Acrylic 3D Christmas Tree DIY Kit

1.Introduction:

This acrylic Christmas tree is a cool DIY project for the holiday decoration. It's a very simple making kit and also has a variety of LED color gradient modes. It has two Christmas trees above and each Christmas tree is combined by two tree shape acrylic, so that you can see the Christmas Tree in any angle. The bottom is built by the long oval shape PCB and acrylic, and each part is added a 5mm full color LED refraction effect. A variety of gradients color changing is all control by the main chip that create a colorful Christmas tree making kit. In order to conform the Christmas holiday theme, the PCB add some different & funny Christmas patterns to increase the festival spirit.

2.Feature:

1>.7 kinds RGB backlight LED full color flashing effect
2>.Automatically switch LED flashing status by re-start power switch
3>.ON/OFF Christmas music playing
4>.5mm RGB LED high brightness
5>.DIP components design and easy for beginner
6>.Micro USB power supply method

3.Parameter:

1>.Work Voltage:DC 5V
2>.Work Temperature:-40℃~85℃
3>.Work Humidity:5%~95%RH
4>.Size(Installed):150*55*133mm

5.Use Methods:

1>.Connect to the 5V power supply by Micro USB cable.
2>.Turn ON/OFF the Toggle Switch can turn ON/OFF work power and switch next LED Flashing Status.
3>.Note: You can connect power wire to ‘ + ’ and ‘ - ’ pads if don't use USB get voltage.

6.Component Listing:

1>.1pcs DIP-8 STC8G1K17A IC Controller
2>.1pcs Micro USB Socket
3>.1pcs Toggle Switch
4>.3pcs 4pin 5mm RGB LED
5>.1pcs 80cm USB Power Wire
6>.4pcs Acrylic Board
7>.4pcs M3*18mm Screw
8>.8pcs M3 Nut
9>.1pcs 120*30mm PCB

7.Application:

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

8.Installation Tips:

1>.User needs to prepare the welding tool at first.
    1.1>.Soldering iron (<50 Watt)
    1.2>.Rosin core ("radio") solder
    1.3>.Wire cutters
    1.4>.Wire strippers

1.5>.Screwdriver

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>.User must install the LED according to the specified rules.Otherwise some LED will not light.

7>.Install complex components preferentially.

8>.Make sure all components are in right direction and right place.

9>.It is strongly recommended to read the installation manual before starting installation!!!

10>.Please wear anti-static gloves or anti-static wristbands when installing electronic components.

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

1>.Step 1: Micro USB Socket: Use pliers to straighten the two large fixed pins, and then use scissors to cut the small fixed pins as shown.

2>.Step 2: Install 1pcs Micro USB Socket on PCB by fix two large fixed pins and 2 side pins as shown.

3>.Step 3: Install 1pcs DIP-8 STC8G1K17A IC Controller on PCB another side. There is a gap mark on one end of the IC and there is a gap mark on PCB silk screen 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.

4>.Step 4: Install 1pcs Toggle Switch.

5>.Step 5: Install 2pcs 4pin 5mm RGB LED. Note: The longest pin connect to the square pad.

6>.Step 6: Install 1pcs 4pin 5mm RGB LED on PCB another side. Note: The longest pin connect to the square pad. Pay attention to keeping a distance of 5mm and then bend the LED as shown.

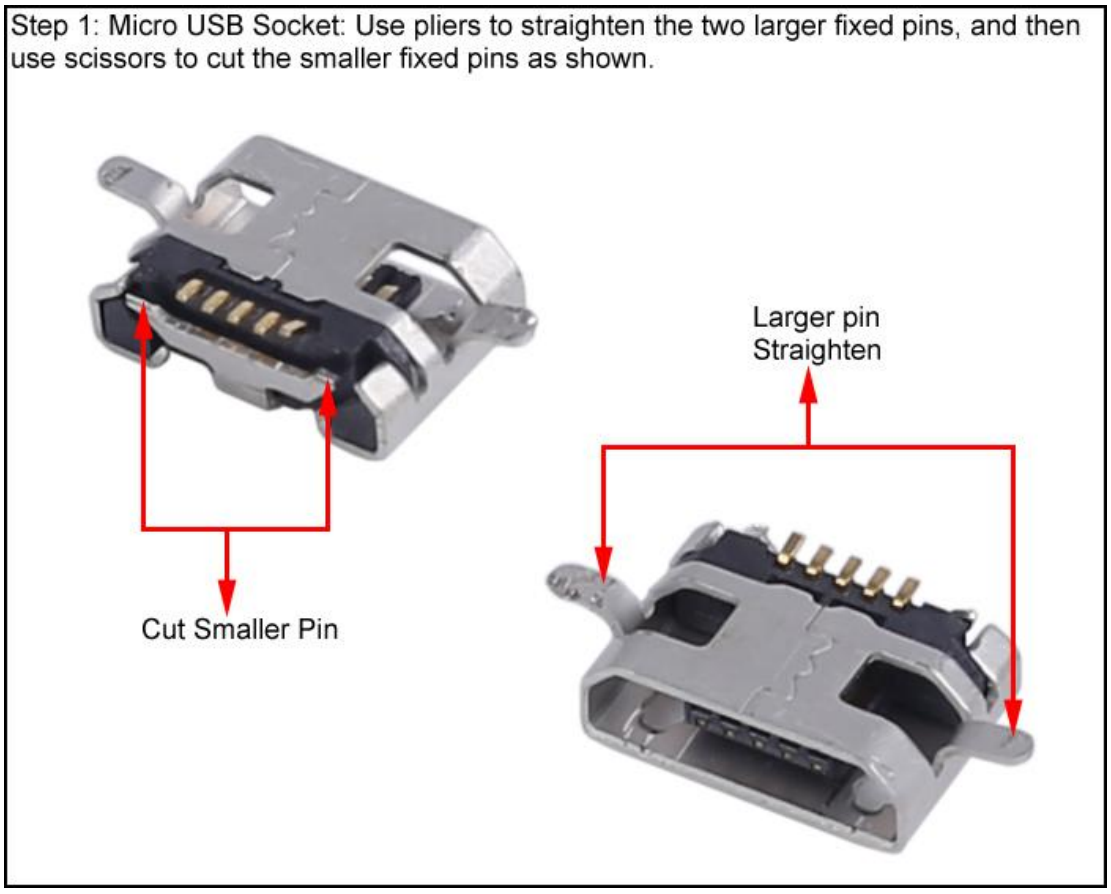
7>.Step 7: Fix 4pcs M3*18mm Screw on PCB by 4pcs M3 Nut.

8>.Step 8: Remove the protective film from the acrylic surface.

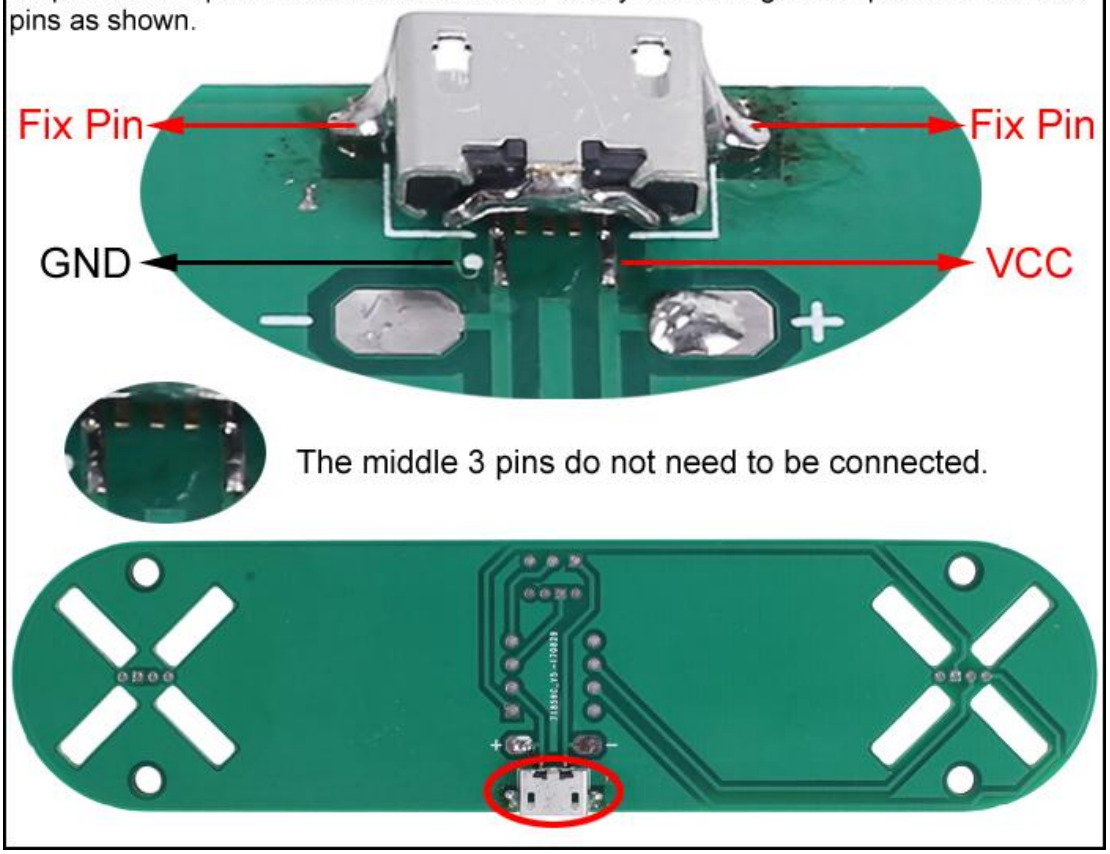
9>.Step 9: Install rectangular acrylic plate by 4pcs M3 Nut.

10>.Step 10: Place others acrylic plate on PCB mounting Hole.

10.Install shown steps:

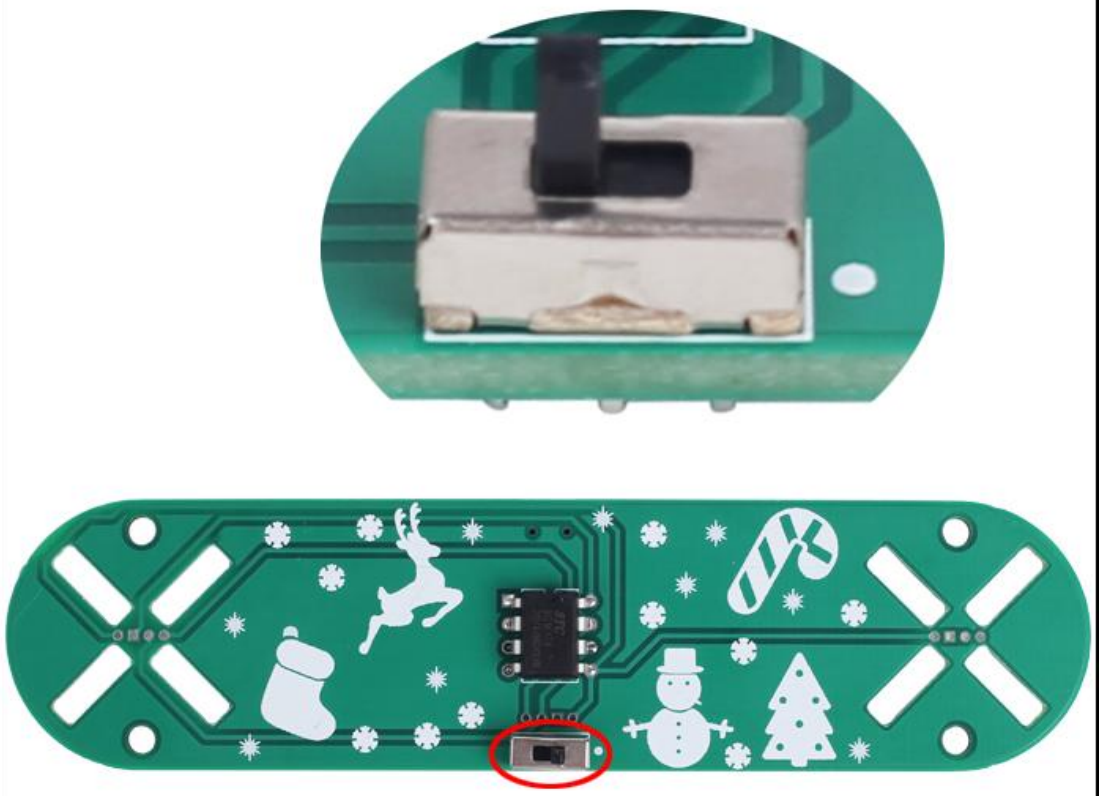


Step 2: Install 1pcs Micro USB Socket on PCB by fix two large fixed pins and two side pins as shown.

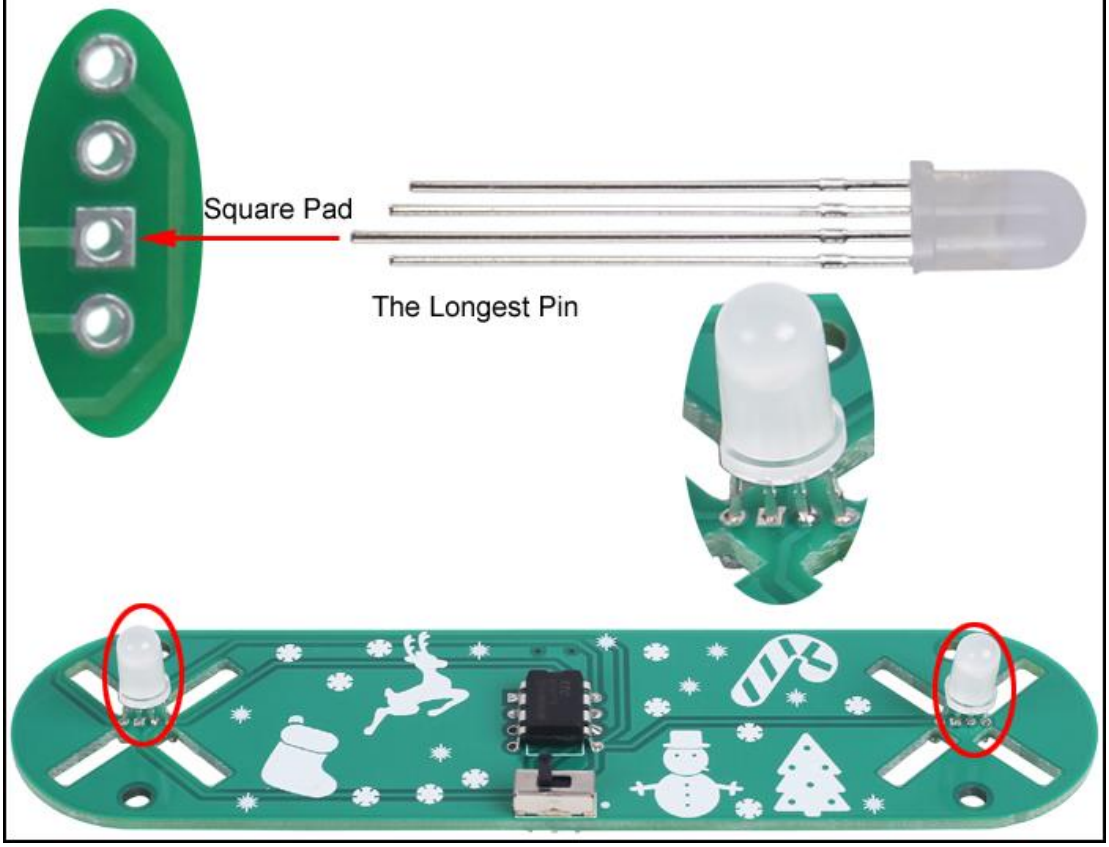


Step 3: Install 1pcs DIP-8 STC8G1K17A IC Controller. There is a gap mark on one end of the IC and there is a gap mark on PCB silk screen where the IC can place on. These two marks are corresponding to each other and are used to specify the installation direction of the IC.

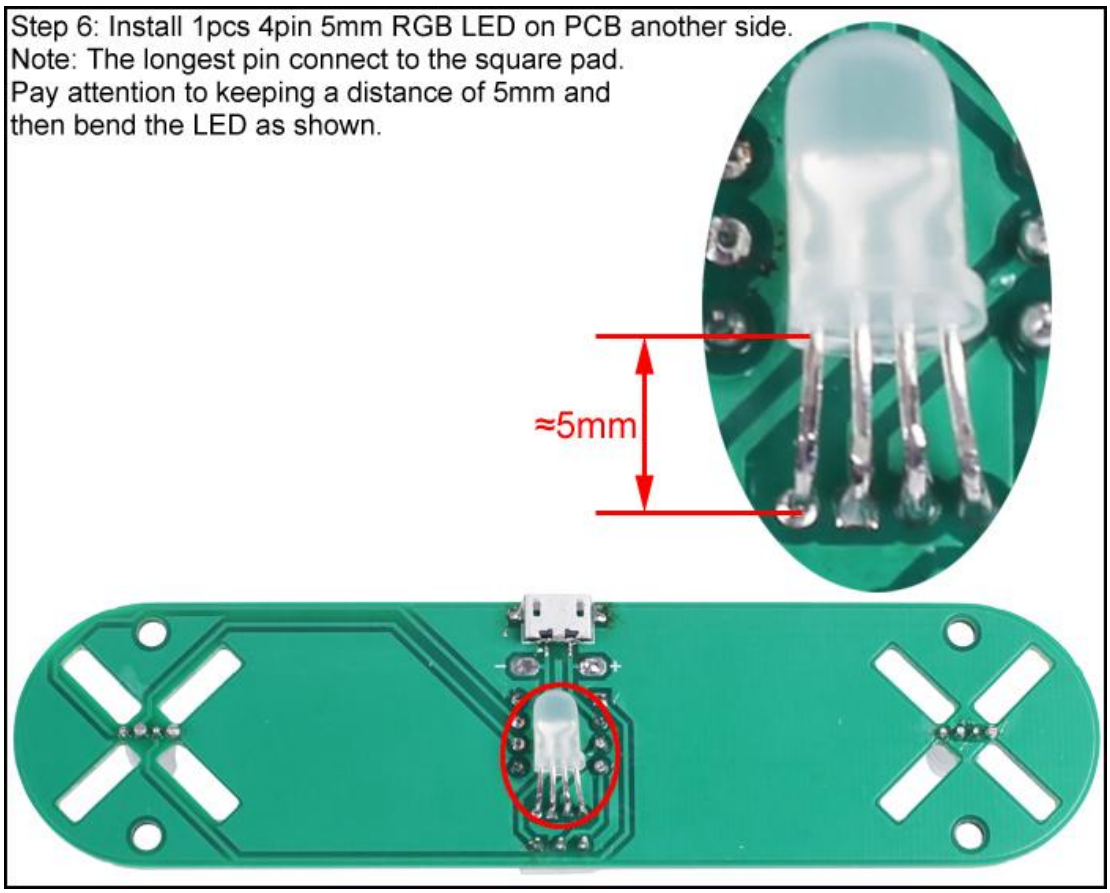
Step 4: Install 1pcs Toggle Switch.



Step 5: Install 2pcs 4pin 5mm RGB LED. Note: The longest pin connect to square pad.

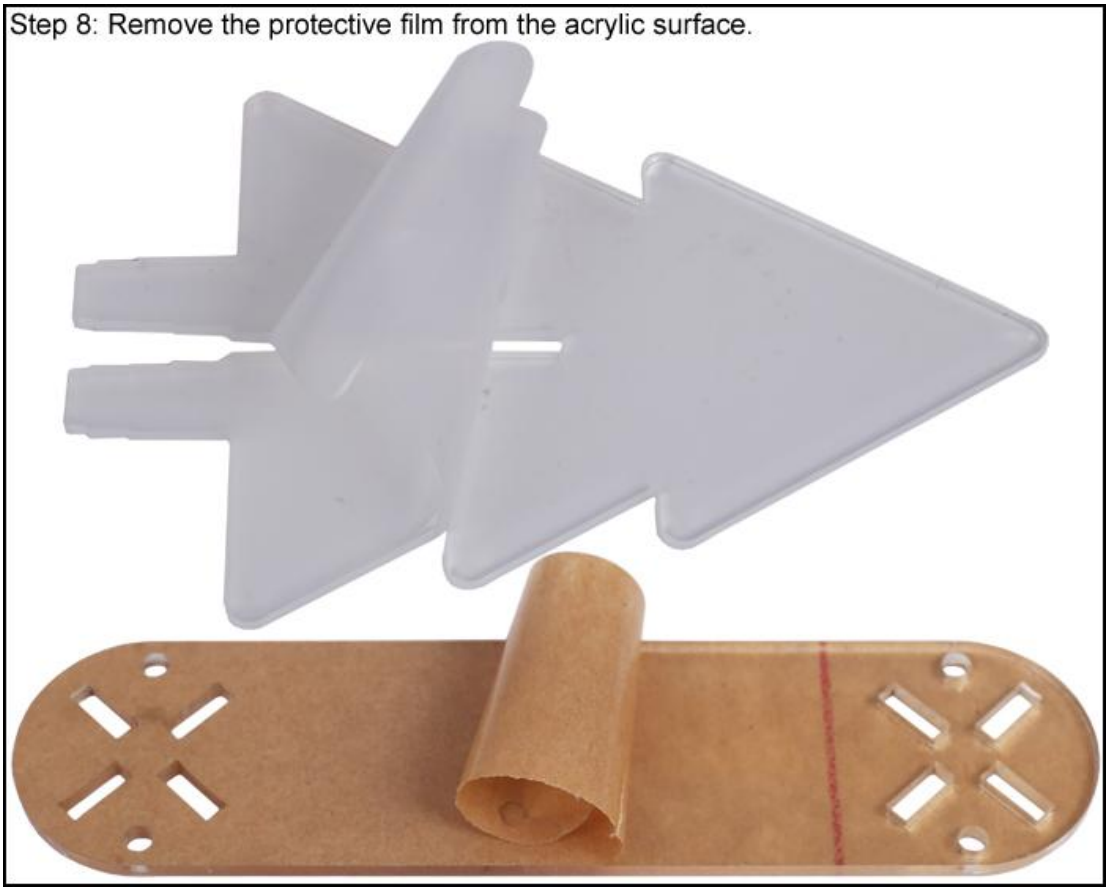


Step 6: Install 1pcs 4pin 5mm RGB LED on PCB another side.
Note: The longest pin connect to the square pad.
Pay attention to keeping a distance of 5mm and
then bend the LED as shown.

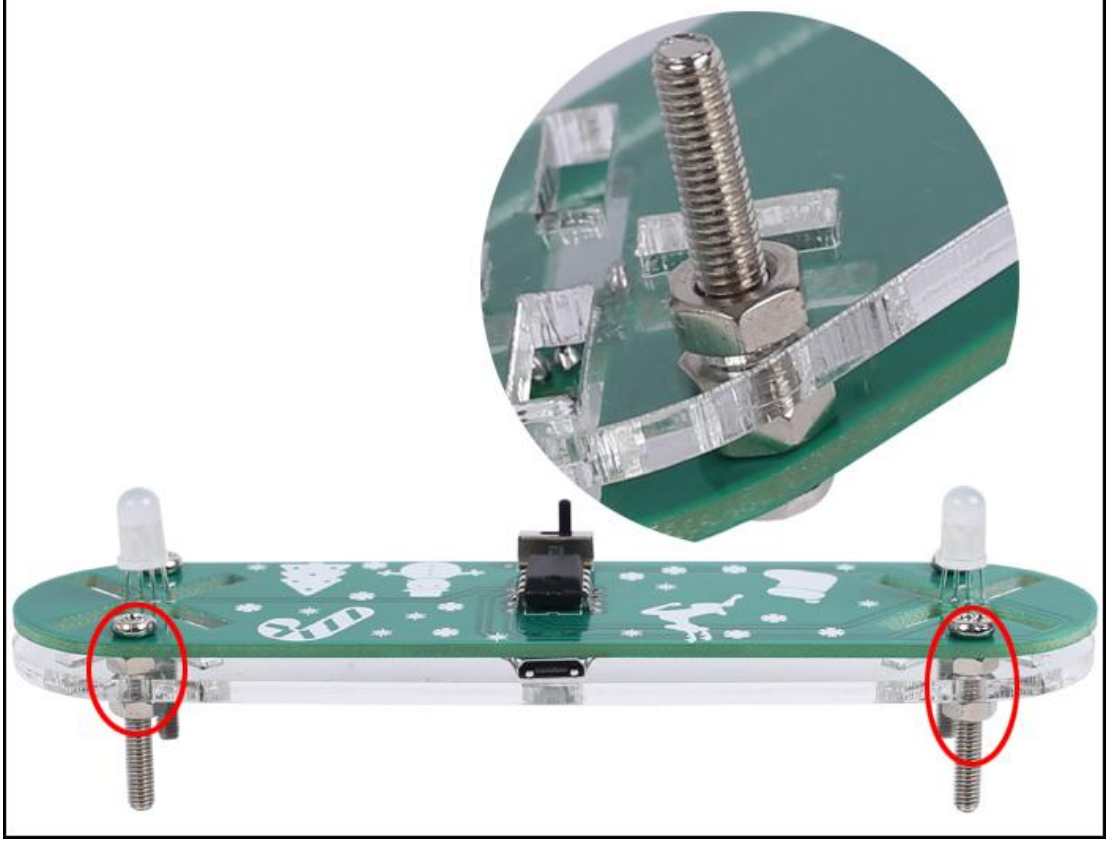


Step 7: Fix 4pcs M3*18mm Screw on PCB by 4pcs M3 Nut.

Step 8: Remove the protective film from the acrylic surface.



Step 9: Install rectangular acrylic plate by 4pcs M3 Nut.



Step 10: Place others acrylic plate on PCB mounting Hole.