Product Introduction

Product description: 2.4G Wireless-Sync-control RGBCW LED CONTROLLER

Applicable model series: HX-DLV004-RFBK

Version: V1.0

Issue Date: 2018/11/26

Item Name	HX-DLV004-RFBK		
Series			
Version Record			
Version	**Update description**	**Issue Date**	**Compatibility with last version**
V1.0	Original version	2018/11/26	

Customer Confirmation Feedback, Company Name :

Test	**Confirmation**	**Audit**

Customer Needed Product Completed Item NO.

Item No. 1		**Item No. 2**	
Item No. 3		**Item No. 4**	

HX-DLV004-RFBK

2.4GHz wireless-sync-control RF remote controller RGBCW

DLV004 is a new feature controller product that enables uniform or individual control of multiple zones. It consists of two parts: the RF remote control and the receiver, which realizes the integrative control of the lights in multiple areas within the effective distance range, and meets the increasingly high requirements of the market for LED lighting control. The RGBCW led controller adopts the most advanced PWM (Pulse Width Modulation) digital control technology, it is used for controlling constant voltage LED lamps that can achieve full-RGB color and dual-color changes, such as: R/G/B/CW/WW LED strips etc; It belongs to low-voltage DC power input and output with six interfaces, of which V+ is a common anode interface, and the other five are R/G/B and CW/WW interfaces;
It adopt 2.4G multi-group remote control, up to 4 areas can be controlled separately; and it can be compatible with other multi-group controller models from HOION to achieve the synchronization effect.

Product Features

- Designed as 5 channels controller for RGBCW constant voltage LED lights.
- DC12-24V, 5 channels output, Max. load current: 4A*5CHs; Max. load power: 240W/12V; 480W/24V.
- Adopts RF remote control, no need line-of-sight. Control range up to 20 meters.
- Wireless-sync-control in both static color and dynamic modes, unlimited by remote control distance.
- Memory function, each time power-on reserve the mode which stop in the last power-off.

- Long-press the brightness and speed key can get the fast adjustment, convenient for operation.
- Short circuit protection.
- Warranty of this product is three years, exclude the artificial situation of damaged or overload working.

Technical Parameters

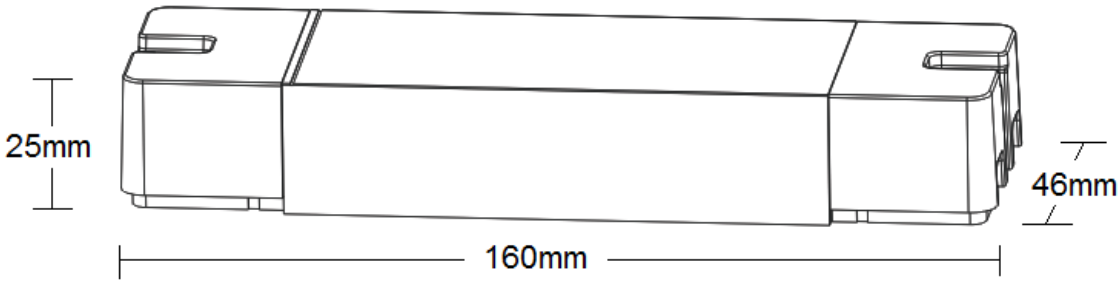
Controller

Working temperature	-20-60℃	**Supply voltage**	DC12V-24V
Static power consumption	<1W	**Connecting mode**	Common anode
Grayscale	1024levels	**Speed stage**	1024grade
External dimension	L160*W46*H25 mm	**Packing size**	L170*W50*H29mm
Net weight	100g	**Gross weight**	130g
RF frequency	2.4GHz	**RF distance**	≤20m
Short circuit protection	Yes	**Memory function**	Yes
Output	5 channels	**Output current**	≤4A(each channel)
PWM frequency	1KHz	**Max. Output power**	12V:<240W, 24V:<480W

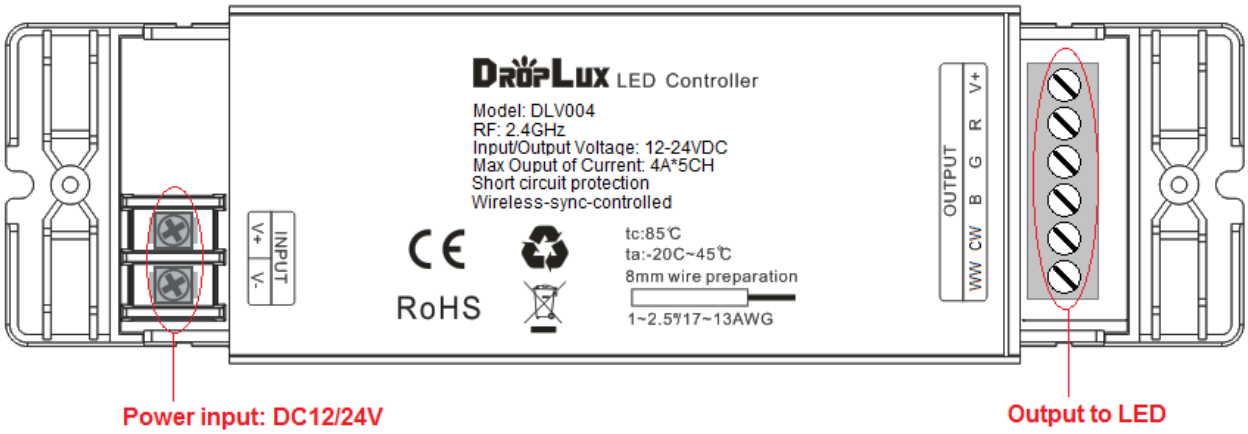
Remote control

Working temperature	-20℃~60℃	**Supply voltage**	DC3V（AAA*2）
Standby current	<18uA	**Working current**	<25mA
Standby power	54uW	**Working power**	75mW
Net weight	95g	**RF frequency**	2.4GHz
External dimension	L150*W40*H20 mm	**RF distance**	≤20m

Dimensions



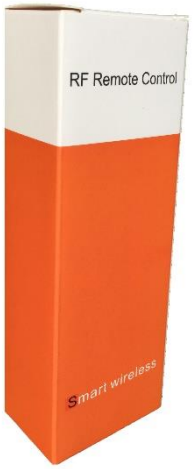
Interface Specifications



Package

Controller (DLV004)and remote control(HX-RFBK-RGB-2.4G) packing separately as below:

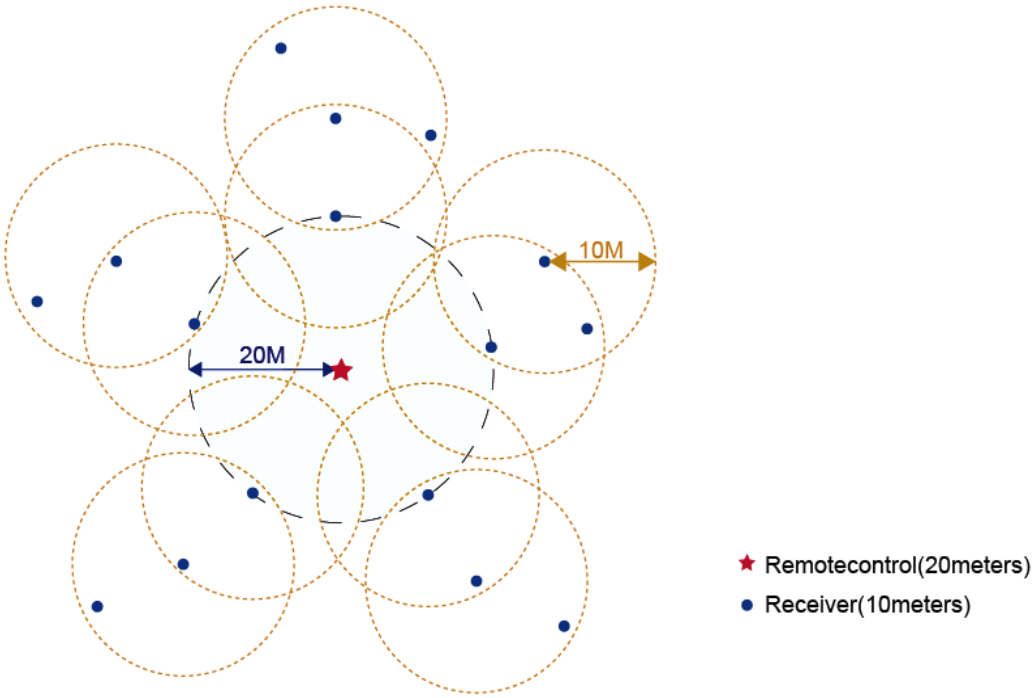
DLV004(168*48*27MM)



HX-RFBK-RGB-2.4G(150*50*35MM)

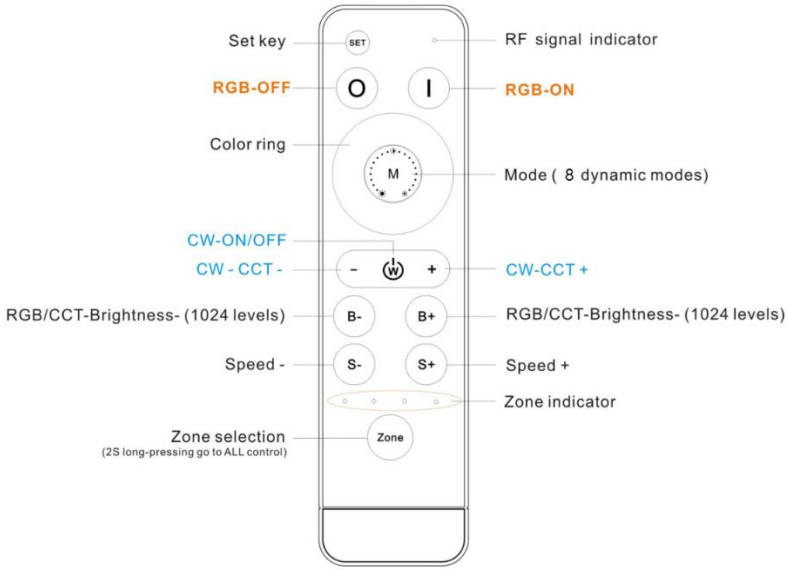
Wireless-synchronization function

Receivers will transmit the control signals from the remote control and self-inspection the work statues for each other, so multiple receivers in same zone will wireless-sync-work completely, not only static mode but also dynamic mode, to achieve wired-like operation experience.



Direction for use

Connect the load wire at first, followed by the power wire, please ensure short circuit can not occur between wires before turning on the power;



Adopts RF 2.4G Multi-zone remote control, 1 color ring and 12 buttons in total, the function of buttons are shown as below:

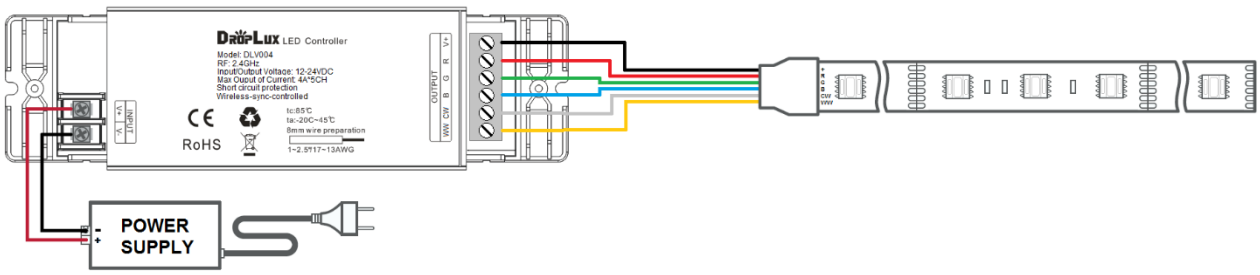
Name	Description
SET	Nonfunctional
I	RGB channels-Turn on
O	RGB channels-Turn off
Color ring	Static color options, 64 colors in total.
M	Dynamic modes, 8 modes in total.
⏻	CW(means: cool white+ warm white) channels-Turn ON/OFF
−	Balance to warm white. Long-press can get fast adjusting.
+	Balance to cool white. Long-press can get fast adjusting.
B-	Brightness – for RGB/CCT static colors. Long-press can get fast adjusting.
B+	Brightness + for RGB/CCT static colors. Long-press can get fast adjusting.
S-	Speed down for dynamic mode. Long-press can get fast adjusting.
S+	Speed up for dynamic mode. Long-press can get fast adjusting.
Zone	Zone selection, 2 seconds long-press get “all-control”.

(Note: B+, B- is universal for RGB and CCT, adjusting RGB brightness after color ring operation, or adjusting CCT brightness after CW-CCT+/ CW-CCT-/ CW-ON operation)

Standard color changes as follows:

No	Patterns	Remarks	No	Patterns	Remarks
1	White breathe	Speed is adjustable, brightness is unadjustable	**5**	7 color fade	Speed is adjustable, brightness is unadjustable
2	3 color jumpy		**6**	R/G cross fade	
3	7 color jumpy		**7**	R/B cross fade	
4	3 color fade		**8**	G/B cross fade	

Typical Applications



About RF code.

The biggest advantage of this system is that it can not only solve the cabling problem in engineering wirelessly, but also realize a wired-like operation experience. In order to facilitate the early testing and debugging of the project, the factory status of the receiver is normally unpaired and each remote controller has a unique code value. The user should perform the matching work of the remote controller and the receiver during the installation of the project to avoid the mutual influence of the radio frequency remote control technology during the later use.

Please pay attention to the following 3 points before operation:

1) All equipment in the complete system after installation should have a unified and unique code value, so as to achieve the security and stability of the system.
2) The receiver can only store one code value and cannot be overwritten. Before learning the new code value, it is necessary to clear the original code of the receiver; the remote controller can only save one code value but can be overwritten and can also restore the factory settings. In order to facilitate the later maintenance, the three components that may be involved in the system (including receivers, handheld remote controllers, and panel remote controllers) can realize mutual learning of code values.
3) The clearing operation should be finished within 1 minutes after the receiver is powered on. Therefore, during the clearing operation, ensure that the lights in other areas are turned off or the power-on time exceeds 1 minute to avoid other areas being cleared.
4) Since the receiver performs code value learning in the power-on state, in order to avoid confusion in the area, it is recommended that each area has an independent power switch so that the power of other areas can be easily cut off when the code is being operated.

(1) **Code pairing operation: means that the receiver will only be controlled by the value code remote control.**

Step	Operation	Instructions
1	Connecting the load to the receiver and power on it.	1.It is necessary to clear the code first, if the receiver was coded before. 2.Batch operation can be performed within the remote control range.
2	Select area	Select the area with the "Zone" key and the corresponding indicator lights up
3	Press and hold “RGB-ON” on the remote control for 5 seconds, the indicator of the remote control will	Will automatically exit code transmission status after 60 seconds, or pressing any key to exit.

	flash quickly, means it enters the pairing code transmission status.	
4	See the load light flashes 3 times and return to the initial state	Pairing coding is finished successfully

(2) Code clearing operation: means that the original code value of the receiver will be cleared and returned to the factory state. Then it can't be controlled by any remote control, and can learn to a new code.

Step	Operation	Instructions
1	Connecting the load to the receiver and power on it.	1. The clearing operation should be finished within 1 minutes after the receiver is powered on. If exceeds the time, can be powered on again. 2. Batch operation can be performed within the remote control range.
2	Press and hold the remote control "RGB-Off" for 10 seconds. The indicator of the remote control flashes quickly, means it enters the clearing code transmission status. There is no need to select the corresponding area when clearing code.	1. Will automatically exit code transmission status after 60 seconds, or pressing any key to exit. 2. If the original remote controller is lost, the new remote controller can be used for clearing operations.
3	See the load light flashes 3 times and return to the initial state	Clearing coding is finished successfully

(3) Code learning operation between remote controls: Used to unify system code values or copy a new remote controls.

Since each remote control has its own unique code at the time of delivery, when there are multiple remote controls in one system, one of them (for example, remote control A) must be selected as the system code value, and the code value of the rest remote controls (for example, remote control B) should be copied to the same one.

Step	Operation	Instructions
1	A remote control：Press and hold "RGB-ON" on the remote control for 5 seconds, the indicator of the remote	Will automatically exit code transmission status after 60 seconds, or pressing any key to exit.

	control will flash quickly, means it enters the pairing code transmission status.	
2	B remote control: long press "mode key" for 5 seconds, the remote indicator light changes from 100% light to off, means entering the code value receiving state	Will automatically exit the code value receiving state after 30 seconds, or exit after learning the code value successfully.
3	see the B remote control indicator light flash 3 times	Code copying is finished and exit code value receiving status.

(4) Copying code from receiver to remote control.

A new remote control can also copy code from any one of the receivers in the whole system, after the successful operation, the new remote control can replace the original remote (if it is lost).

Step	Operation	Instructions
1	Cut off the power of receiver.	Which one will be controlled by remote.
2	Long-press "mode key" for 5 seconds, the remote indicator light changes from 100% light to off, means entering the code value receiving state.	Will automatically exit the code value receiving state after 30 seconds, or exit after learning the code value successfully.
3	Power on the receiver, will see remote control indicator light flash 3 times.	Code copying is finished and exit code value receiving status.

* For security of the system, the distance from remote control to the one receiver should be less than 2 meters in this operation.

* Only one time operation is requested for the whole system, no need different operation for different zones.

(5) The remote control restores the factory setting: it means that the remote control will be restored to the factory's unique code value.

Step	Operation	Instructions
1	Long press "mode " for 20 seconds	The remote indicator light dim down and flashes continuously until the 20th second and then back to 100% light. Means this step is finished.
2	Press the "RGB-OFF" to confirm, the remote indicator light flashes 3 times	Restore factory settings successfully.

Product after-sales advantages:

1. There is no power-on time limit for matching code, only need to power on the receiver;
2. Since the code value of the receiver cannot be covered, the new controller pair code won't affect the controller already fixed code;
3, The same model or compatible remote control can copy the code value between each other to achieve the same control function;
4. If the remote control which matched code with the receivers is lost or does not work properly, it is not necessary to re-clear and re-code all the receivers. You can copy the code value from the receivers to the new remote to achieve the same control function.

About installation of remote control's bracket:

1.Accessories include: bracket 1pc, 3M foam sponge glue 1pc, screw 2pcs, expansion tube 2pc.
2. There are 2 options for bracket installation:
1) Using screw and expansion tube make drilling installation (suitable for uneven and ash surface);
2) Using 3M foam sponge glue make free drilling installation (suitable for flat no ash surface).

Product information for placing order

Product name	Item number
RGBCW LED controller with RFBK remote	HX-DLV004-RFBK Receiver: HX-DVL004 Remote: HX-RFBK-RGB-2.4G