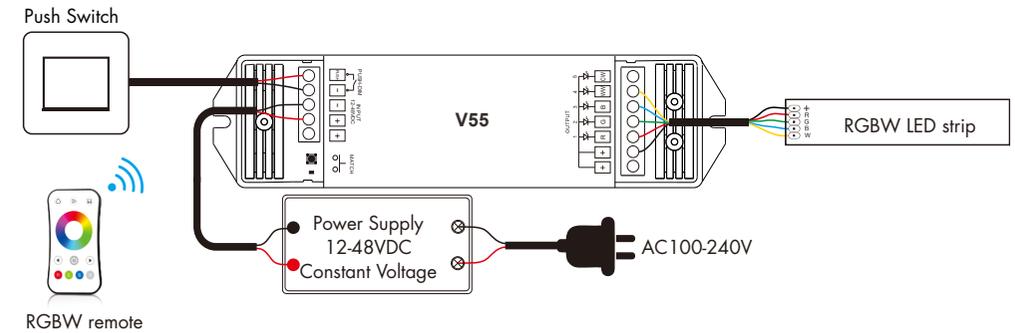
Wiring Diagram

- Connect RGB+CCT LED strip

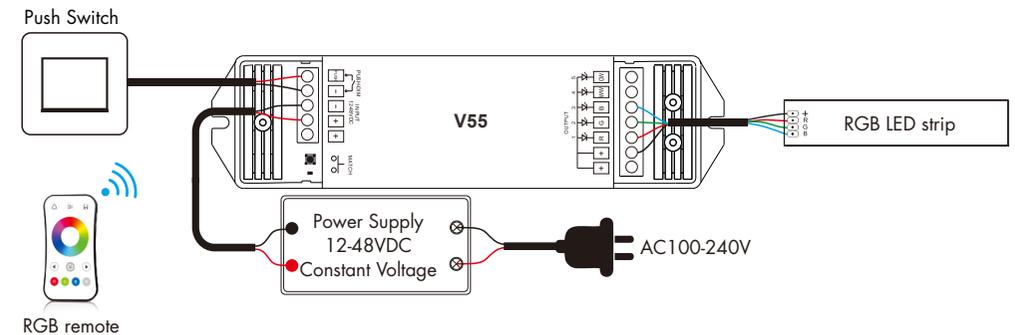


Note:
Long press match key 10s, RGB and CCT light can not be on at the same time, the light on/off time restore to 0.5s (restore factory default).
Long press match key 15s, RGB and CCT light can be on at the same time.

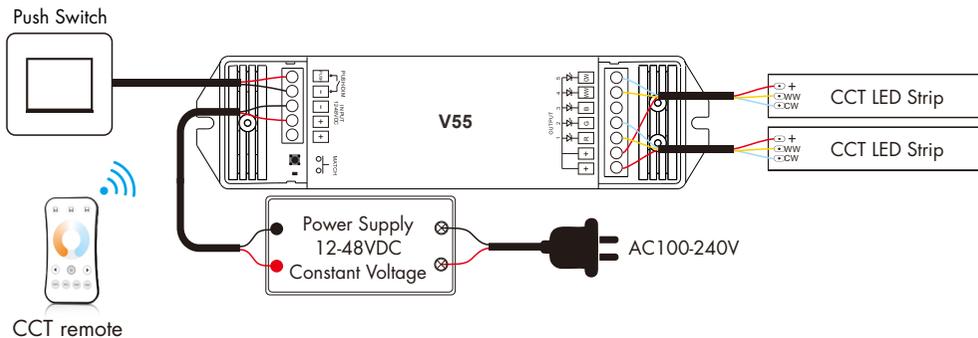
- Connect RGBW LED strip



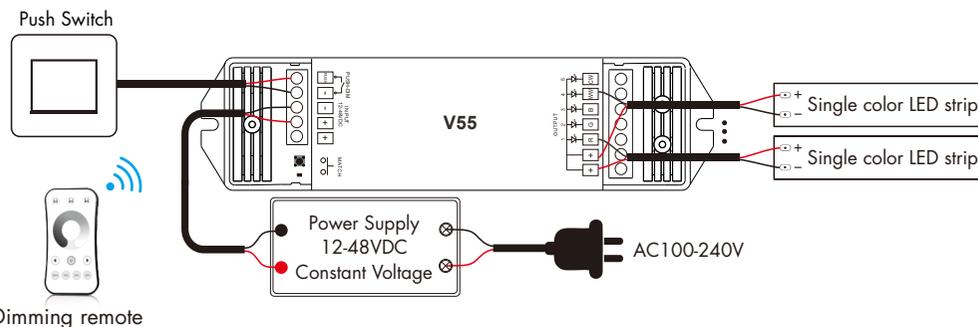
- Connect RGB LED strip



- Connect color temperature LED strip



- Connect single color LED strip



Light Type Setting

Within 30s after the controller is powered on, press and hold the match key for 2s to set the 5 types of light type in sequence:
 When set to the DIM light type, the LED indicator light flashes once.
 When set to the CCT light type, the LED indicator light flashes twice.
 When set to the RGB light type, the LED indicator light flashes three times.
 When set to the RGBW light type, the LED indicator light flashes four times.
 When set to the RGB+CCT light type, the LED indicator light flashes five times.

Match Remote Control (Two Match Ways)

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, 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 for 5s to delete all match, The LED indicator fast flash a few times means all matched remotes were deleted.

Use Power Restart

Match:
 Switch off the power of the receiver, 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 the receiver, 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.

Note: When matched with an RGB+CCT remote control, the controller will automatically change to the RGB+CCT light type. When matched with remote controls of other light types, the light type of the controller will not be automatically changed.

Push Dim

Single color	Click	ON/OFF
	Double Click	Turn on at 100% or 10%(night light) and vice-versa
	Long press(>1s) from OFF	Dimming UP/DOWN
	Long press(>1s) from ON	Dimming UP/DOWN
Dual Color	Click	ON/OFF
	Double Click	Turn on at 100% or 10%(night light) and vice-versa
	Long press(>1s) from OFF	Color temperature UP/DOWN (turn off / on to return dimming)
	Long press(>1s) from ON	Dimming UP/DOWN
RGB	Click	ON/OFF
	Double Click	Change from color to white mode(RGB mixed) and vice-versa
	Long press(>1s) from OFF	If on color mode change rotation speed; If on white mode dimming UP/DOWN
	Long press(>1s) from ON	If on color mode start/stop color rotation; If on white mode dimming UP/DOWN
RGBW	Click	ON/OFF
	Double Click	Change between color/white mode(W channel)/color+W mode
	Long press(>1s) from OFF	If on color mode change rotation speed; If on white mode or color+W mode, W dimming UP/DOWN
	Long press(>1s) from ON	If on color mode start/stop color rotation; If on white mode or color+W mode, W dimming UP/DOWN
RGB+CCT	Click	ON/OFF
	Double Click	Change from color mode to tunable white mode and vice-versa
	Long press(>1s) from OFF	If on color mode change rotation speed; If on tunable white mode color temperature UP/DOWN (turn off and turn on to return dimming)
	Long press(>1s) from ON	If on color mode start/stop color rotation; If on tunable white mode dimming UP/DOWN

Color rotation:



We can select 4 rotation speed:
 10 flash/s means 6 seconds color rotation
 5 flash/s means 30 seconds color rotation
 2 flash/s means 1 minute color rotation
 1 flash/s means 6 minutes color rotation

PWM Frequency Setting

At the moment of power-up:
 Long press the match key for 2s, set the output PWM frequency to 1KHz, the LED indicator flash 1 time.
 Long press the match Key for 5s, set the output PWM frequency to 2KHz, the LED indicator flash 2 times.
 Long press the match Key for 10s, set the output PWM frequency to 4KHz, the LED indicator flash 3 times.
 Long press the match Key for 15s, set the output PWM frequency to 8KHz, the LED indicator flash 4 times.
 The factory default PWM frequency is 1KHz.

Note: Higher PWM frequency will cause lower output current, higher power noise, but more suitable for camera(No flickers for video).

PWM frequency and output current mapping:

U _{in} \ I _{out} / PWM	1KHz	2KHz	4KHz	8KHz
12/24V	5A	5A	4A	4A
36/48V	4A	4A	3A	3A

Light on/off Fade Time

Long press match key 5s, then short press match key 3 times, the light on/off time will be set to 3s, the indicator light blink 3 times. Long press match key 10s, restore factory default parameter, the light on/off time also restore to 0.5s.

Dynamic Mode List

For RGB/RGBW:

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

For RGB+CCT:

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	Color temperature smooth	10	White fade in and out

Dual Color Control

CH4=Warm white LED CH5=Cool white LED

Each channel can supply up to 120W (@24V) and white balance can be controlled as such:

Color temperature	Cool white	Neutral white	Warm white
Power distribution	CH4=0W, CH5=120W	CH4=120W, CH5=120W	CH4=120W, CH5=0W

Malfunctions Analysis & Troubleshooting

Malfunctions	Causes	Troubleshooting
No light	1. No power. 2. Wrong connection or insecure.	1. Check the power. 2. Check the connection.
Wrong color	1. Wrong connection of R/G/B/WW/CW wires.	1. Reconnect R/G/B/WW/CW wires.
Uneven intensity between front and rear, with voltage drop	1. Output cable is too long. 2. Wire diameter is too small. 3. Overload beyond power supply capability. 4. Overload beyond controller capability.	1. Reduce cable or loop supply. 2. Change wider wire. 3. Replace higher power supply. 4. Add power repeater.
No response from the remote	1. The battery has no power. 2. Beyond controllable distance. 3. The controller did not match the remote.	1. Replace battery. 2. Reduce remote distance. 3. Re-match the remote.

Installation Precautions

- The products shall not be stacked, the distance should be $\geq 20\text{cm}$, so as not to affect lifespan of the products due to poor heat dissipation.
- The product shall not be installed close to the switching power supply with an interval of $\geq 20\text{cm}$ to avoid radiation interference of the switching power supply.
- The installation height shall be $\geq 1\text{m}$ from the floor to avoid shortening the remote control distance due to too weak reception signal.
- The products are not allowed to be close to or covered by metal objects, with an interval of $\geq 20\text{cm}$ to avoid signal attenuation and shorten the remote distance.
- Avoid installation at the corner of the wall or the corner of the beam, with an interval of $\geq 20\text{cm}$ to avoid signal interference.

Statement

FCC Statement:

This device complies with Part 15 of the FCC Rules. operation is subject to the following two conditions:

- this device may not cause harmful interference, and
- this device must accept any interference received, including interference that may cause undesired operation.

IC Statement:

This Class B digital apparatus complies with Canadian ICES-003.

(Cet appareil numérique de la Classe B conforme à la norme NMB-003 du Canada).