



<https://www.icstation.com/>

1.Introduction:

RNT-8 is a DC 5V-6V Infrared Remote Control Lamp DIY Kit. User can use any infrared remote controller to control the lamp on or off with 8pcs white LED.

2.Parameter:

- 1>.Product Name:RNT-8 Infrared Remote Control Lamp DIY Kit
- 2>.Product Number:RNT-8
- 3>.Work Voltage:DC 5V-6V
- 4>.Power Type:USB or Battery(Not Included!)
- 5>.Work Mode:Switch or Infrared Remote Control
- 6>.Color:White LED
- 7>.Work Temperature:-25°C~85°C
- 8>.Work Humidity:5%~95%RH
- 9>.Size(Installed):74.2*74.2*54mm

3.Function:

- 1>.Black button on PCB is used to turn ON or OFF lamp.
- 2>.Any infrared remote controller to control the lamp on or off.
- 3>.Note:The batteries must be removed when using USB power supply.

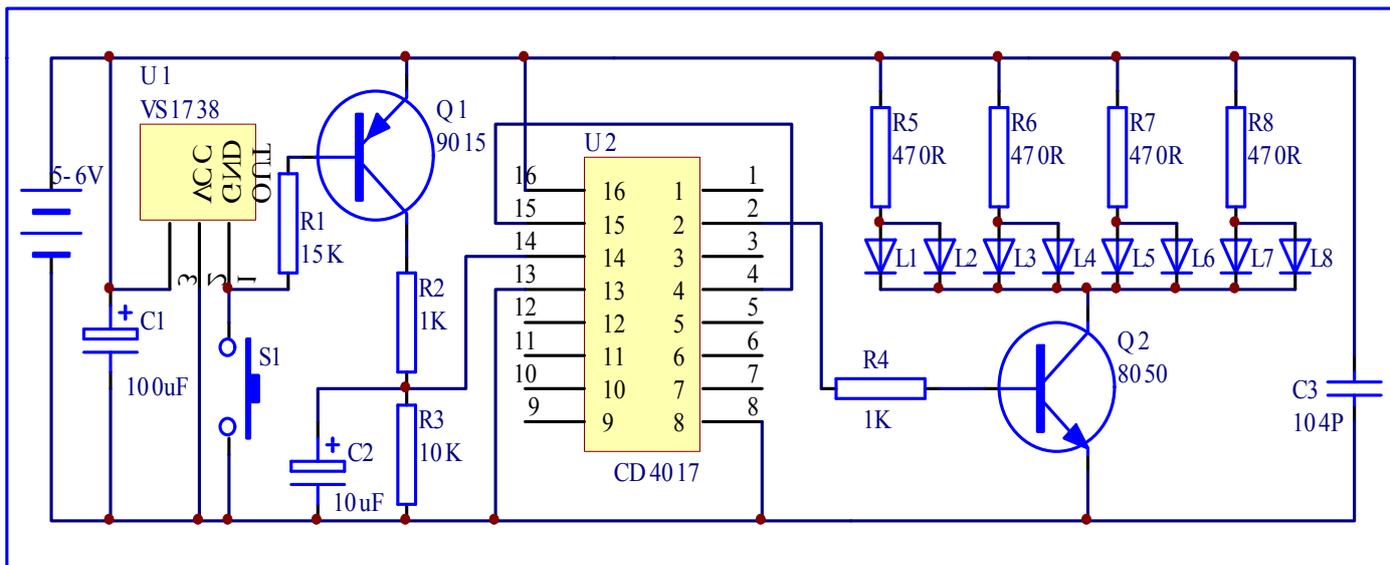
4.Component List:

NO.	Component Name	PCB Marker	Parameter	QTY
1	Metal Film Resistor	R5-R8	470ohm	4
2	Metal Film Resistor	R2,R4	1K	2
3	Metal Film Resistor	R3	10K	1
4	Metal Film Resistor	R1	15K	1
5	Ceramic Capacitor	C3	0.1uf	1
6	Electrolytic Capacitor	C2	10uF 25V	1
7	Electrolytic Capacitor	C1	100uF 16V	1
8	F5 LED White	L1-L8	5mm	8
9	S9015 Transistor	Q1	TO-92	1
10	S8050 Transistor	Q2	TO-92	1
11	Black Button	S1	6*6*13mm	1
12	VS1738 Infrared receiver	U1		1
13	CD4017	U2	DIP-16	1
14	4*AA battery box			1
15	USB Power Wire	DC5-6V	100cm	1
16	Lampshade		60mm	1
17	Fixed plate		74.2*74.2mm	1

18	Copper Cylinder		M3*10+6	4
19	Screw		M3*6	4
20	Screw		M2*8	2
21	Nut		M3	4
22	Nut		M2	2
22	PCB		74.2*74.2mm	1

Note:Users can complete the installation according to the PCB silk screen and component list.

5.Schematic diagram:



6.Installation Tips:

- 1>.User needs to prepare the welding tool at first.
- 2>.Please be patient until the installation is complete.
- 3>.The package is DIY kit.It need finish install by user.
- 4>.The soldering iron can't touch the components for a long time(1.0 second), otherwise it will damage the components.
- 5>.Pay attention to the positive and negative of the components.
- 6>.Strictly prohibit short circuit.
- 7>.User must install the LED according to the specified rules.Otherwise some LED will not light.
- 8>.Install complex components preferentially.
- 9>.Make sure all components are in right direction and right place.
- 10>.Check that all of the LED can be illuminated.
- 11>.It is strongly recommended to read the installation manual before starting installation!!!
- 12>.Please wear anti-static gloves or anti-static wristbands when installing electronic components.

7. Installation Steps(Please be patient):

Step 1: Install 4pcs 470ohm Metal Film Resistor at R5-R8.

Step 2: Install 2pcs 1Kohm Metal Film Resistor at R2,R4.

Step 3: Install 1pcs 10Kohm Metal Film Resistor at R3.

Step 4: Install 1pcs 15Kohm Metal Film Resistor at R1.

Step 5: Install 8pcs 5mm F5 White LED at L1-L8. The longer pin is inserted into the inner ring pad(positive pole). The shorter pins are inserted into the outside ring pads.

Step 6: Install 1pcs DIP-16 CD4017 IC at U6. There is a mark on one end of the IC and there is a mark on PCB where the IC can place on. These two marks are corresponding to each other and are used to specify the installation direction of the IC.

Step 7: Install 1pcs 0.1uF 104 Ceramic Capacitor at C3.

Step 8: Install 1pcs TO-92 S9015 Transistor at Q1.

Step 9: Install 1pcs TO-92 S8050 Transistor at Q2.

Step 10: Install 1pcs VS1738 Infrared receiver at U2. Pay attention to the installation direction.

Step 11: Install 1pcs 10uF 25V Electrolytic Capacitor at C2. Pay attention to distinguish between positive and negative. The Longer pin is positive pole.

Step 12: Install 1pcs 100uF 16V Electrolytic Capacitor at C1. Pay attention to distinguish between positive and negative. The Longer pin is positive pole.

Step 13: Install 1pcs 6*6*13mm Black Button at S1.

Step 14: Install 1pcs 4*AA battery box or USB Power Wire at DC5-6V. Red wire connect to '+' and black wire connect to '-'. Note: It is recommended to connect to only one of the power supply methods.

Step 15: Fix battery box by 2pcs M2*8 Screw and 2pcs M2 Nut if installed battery box.

Step 16: Install 4pcs M3*10+6 Copper Cylinder and 4pcs M3 Nut on PCB. May need to adjust the nut position.

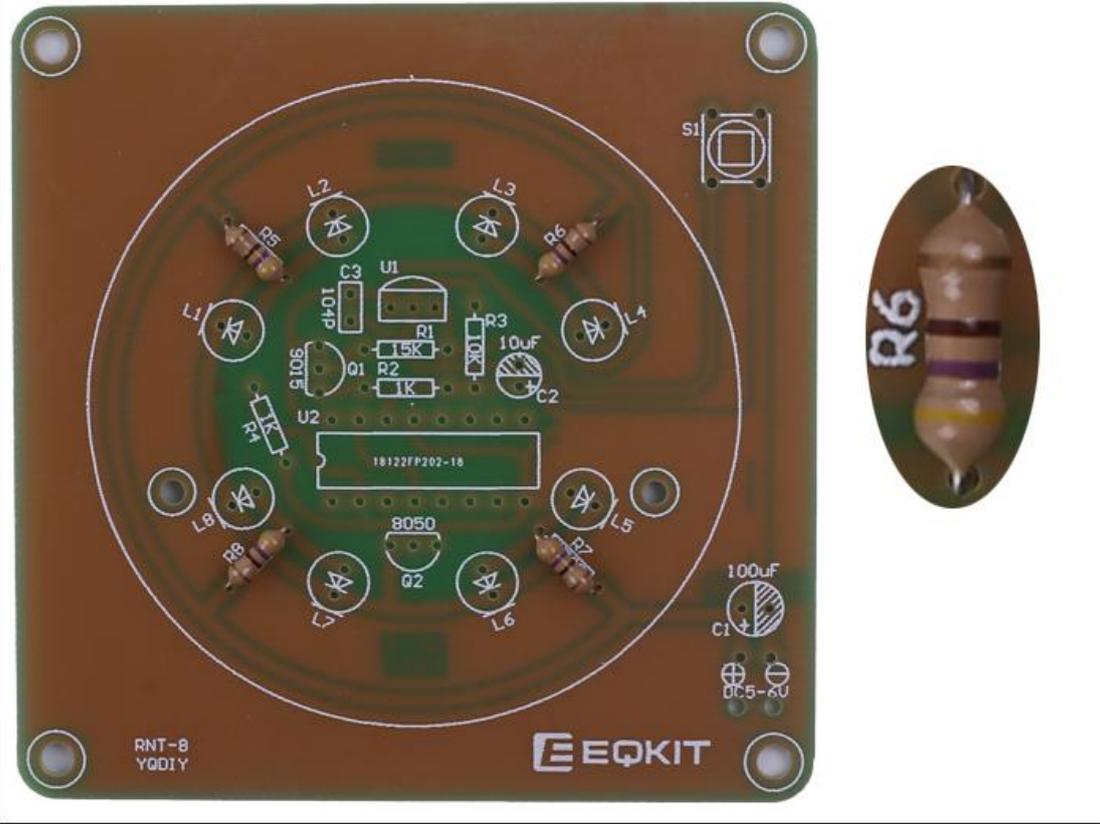
Step 17: Tear off the protective film on the black acrylic surface.

Step 18: Install Lampshade and fixed by Fixed plate and M3*6 Screw.

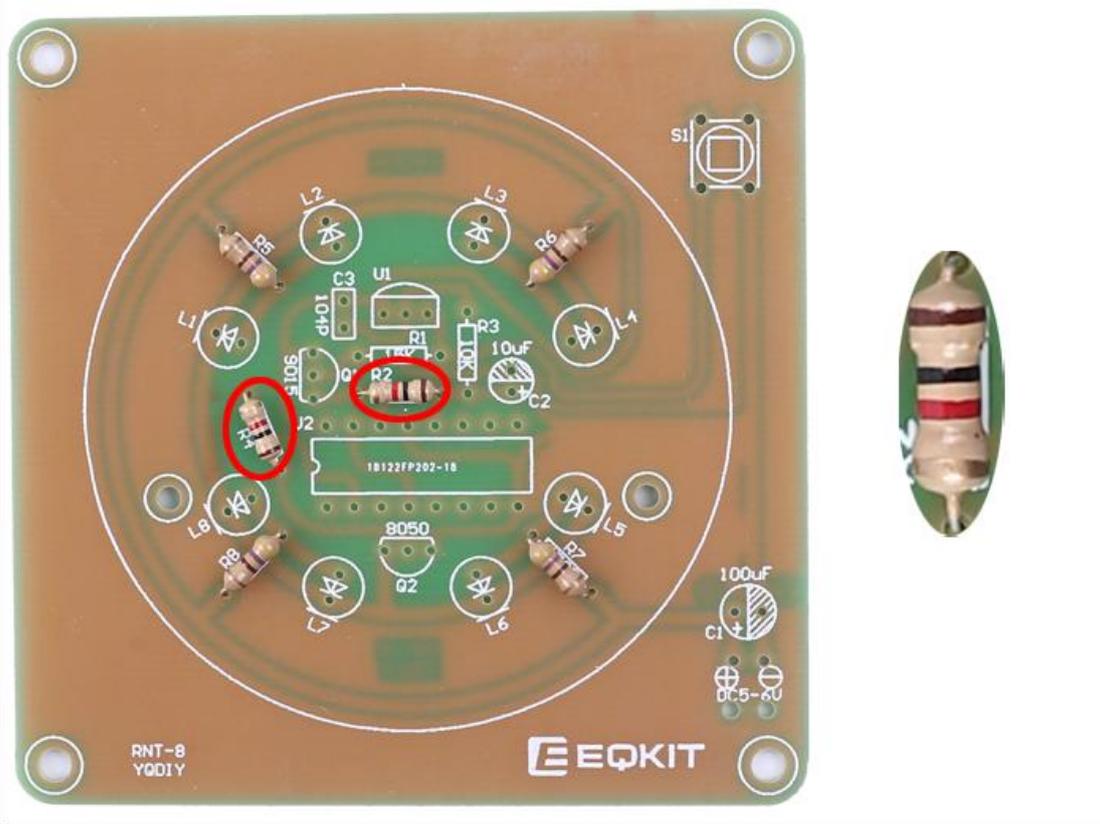
Step 19: Install 4pcs 1.5V AA battery(not included) or connect USB power and then press button to switch lamp.

8. Install shown steps:

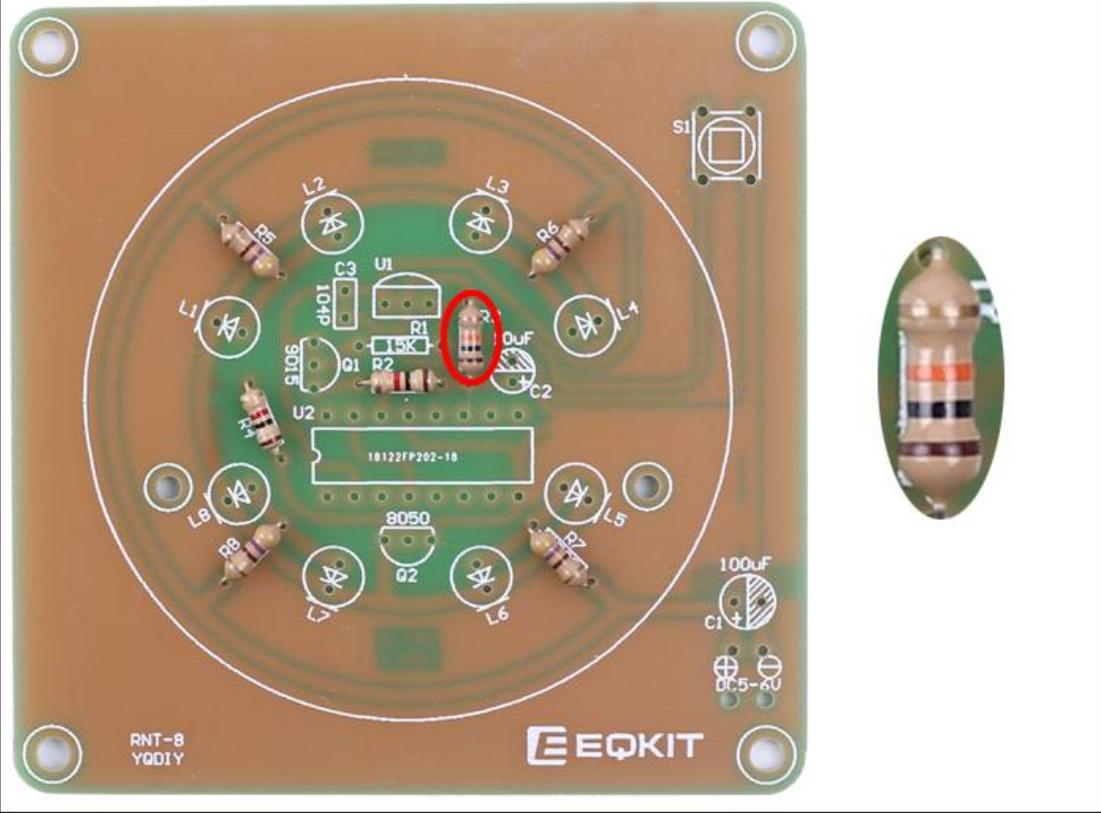
Step 1: Install 4pcs 470ohm Metal Film Resistor at R5-R8.



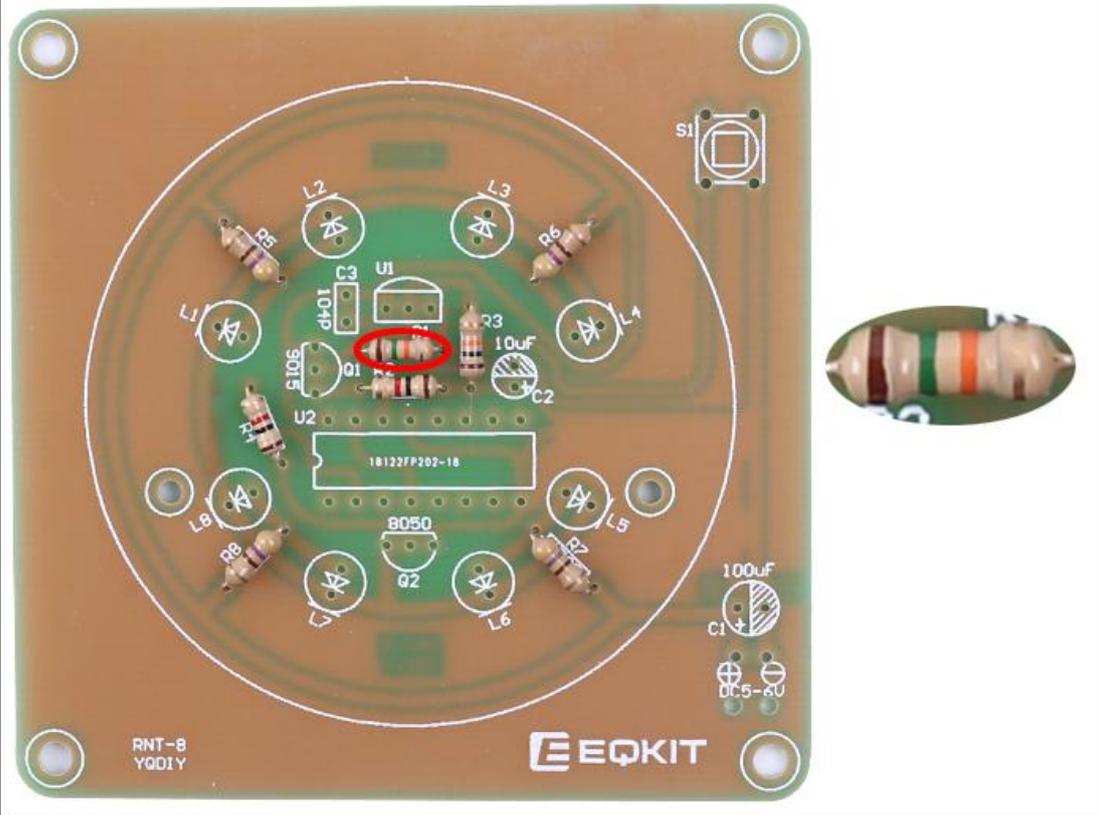
Step 2: Install 2pcs 1Kohm Metal Film Resistor at R2,R4.



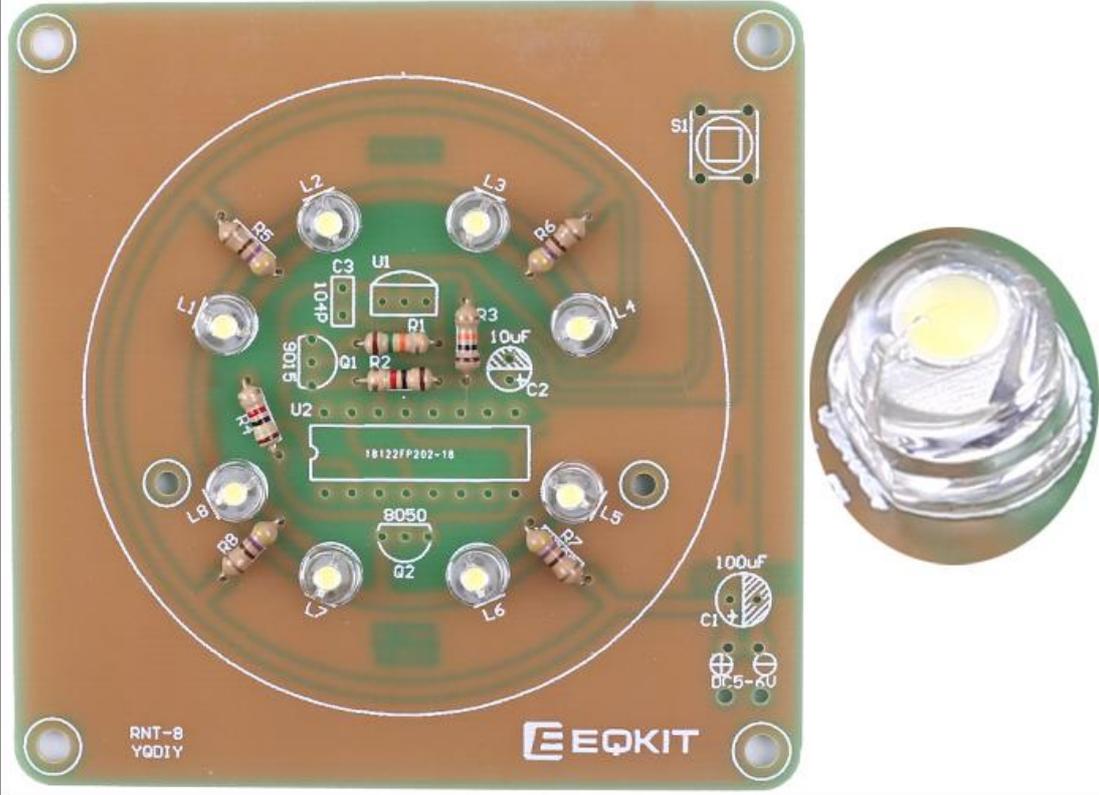
Step 3: Install 1pcs 10Kohm Metal Film Resistor at R3.



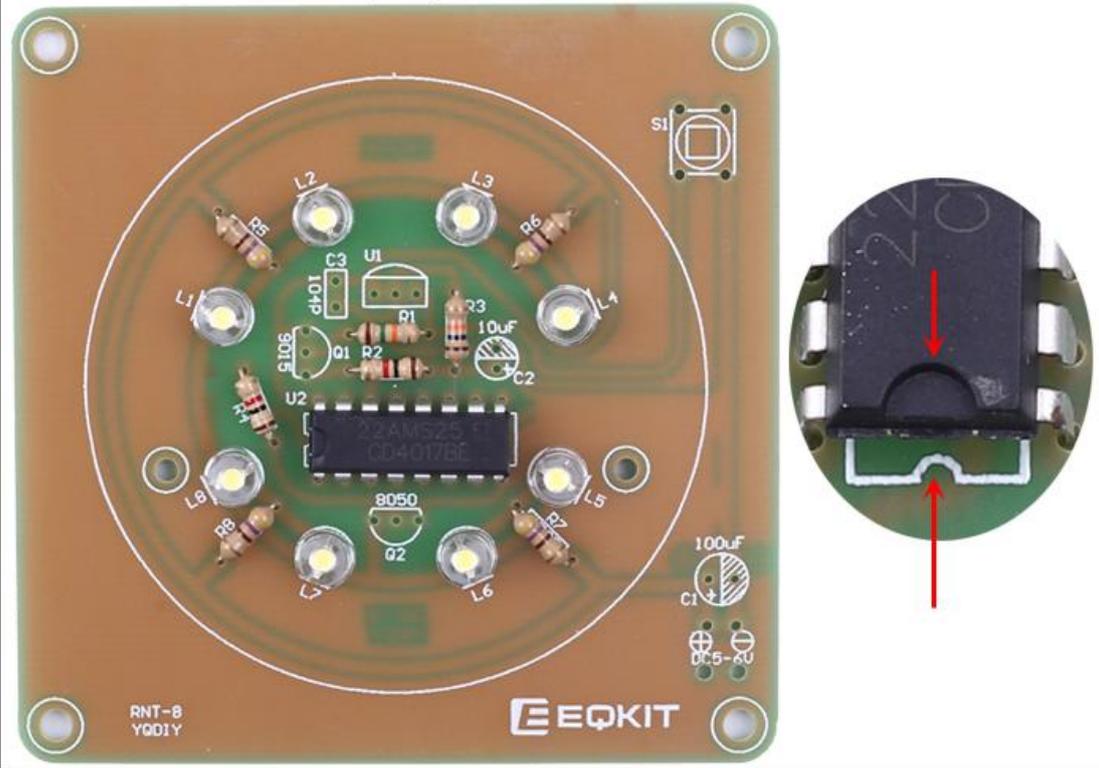
Step 4: Install 1pcs 15Kohm Metal Film Resistor at R1.



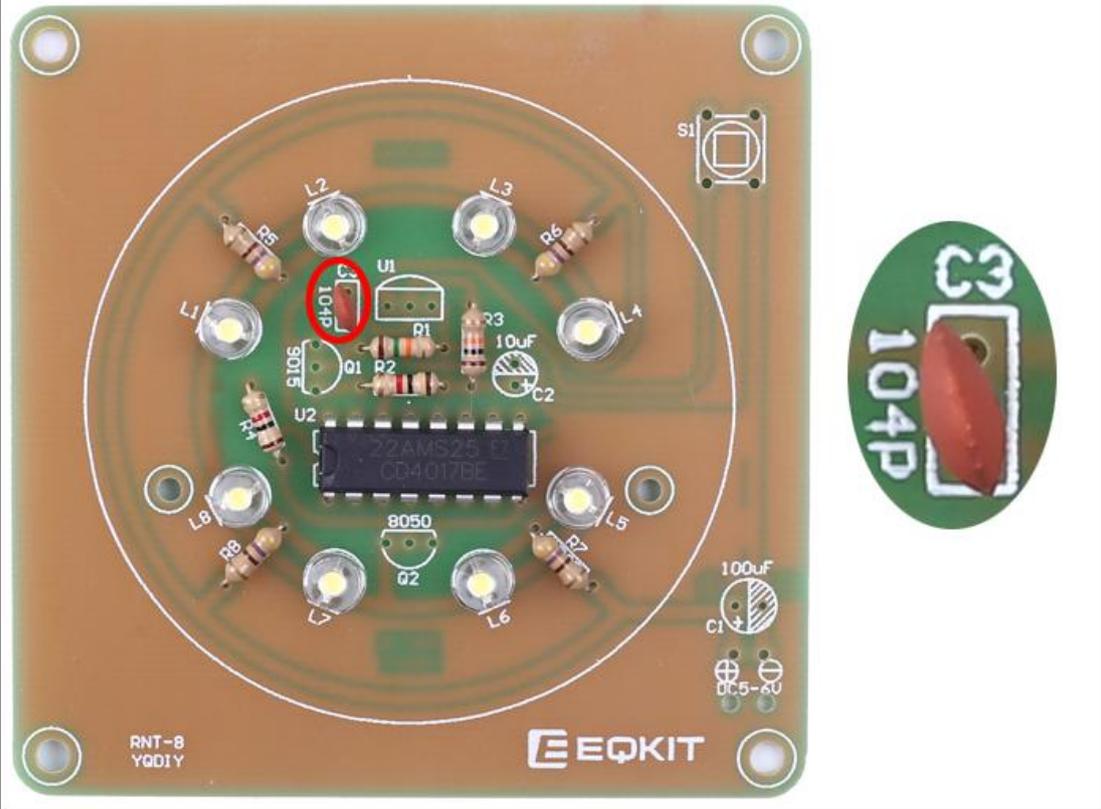
Step 5: Install 8pcs 5mm F5 White LED at L1-L8. The longer pin is inserted into the inner ring pad(positive pole). The shorter pins are inserted into the outside ring pads.



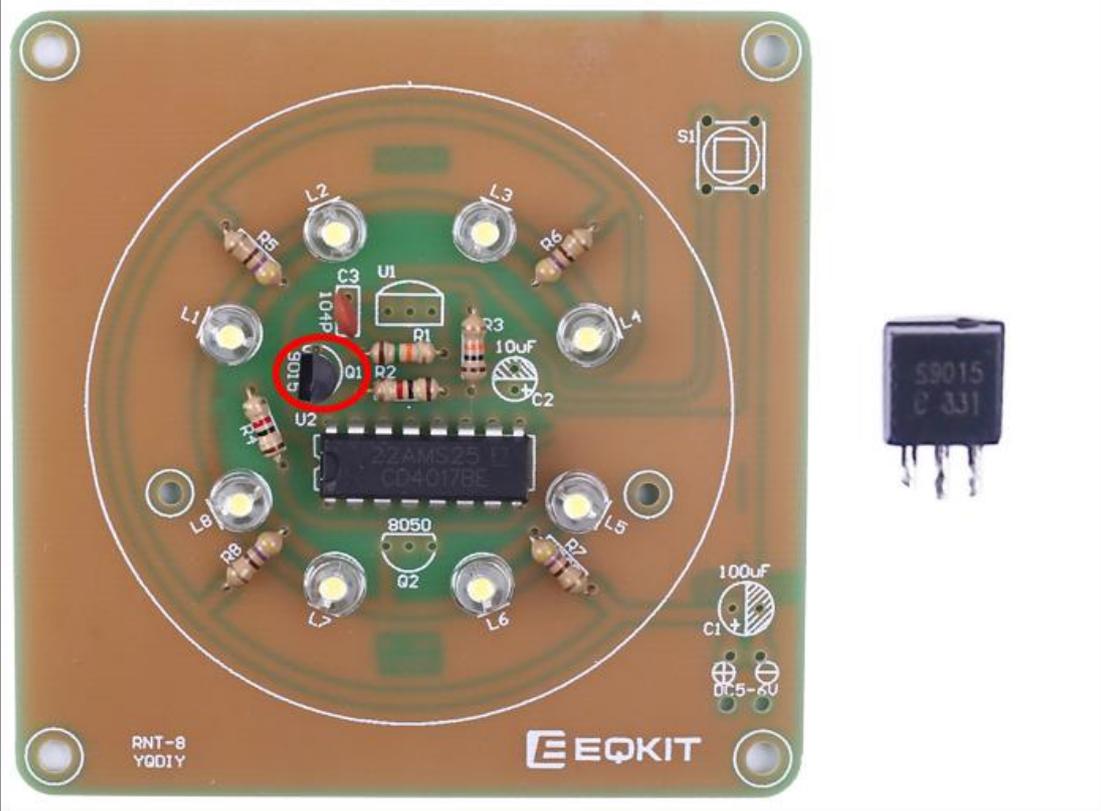
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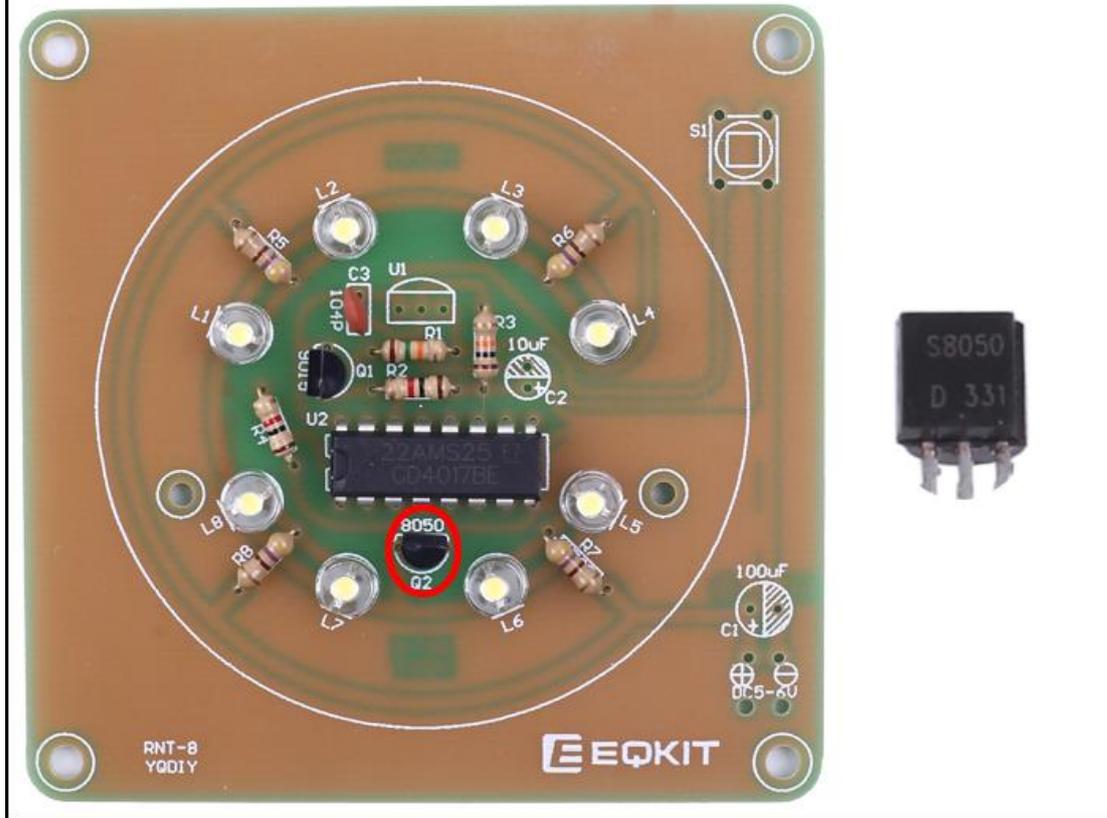
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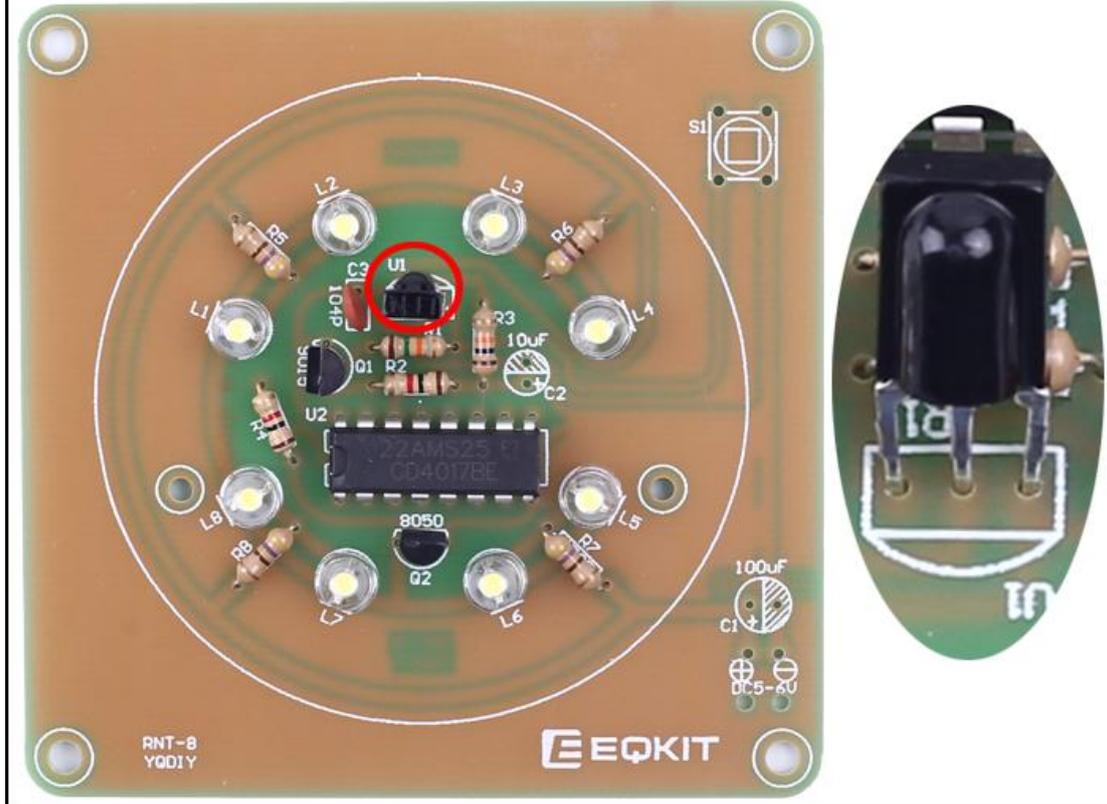
Step 8: Install 1pcs TO-92 S9015 Transistor at Q1.



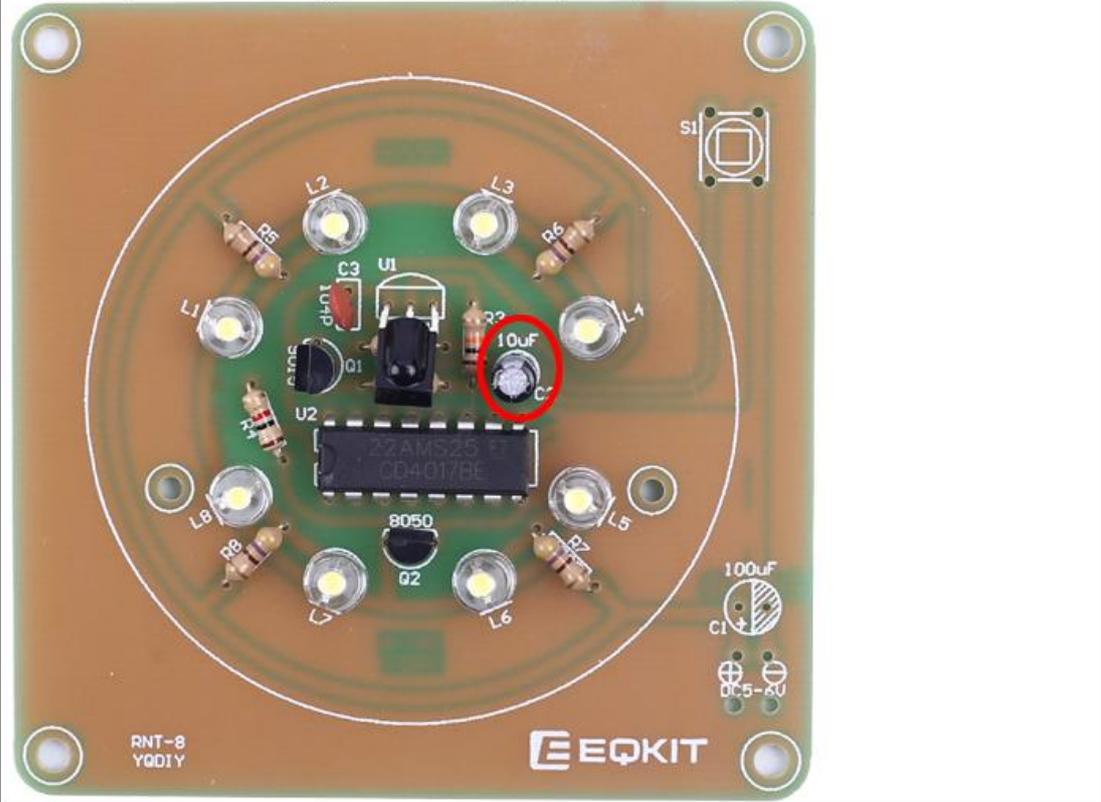
Step 9: Install 1pcs TO-92 S8050 Transistor at Q2.



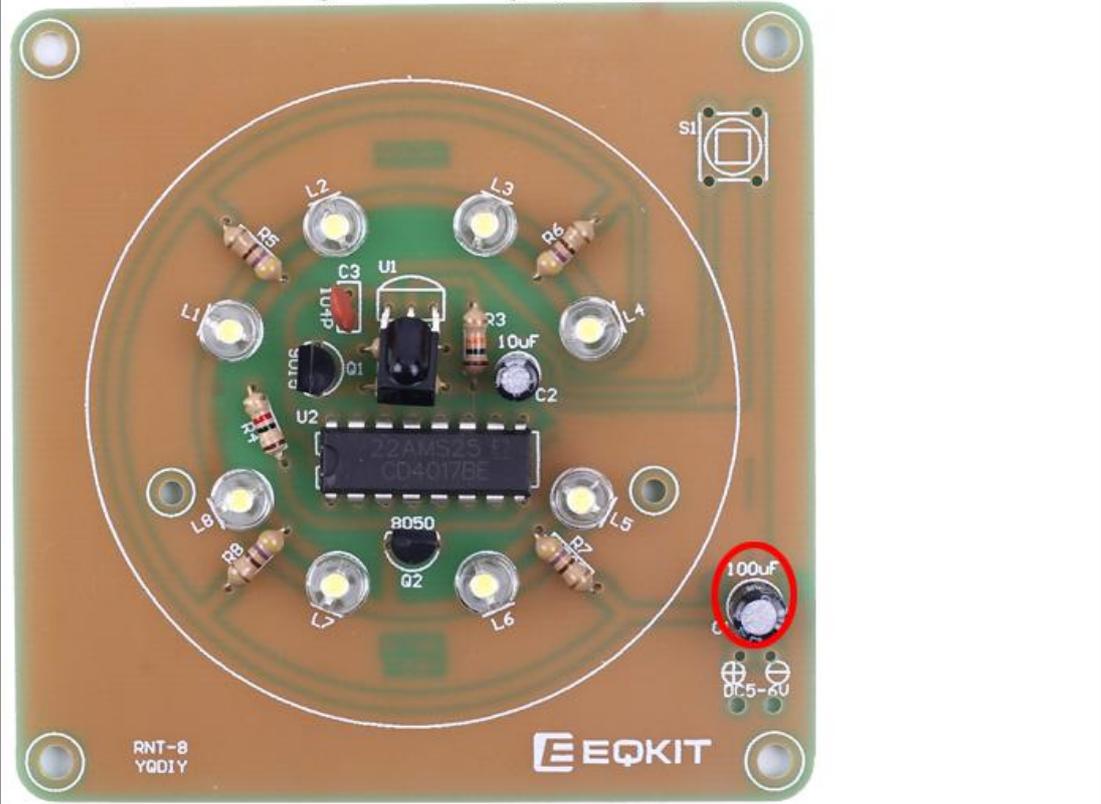
Step 10: Install 1pcs VS1738 Infrared receiver at U2. Pay attention to the installation direction.



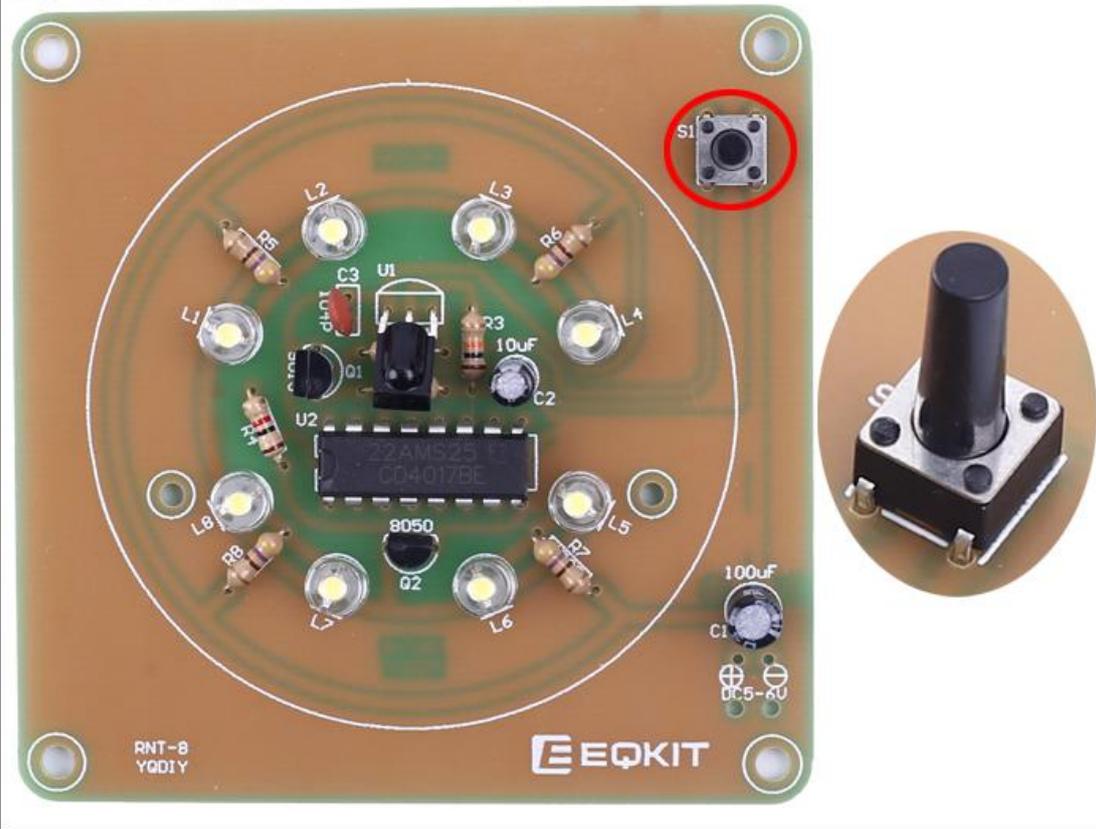
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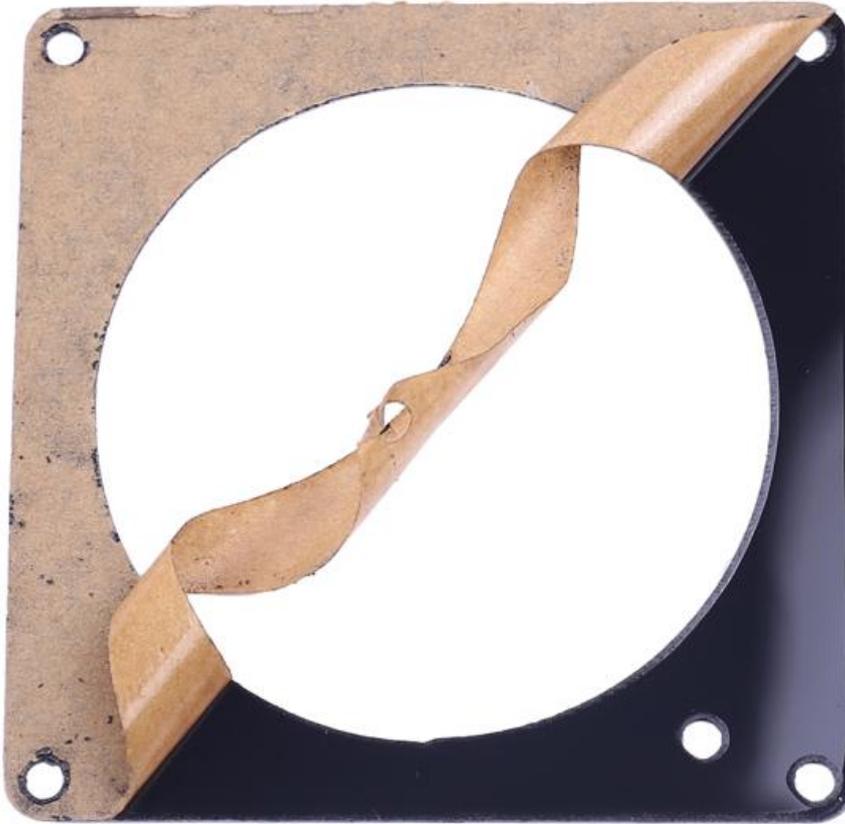
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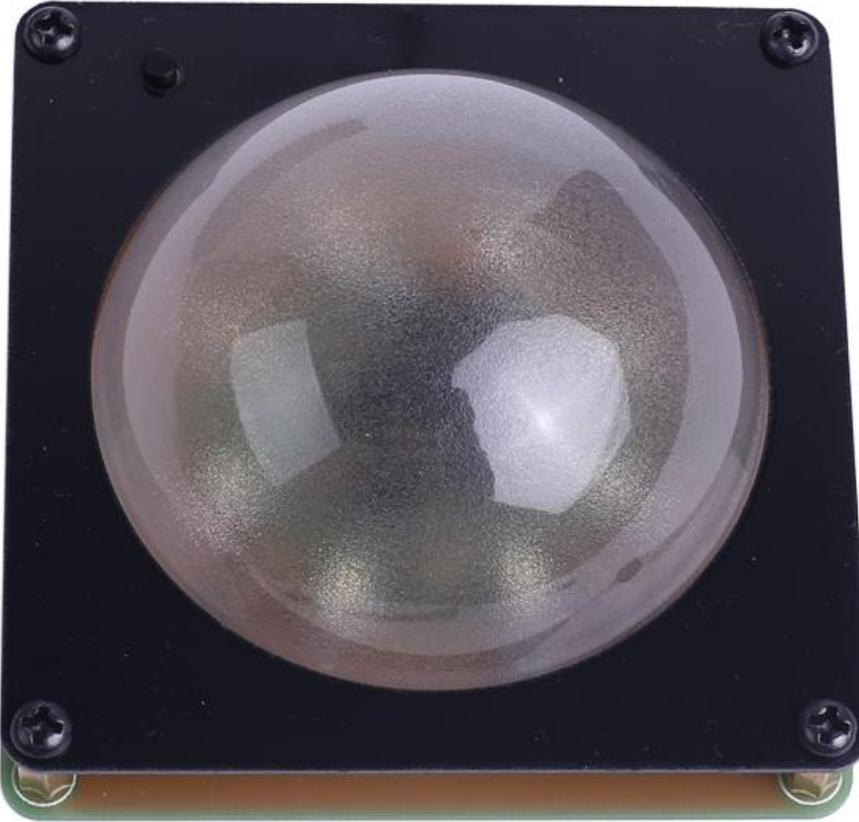
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