

Sound Controlled LED Flashing Glasses DIY Kit

I. Introduction:

It is a Sound Controlled LED Flashing Glasses DIY Kit with LED automatic flashing effects. It has a built-in mini microphone which can make the LED flashing with ambient sound volume. The higher the ambient volume, the more LED are lit. The ambient volume keeps changing, and the LED flickering effect is more obvious.

It can be used for holidays, events, celebrations and parties, etc. It can be used to create a festive atmosphere.

It is a very interesting DIY electronic product which enables users to understand the circuit more clearly and learn welding skills.

II. Feature:

- 1>.LED flashes automatically
- 2>.Sound-activated light flickering effect
- 3>.Adjustable sound sensing sensitivity
- 4>.Perfect simple circuit
- 5>.DIY hand soldering

III. Parameter:

- 1>.Product Name:Sound Controlled LED Flashing Glasses DIY Kit
- 2>.Work Voltage:DC 12V
- 3>.Control Type:MIC sound control
- 4>.Work Temperature:-20°C~85°C
- 5>.Work Humidity:5%~85%RH
- 6>.Size(Installed):165*150*52mm

IV. Component Listing:

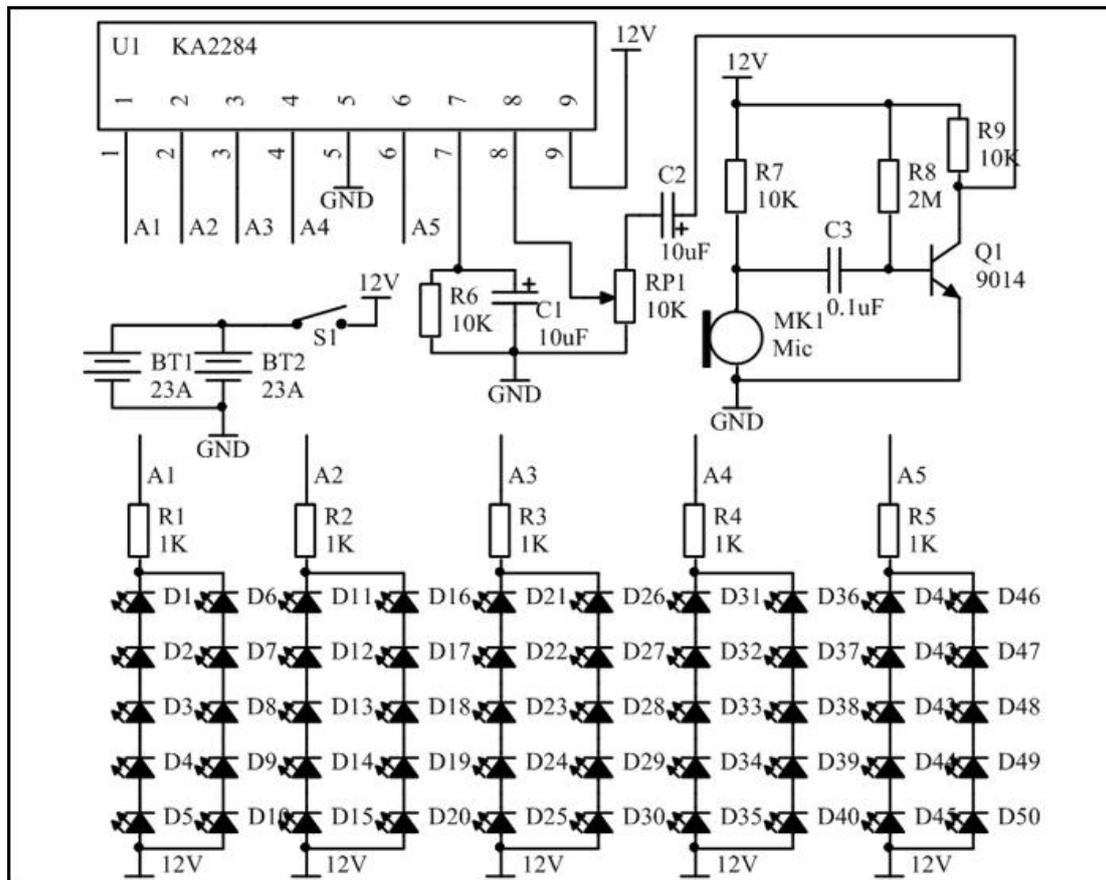
NO.	Component Name	PCB Marker	Parameter	QTY
1	KA2284 LED Driver	U1	ZIP-9	1
2	Metal Film Resistor	R1-R5	1Kohm	5
3	Metal Film Resistor	R6,R7,R9	10Kohm	3
4	Metal Film Resistor	R8	2Mohm	1
5	Potentiometer	RP1	10Kohm 103	1
6	Ceramic capacitor	C3	0.1uF 104	1
7	Electrolytic capacitor	C1,C2	10uF	2
8	S9014 Transistor	Q1	TO-92	1
9	LED	D1-D50	3mm	50
10	MIC-6022 Microphone	MK1		1
11	SK12D07 Toggle Switch	S1	5Pin	1
12	Battery fixing metal sheet	BT1,BT2		4
13	Black PA1.5*5 Screw			8
14	Glasses shell			1
15	23A 12V Battery			2
16	Screwdriver			1
17	PCB			1

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

V. Application:

- 1>.Training welding skills
- 2>.Student school
- 3>.DIY production
- 4>.Project Design
- 5>.Electronic competition
- 6>.Gift giving
- 7>.Crafts collection
- 8>.Home decoration
- 9>.Souvenir collection
- 10>.Graduation design
- 11>.Holiday gifts

VI. Schematic:



VII. 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(3s), otherwise damage 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.

VIII. Installation Steps(Please be patient install!!!):

1>.Step 1: Install 1pcs 2Mohm Metal Film Resistor at R8.

2>.Step 2: Install 3pcs 10Kohm Metal Film Resistor at R6,R7,R9.

3>.Step 3: Install 5pcs 1Kohm Metal Film Resistor at R1-R5.

4>.Step 4: Install 1pcs MIC-6022 Microphone at MK1. Pay attention to distinguish between positive and negative pole.

5>.Step 5: Identify the positive(anode) and negative(cathode) lead of LED.The leads of the LED must be installed correctly, otherwise the LED cannot be turned on.Here are four methods as following:

5.1>.According to the length of the LED lead to distinguish. The longer pin is positive(anode) lead. The shorter pin is negative(cathode) lead.

5.2>.Identify the negative(cathode) of the LED is to look into the plastic case where one can see that the negative(cathode) is much thicker/bigger inside the plastic case than the anode lead.

5.3>.Identify by edge of plastic case.The negative(cathode) lead of the LED should be the pin nearest the flat on the plastic case.

5.4>.Test by 3V battery or multimeter.The pin is positive(anode) lead which has connect to the positive of 3V if LED can light up after connect 3V power supply.(LED should not be powered directly from the 3V for a short time:less then 0.5second)

5.5>.It is positive(anode) where the white mark “ + ” pointing to on PCB.

6>.Step 6: Install 50pcs 3mm LED at D1-D50. Pay attention to distinguish between positive and negative pole.

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

8>.Step 8: Install 1pcs ZIP-9 KA2284 LED Driver at U1. Pay attention to the mounting direction as showing.

9>.Step 9: Install 1pcs TO-92 S9014 Transistor at Q1. Pay attention to the mounting direction as showing.

10>.Step 10: Install 2pcs 10uF Electrolytic Capacitor at C1,C2.Pay attention to distinguish between positive and negative.The Longer pin is positive pole.

11>.Step 11: Install 1pcs 10Kohm 103 Potentiometer at RP1.

12>.Step 12: Install 1pcs 5Pin SK12D07 Toggle Switch at S1 on PCB another side.

13>.Step 13: Install 2pcs battery holder positive metal sheet. Pay attention to the placement.

14>.Step 14: Install 2pcs battery holder negative metal sheet. Pay attention to the placement.

15>.Step 15: Put the PCB into the silver mirror frame and pay attention to the toggle switch.

16>.Step 16: Fixed PCB by 8pcs Black PA1.5*5 Screw.

17>.Step 17: Install 2pcs 23A 12V Battery. Pay attention to distinguish between positive and negative pole. Negative pole connect to spring metal sheet.

18>.Step 18: Turn ON work power and adjust sound sensing sensitivity to enjoy this LED Flashing Glasses.

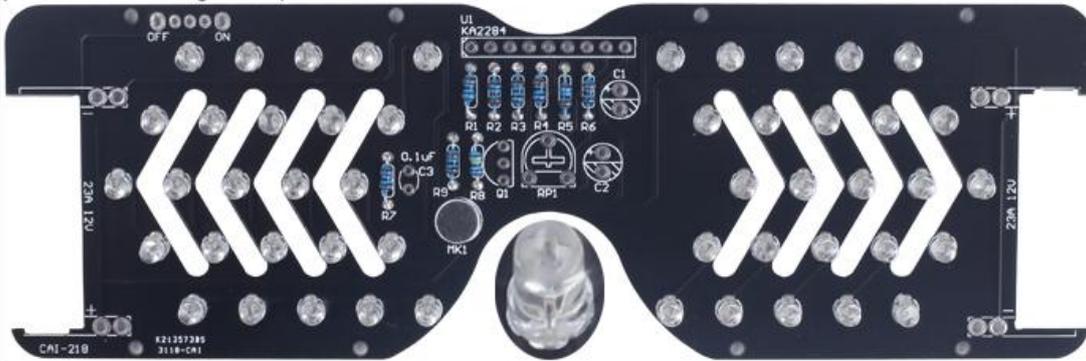
IX. Install shown steps:

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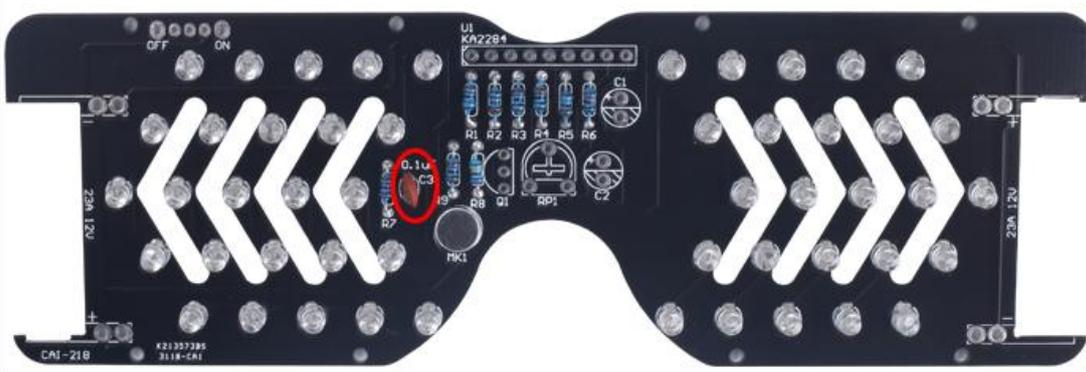
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- 5.5>.Note:If the flat on package disagrees with other indicators(short lead,large cathode lead end), then other indicators take priority. I.e. if the flat disagrees with the lead length,use the lead length as the cathode indicator.



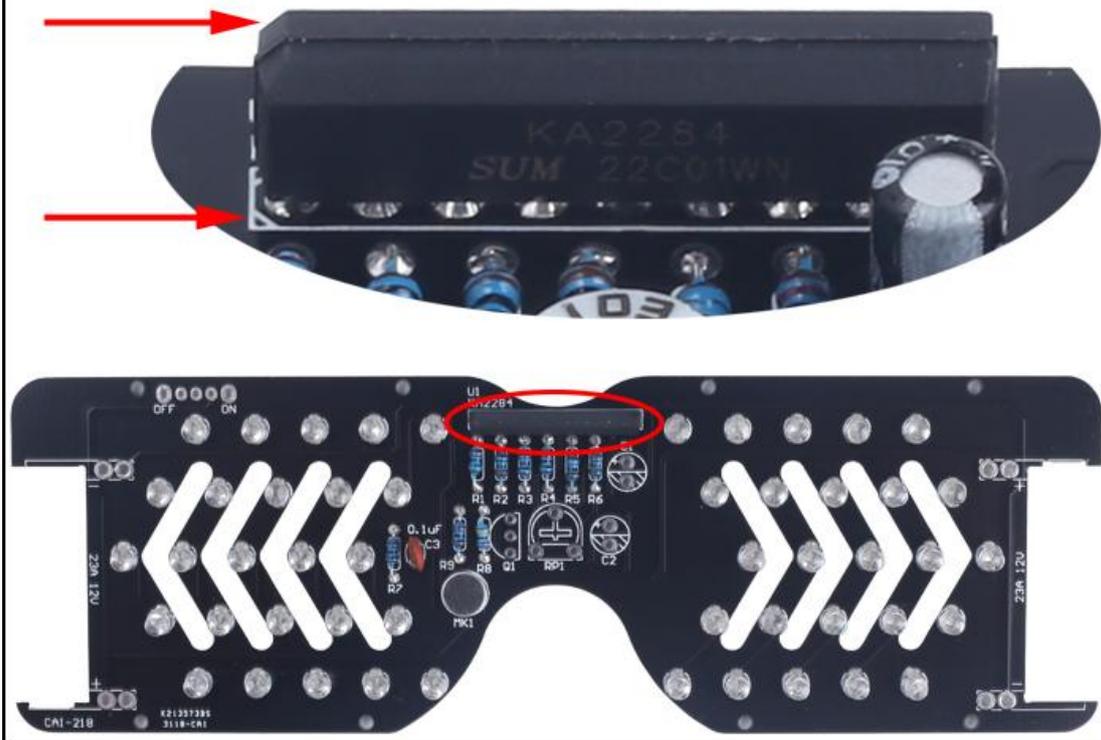
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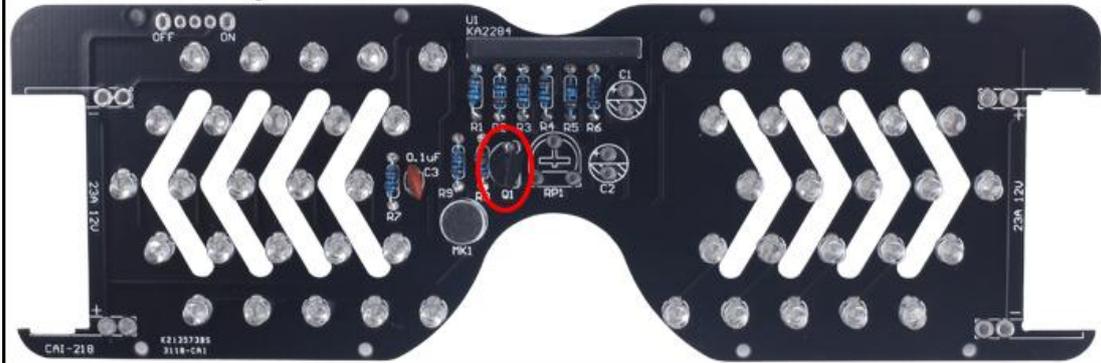
Step 7: Install 1pcs 0.1uF 104 Ceramic Capacitor at C3.



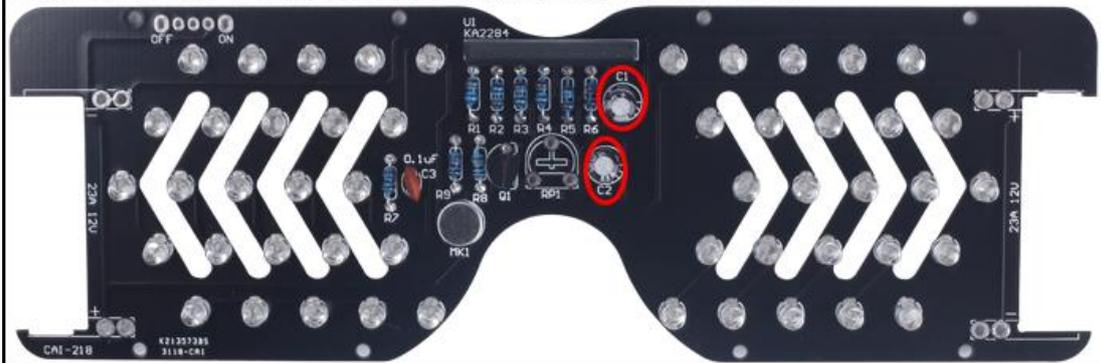
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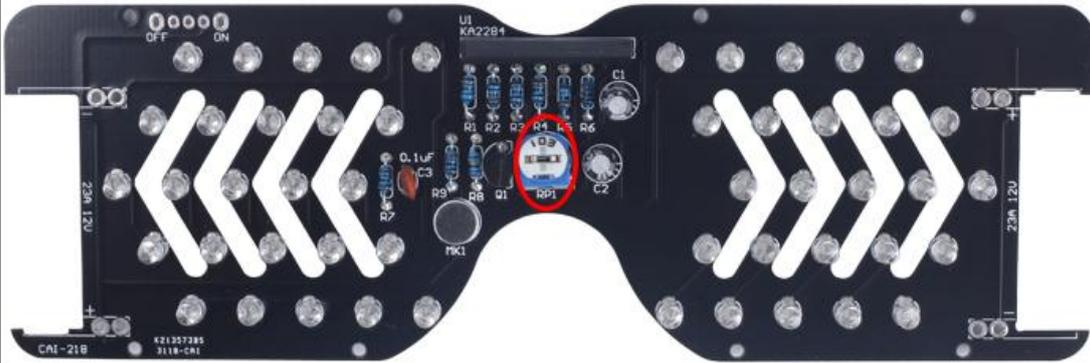
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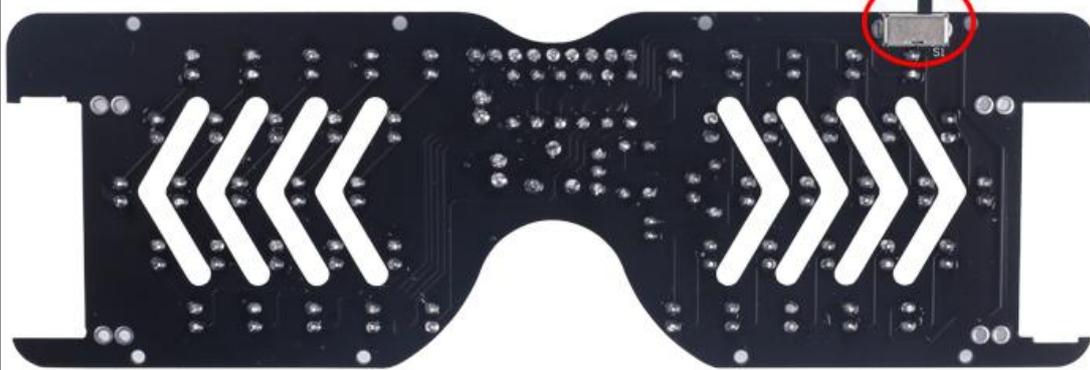
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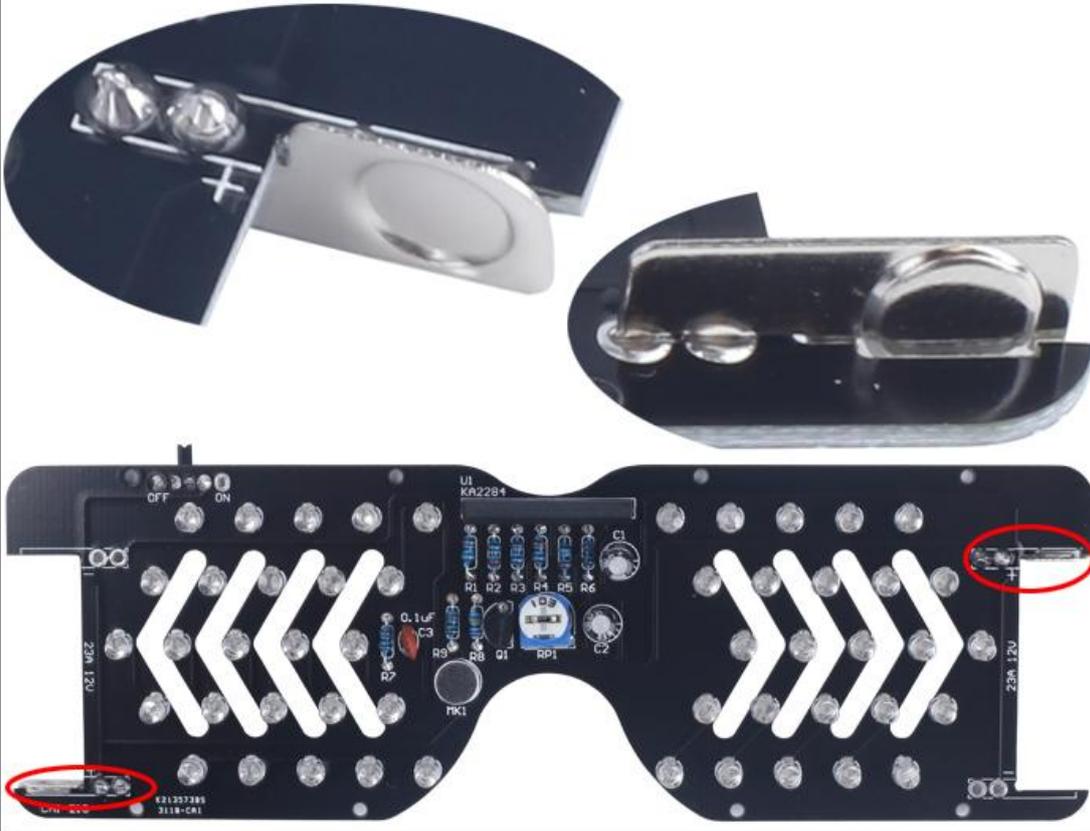
Step 11: Install 1pcs 10Kohm 103 Potentiometer at RP1.



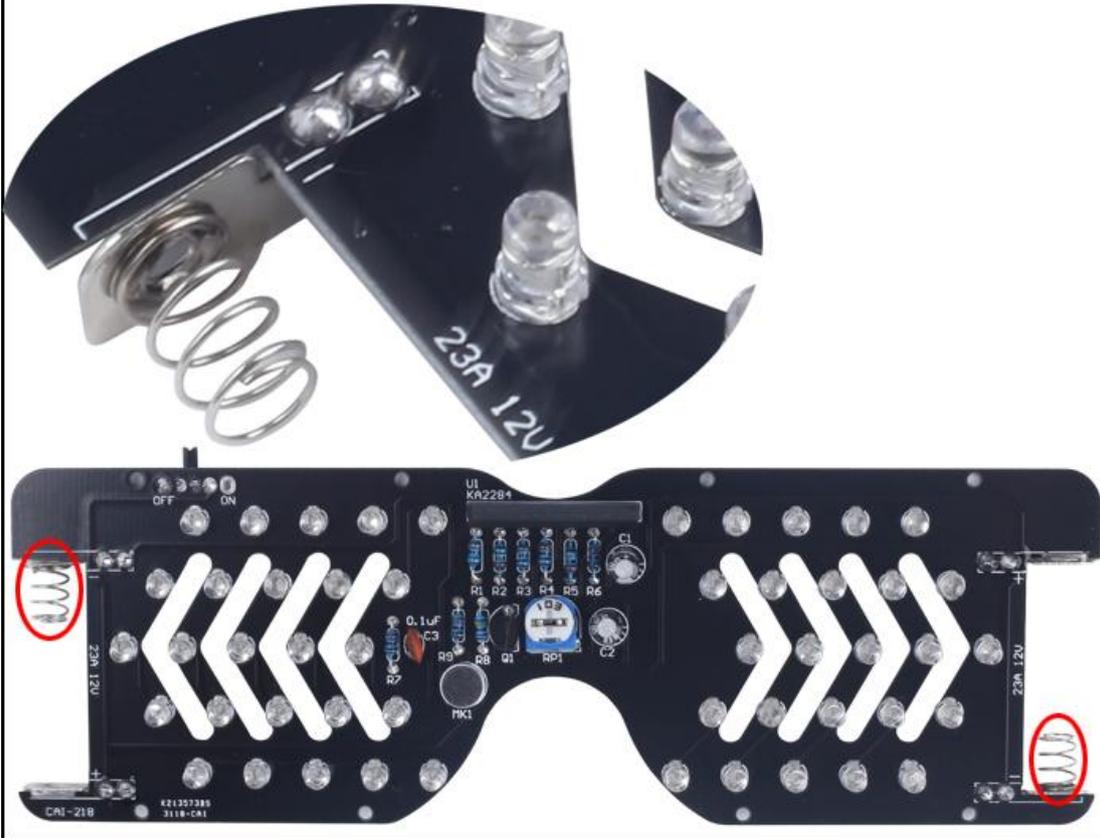
Step 12: Install 1pcs 5Pin SK12D07 Toggle Switch at S1 on PCB another side.



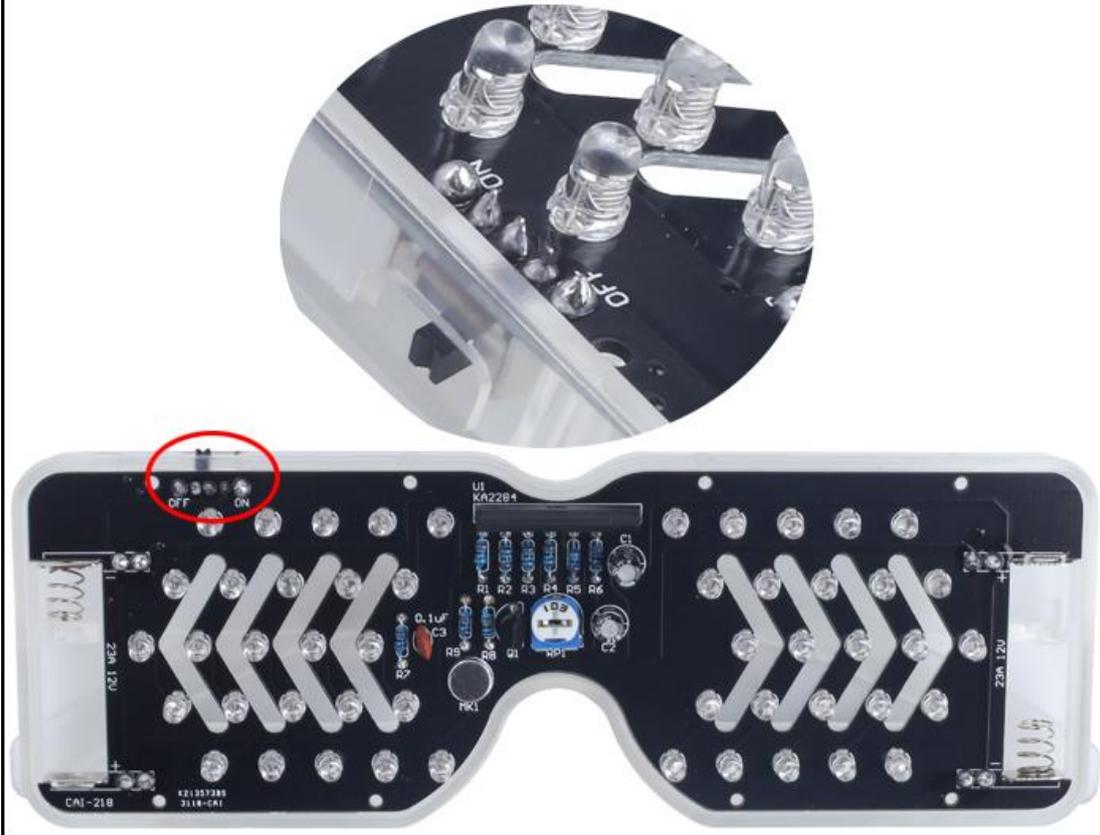
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