

# LT-311

## LED Dim controller

### V2.00

# USER INSTRUCTIONS



## Forword

Thanks for choosing our LT-311 Dim Controller. Before installation and use, we strongly recommend you to read through this manual carefully. If device has been damaged during transport, please report it to your supplier immediately. Please don't take any action without contacting your supplier first.

## After-sales Service

From the day you purchase our products within a year, if being used properly in accordance with the instruction, and quality problems occur, we provide free repair or replacement services except the following cases:

1. Any defects caused by wrong operations..
2. Any damages caused by unauthorized removal, maintenance, modifying circuit, incorrect connections and replacing chips.
3. Any damages due to transportation, vibration etc after the purchase.
4. Any damages caused by earthquake, fire, lightning strike, pollution and abnormal voltage.
5. Any damages caused by negligence, inappropriate storing at high temperature and humidity environment or near harmful chemicals.
6. Product has been updated

## Safety Warnings

1. Please don't install this controller in lightening, intense magnetic and high-voltage fields.
2. To reduce the risk of component damage and fire caused by short circuit, make sure correct connection
3. Always be sure to mount this unit in an area that will allow proper ventilation to ensure a fitting temperature.
4. Check if the voltage and power adapter suit the controller & if anode or cathode definition is the same as the controller's.
5. Don't connect cables with power on, make sure a correct connection and no short circuit checked with instrument before power on.
6. Please don't attempt any repairs yourself; doing so will void your manufactures warranty.

For update information, kindly please consult with your supplier.

## Product Brief

LT-311 multi-functional LED Dim controller is dedicated to control single color changes (common anode), LED lamp's brightness and synchronic color changing effect. Extensively used in all kinds of LED lighting decoration.

If used together with our LT-3060 power amplifier, each can control twice the quantity of LED lights by every adding one more, which can achieve the unlimited output power repeating.

### I . Technical Spec

Model: LT-311

Input voltage:	DC5V-DC24V	Speed:	8 Levels
Output current:	6A/CH×3CH	BRT adjust:	64 Levels
Output power:	1~90W(5V)	Working Temp:	-35℃—55℃
1~220W(12V)	1~450W(24V)	Cover Size:	L211×W40×H30(mm)
Changing mode:	8 Modes	Package Size:	L215×W43×H33(mm)
Color depth:	256 levels per R,G &BGW:		180g

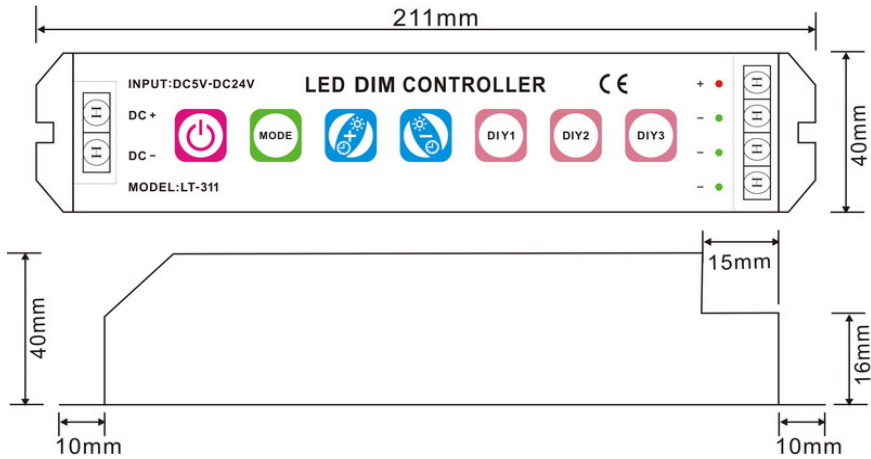
### II . Features

- 1、 Auto switch to LED lights with voltage from DC5-24V,
- 2、 ON/OFF button function available,
- 3、 3-Channel RGB full color control, maximum outputs 6A per Channel,
- 4、 Speed of each mode is adjustable separately from 1-8 level, and the color depth can be 256 levels,
- 5、 Three color changing modes for choice: color strobe, color skipping and color gradual, 8 levels speed changing,
- 6、 5 easy brightness selecting function, 64 levels brightness gradual

adjustment,

- 7、 0%、 25%、 50%、 75%、 100% brightness easy select,
- 8、 3 DIY modes,
- 9、 Remote controllable (option) .

### III. Size



### IV. Tables of changing modes

Sequence	Modes	Description
1	Static brightness 1	0% brightness, support BRT adjustment
2	Static brightness 2	25% brightness, support BRT adjustment
3	Static brightness 3	50% brightness, support BRT adjustment
4	Static brightness 4	75% brightness, support BRT adjustment
5	Static brightness 5	100% brightness, support BRT adjustment
6	Color strobe	8 levels speed adjustment,

7	3 CH color skipping	8 levels speed adjustment,
8	Gradual dark and gradual bright	8 levels speed adjustment,





## V. Operating instructions



The controller has 7 function keys:

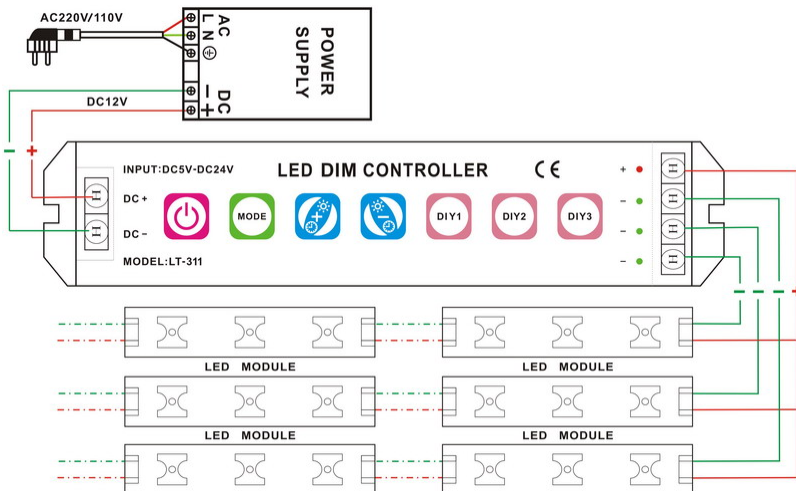
### ON/OFF、MODE、BRT/ SPEED+、BRT/ SPEED-、DIY1、DIY2、DIY3

Sign	Button	Description
	<b>ON/OFF</b>	<b>on/off key:</b> start or turn off the controller At the Off status, press any key to start the controller
	<b>MODE</b>	<b>Mode key:</b> press it to enter into next mode
	<b>BRT/ SPEED+</b>	<b>BRT/ SPEED+:</b> press it at the BRT status to increase the brightness, press it at the Speed status to increase the speed

	<p><b>BRT/ SPEED-</b></p>	<p><b>BRT/ SPEED-:</b>                  press it at the BRT status to decrease the brightness,                  press it at the Speed status to decrease the speed</p>
	<p><b>DIY1</b></p>	<p><b>DIY1:</b> Press it for 3 seconds, LED flashes twice, and then remember the current brightness or color changing effect and speed, just press it once then enter into pre-setup status</p>
	<p><b>DIY2</b></p>	<p><b>DIY 2:</b> The same as above</p>
	<p><b>DIY3</b></p>	<p><b>DIY 3:</b> The same as above</p>

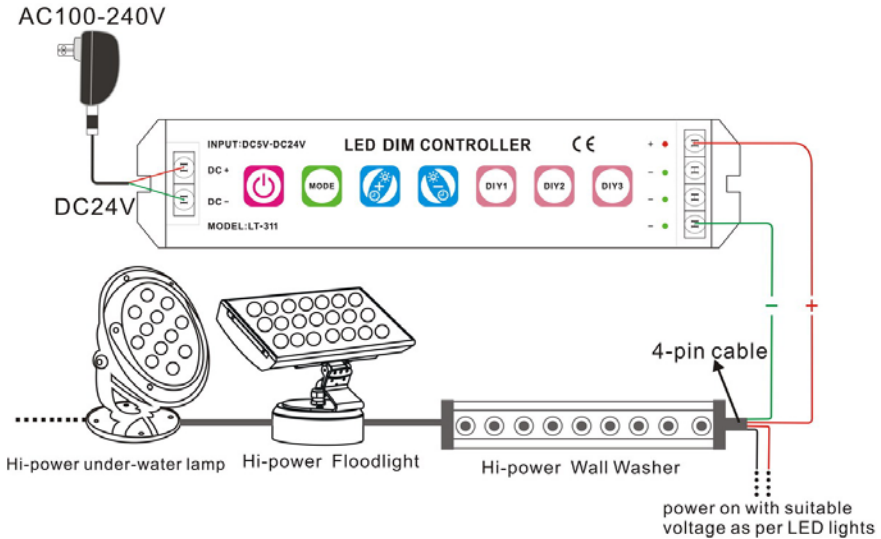
## VI. Connecting scheme

1. Take single color LED Module as an example as follows



2. Collect to single color high power LED lamps, the controller provides controlling signals only; the lights need extra power based on the specific working voltage of the lights. Each controller theoretically can control unlimited quantity of the lamps.

(The high power lights must have built-in constant PWM current driving circuit)

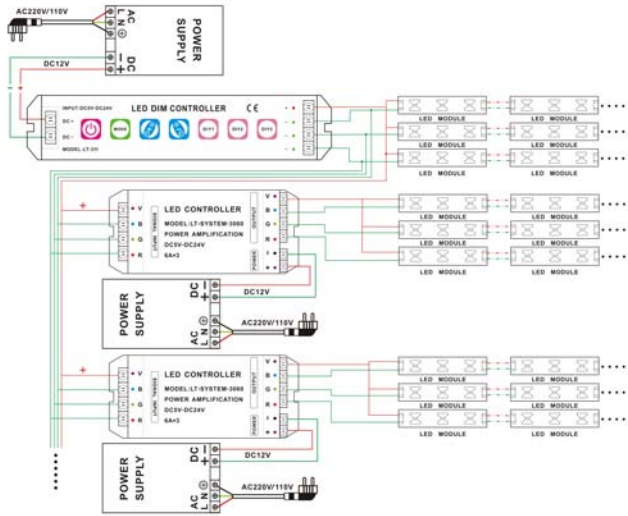


VII. If one controller is not enough, you can add a 3060 power amplifier to amplify the output.

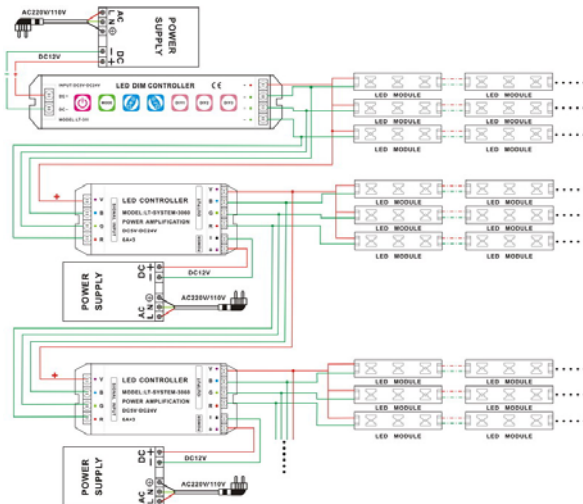


Bellow are three common methods of connecting. And the three methods can be mixed up. If you don't need the color skipping function, there only need one in-phase anode wire and one in-phase cathode wire between the controller and the amplifier.

1、 Method One: All amplifiers connected to the main power

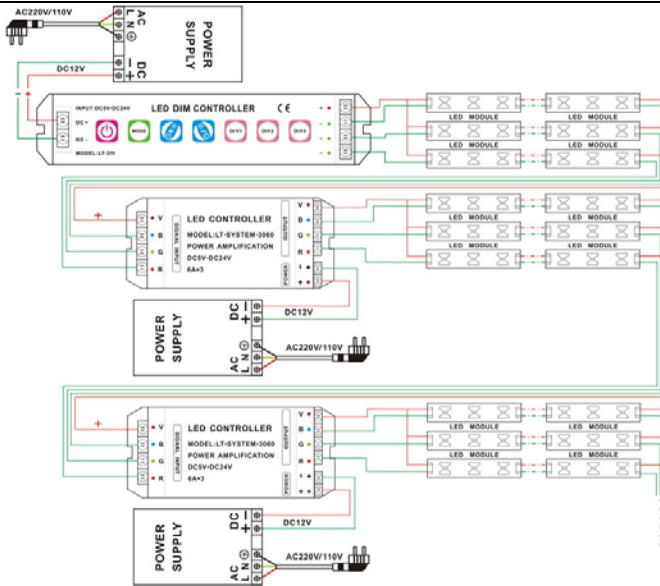


2、 Method Two: Connect the controller and the amplifier by a method of “hand in hand”.



3、 Method Three: The LED modules are followed by amplifiers in series.





### VIII. Exception Handles

Malfunction	Causation	Settle
No Light	<ol style="list-style-type: none"> <li>1、 No power from plug</li> <li>2、 Power supply protector works</li> <li>3、 Incorrect connection</li> </ol>	<ol style="list-style-type: none"> <li>1、 Check the socket</li> <li>2、 Check the malfunction, re-power on</li> <li>3、 Check connection</li> </ol>
Incorrect color Amplifier not in phase	<ol style="list-style-type: none"> <li>4、 Incorrect RGB output wire connection</li> </ol>	<ol style="list-style-type: none"> <li>4、 Re-connect RGB wires correspondently</li> </ol>
LED BRT is not smooth or even	<ol style="list-style-type: none"> <li>5、 Output wire too long</li> <li>6、 Wire diameter too thin</li> <li>7、 Overload beyond controller capability</li> </ol>	<ol style="list-style-type: none"> <li>8、 reduce wire length or use loop circuit to power on</li> <li>9、 Calculate the current and change to a thicker wire</li> <li>7,Change the power supplier or add a power amplifier</li> </ol>