

LED LIGHT ENGINE RGB 75W RF DMX CONTROL

SKU: O2020203-004

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DATASHEET



GENERAL INFORMATION

MATERIAL	Aluminum
DIMENSIONS	L280 × W195 × H80 mm
COLOR	Black
FIBER HEAD INNER DIAMETER	29 mm
NET WEIGHT	1.94 kg
GROSS WEIGHT	2.4 kg
REMOTE CONTROL TYPE	RF
REMOTE DIMENSIONS	L85 × W52 × H7 mm
LIFETIME	50,000 hours
WARRANTY	2 years
ORIGIN	PRC

ELECTRICAL & OPTICAL PERFORMANCE

POWER CONSUMPTION	75W
INPUT VOLTAGE	24VDC
AC/DC ADAPTER INCLUDED	Input 100-240 50/60Hz, Output: DC24V=4A
LED TYPE	RGB LED
COLOR CONTROL	RGB (3-channel DMX)
OUTPUT GRAY LEVEL	256
CONTROL PROTOCOL	DMX512/1990
DMX CONNECTOR	Standard XLR socket
DIMMING	Yes (via DMX and RF remote)

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MODE1:DMX MODE



Note: FUN = OFF (the DIP 10 switch up) means to accept DMX512 signal mode

Note: When all machines needs to be connected to DMX512 console, switch down DIP NO. 1 for first machine, then switch down DIP NO.3 for second machine, finally switch down DIP NO.1, 2, 3 for third machine, etc.

The first DMX address setting:

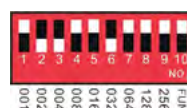
The decoder set the address bit by coding switch, of which 1-9 is for setting the start address of the Binary numeric code switch of DMX512, the first one is the lowest position, the ninth one is the highest

Bit of address code can be set to 512.

DMX512 start address code is the sum of switches 1-9, at the same time turn downside of the code switch (ON set to "1"), then the value of the bit can be gotten; coding switch up (set to "0"), the value of the bit is 0.

Example 1:

As the following Schematic 1, DMX512 start address is set to 38, encoding the No. 6,3,2 position on switch dial to "1", others set to "0", then the sum of the switch 1-9 code value is $32 + 4 + 2$, that is the DMX512 start address 38



Schematic 1

Example 2:

As the schematic 2, DMX512 start address is set to 388, encoding the no. 2,3,6,8 switch dial to "1", others set to "0", then the sum of the switch 1-8 code value is $4 + 128 + 256 = 388$, that is the DMX512 start address 388.



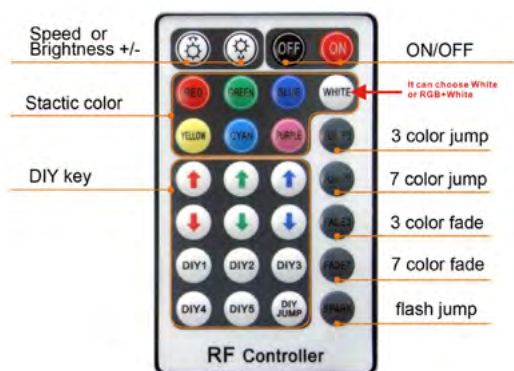
Schematic 2













MODE2:RF MODE



Note: It will be RF mode when switch down DIP NO.10, the rest ones NO.1-9 do not need to be switched down. If DMX connection, the NO.10 for master machine needs to be switched down, the slave machines do not need.

Remote instructions:



RF28 key remote control function	Key function details specification
 ON/OFF	Turn ON/OFF the controller
 Speed/brightness adjust key	Press this two keys to increase/decrease the brightness when in static mode, Press these two keys to increase/decrease the changing speed when in dynamic mode
 static color mode	brightness is adjustable
 DIY brightness adjust key	Press the DIY key to address the Green, Red, Blue color brightness to choose the specific color
 DIY mode key	Press the key to save the DIY color you adjust be the DIY brightness adjust key
 DIY JUMP	Press the key to realize all the color setting by DIY to JUMP
 3 color JUMP	Red, Green, Blue color jump
 7 color JUMP	Red, Green, Blue, Yellow, cyan, purple white color jump
 3 color fade	Red, Green, Blue color fade
 7 color fade	Red, Green, Blue, Yellow, purple, cyan, white color fade
 SPARK	SPARK Dynamic mode
 WHITE	white mode
	white, rgb+white change

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Match Code Function (It is available when leave factory)

1. Power on led engine, it works well when red indicated lights.

2. Press the FADE3 and FADE7 at same time in the effective remote distance, the white color of led engine flash. The code matches success.

MODE3: Preset Programs Mode

Note: Switch down the DIP NO.9 and NO.10 if require built-in programs mode. The RF remote does not function then.

If DMX connection, only switch down DIP NO.9 and 10 for master machine, the slave machines do not need. RF remote does not function.



250
128
64
32
16
8
4
2
1
001

Effect choice (button switch No.1 to No.4):12 kinds

1. Push No.1: Seven-color gradual cycle changing.
3. Push No.1 & 2: Seven color jumping
5. Push No.1 & 3: RGB flash jumping.
7. Push No. 1 & 2 & 3:Static green
9. Push No.1 & 4: Static yellow
11. Push No.1 & 2 & 4: Static cyan

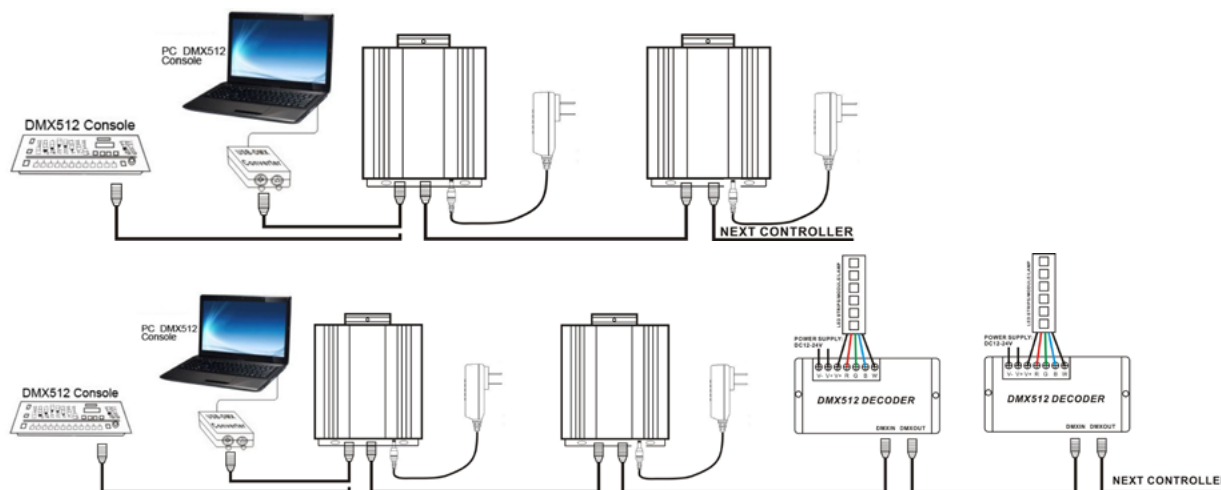
2. Push No. 2: RGB Fade in and out
4. Push No.3: RGB jumping.
6. Push No.2 & 3: Static red
8. Push No.4: Static blue
10. Push No.2 & 4: Static purple
12. Push No.3 & 4: Static white

Speed Choices (Button Switch No.5 to No. 7) 8 kinds

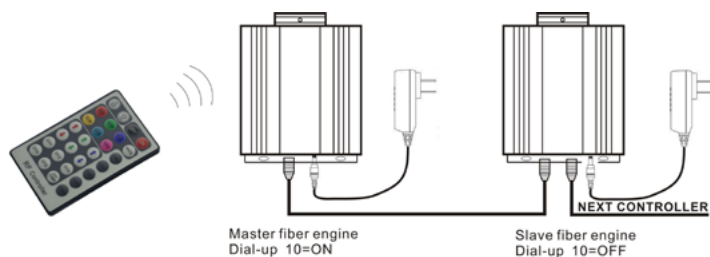
1. Push No.5: 0.5 second. 2. Push No.6: 1 second. 3. Push No.5,6: 1.5 second. 4. Push No.7: 2 second.
5. Push No.5: 0.5 second. 6. Push No.6: 1 second. 7. Push No.5,6: 1.5 second. 8. Push No.7: 2 second.

Application Connection Diagram

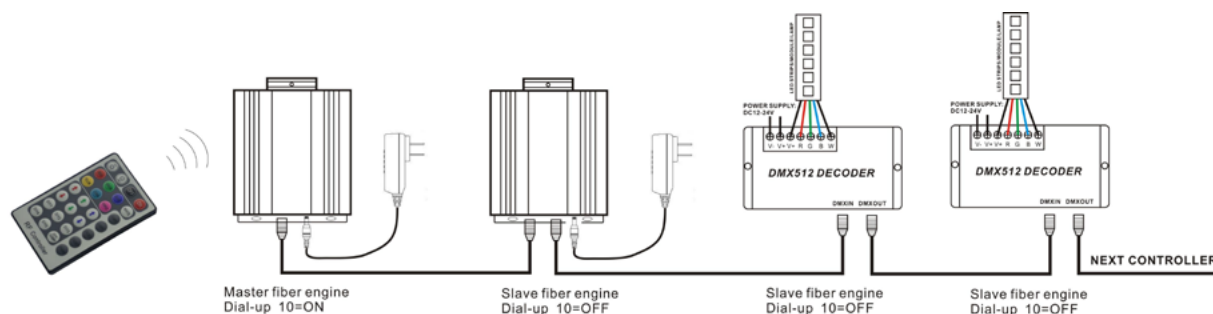
1.DMX MODEL



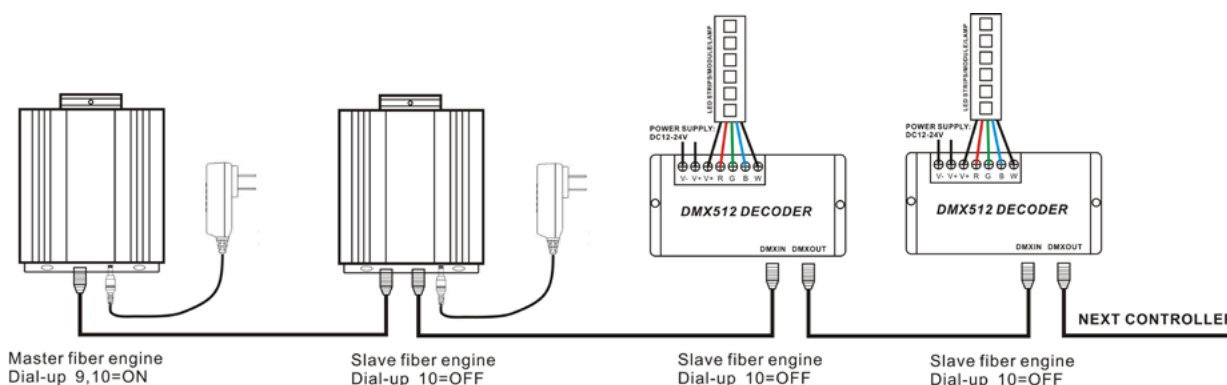
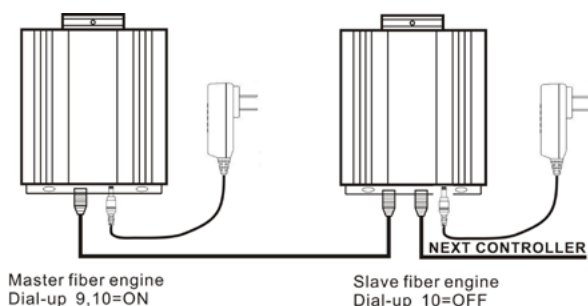
2.RF MODEL



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3.BUILT_IN MODEL



Maximum fiber connection formula:

Fiber head' s radius: R

Fiber Diameter: D1, D2,D3.....

Fiber quantity:N1, N2, N3.....

Result: $\pi * R^2 \geq N1 * D1^2 + N2 * D2^2 + N3 * D3^2$

Example:

fiber head' s radius (Diameter 20mm)

Fiber Diameter:0.75mm,1.0mm,1.5mm

Fiber Quantity:150mm, 50mm,10mm.....

Result: $3.14 * 10^2 \geq 150 * 0.75^2 + 50 * 1^2 + 10 * 1.5^2$

fiber head inner diameter : 16-20MM

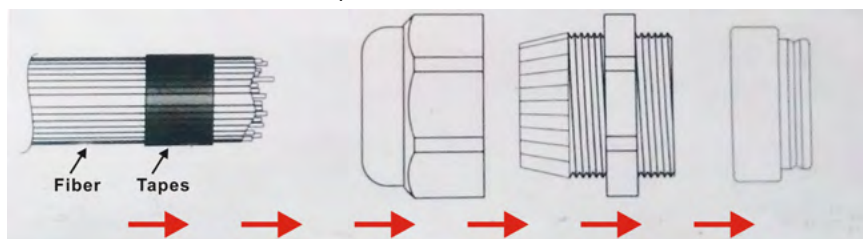
The number of optical fiber can be installed:

model	PGConnector inner diameter(MM)	fiber diameter(MM)	max fiber number
QJ-FB75RGBWRFDMX	29	0.75	1100
QJ-FB75RGBWRFDMX	29	1	660
QJ-FB75RGBWRFDMX	29	1.5	290
QJ-FB75RGBWRFDMX	29	2	160

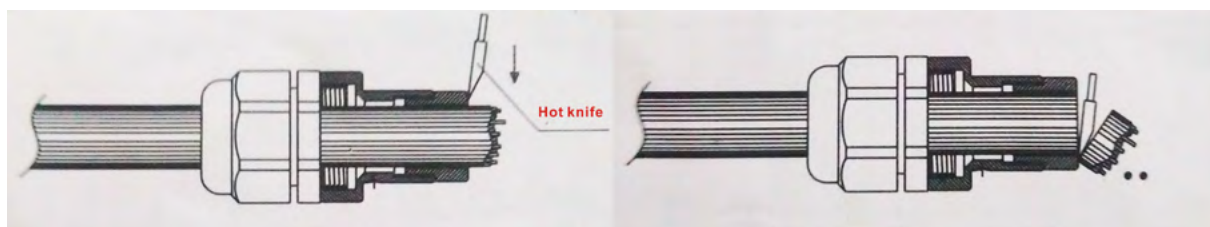
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Connection method between Fiber and Led engine:

1. Align all the fiber head, fasten with tapes which can resistance temperature over 130°C
2. Pass through the fiber to connector, fastening rotary tensioner. To make sure the fiber bunch could not move and each fiber must be in the same plane.

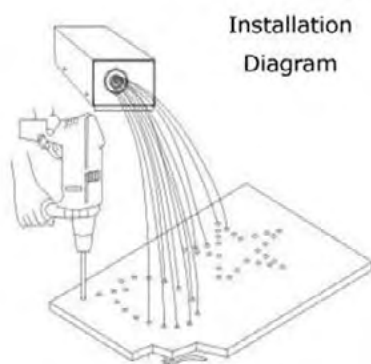


3. Cut the fiber bunch to flat surface by heat-knife or blade.



4. Make sure the fiber bunch head is smooth and clean. Thus each fiber's light will be evenly.
5. Put through the whole fiber connector to fix ring of Led engine. Fasten screw on the top of the fix ring.

Application installation diagram:



Attention:

1. Make sure the input voltage is correct.
2. Put led engine in the rain or moist place is prohibited
3. Please don't open led engine for inspection or change the electronic circuits if you are not professionor.
4. Led engine has to be good ventilation, please don't put at sealed place.
5. Put debris on top of led engine or around it will be caused poor heat dissipation.