

Circuit-Pop



LED Pyramid Desk Trinket DIY Kit Instructions

Compiled By: Circuit-Pop Team



Description:

Egyptians aren't the only ones that know how to make pyramids. This colorful LED Desk ornament is a great trinket and beginner project. Use it to light up your computer desk or set it on your desk drawer. This kit utilizes 28 RGB LEDs soldered into a triangular pyramid shape. Tap the white circle to switch between 24 unique LED animations. This kit comes with all you need from the PCB to the Microcontroller and USB Cable. Tip: if you buy two you can connect the boards to create a tesseract figure.

Parts List:

Parts	Quantity
PCB	1
RGB LEDs	28
Acrylic Plate	1
Pre-Programmed MCU	1
USB Mini-B Cable	1
100uF Capacitor	1
USB Mini-B PCB Port	1
0.1uF Capacitor	1
PCB Screws	3
Nuts	3
1M Ω Resistor	1

Recommended Tools:



1. Soldering Station
2. 60/40 Solder
3. Multimeter

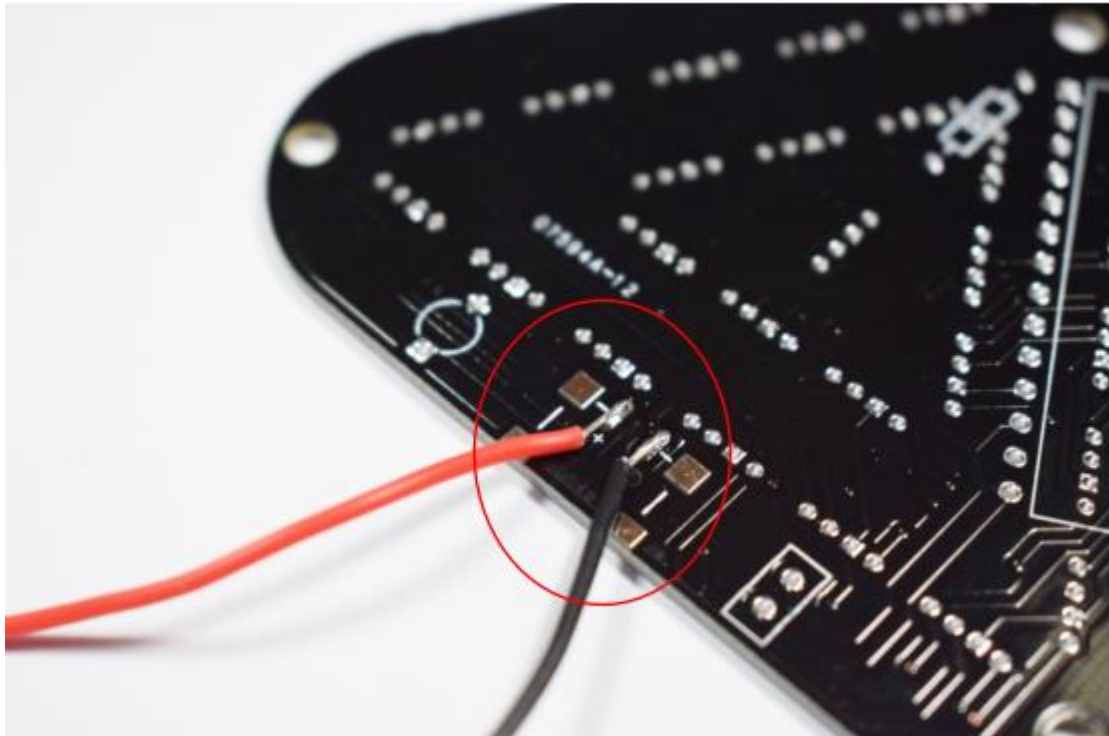
Build Steps:

Lay out all the components on a flat surface and make sure everything is included.



Note: Soldering temperature must be below 320 c, soldering iron temperature should not be too high, or they may damage the LED

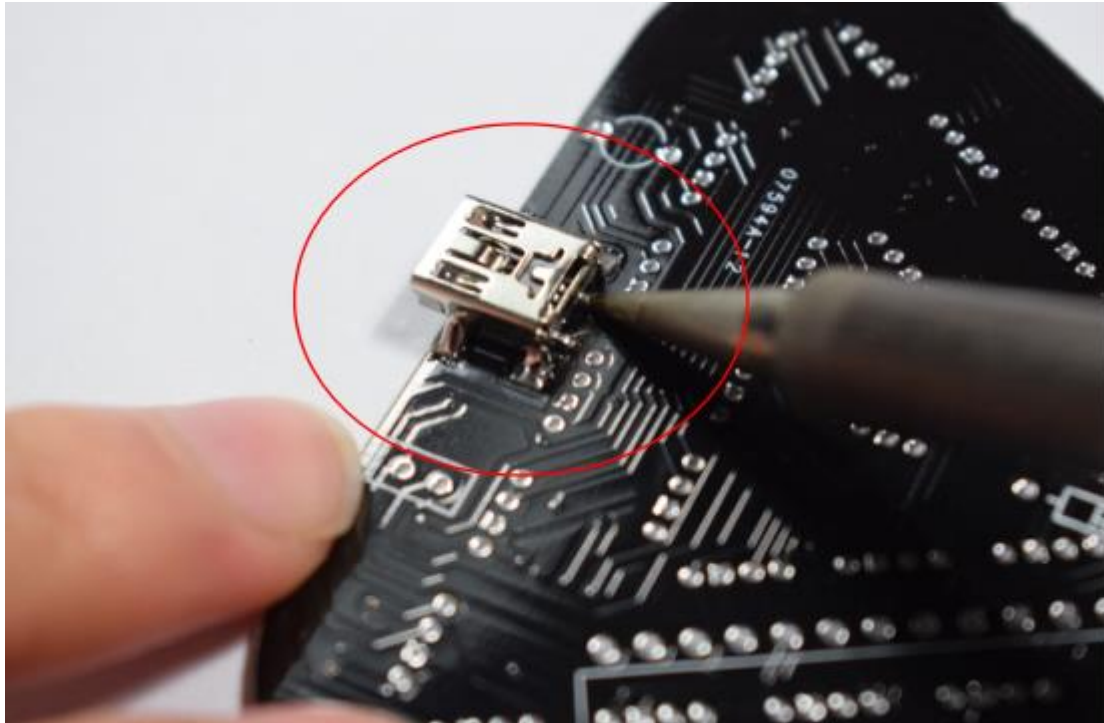
If you don't like mini USB socket power supply, you can take two lines received positive and negative terminals of the circuit board, power supply voltage is 5V, Soldering as the following figure:



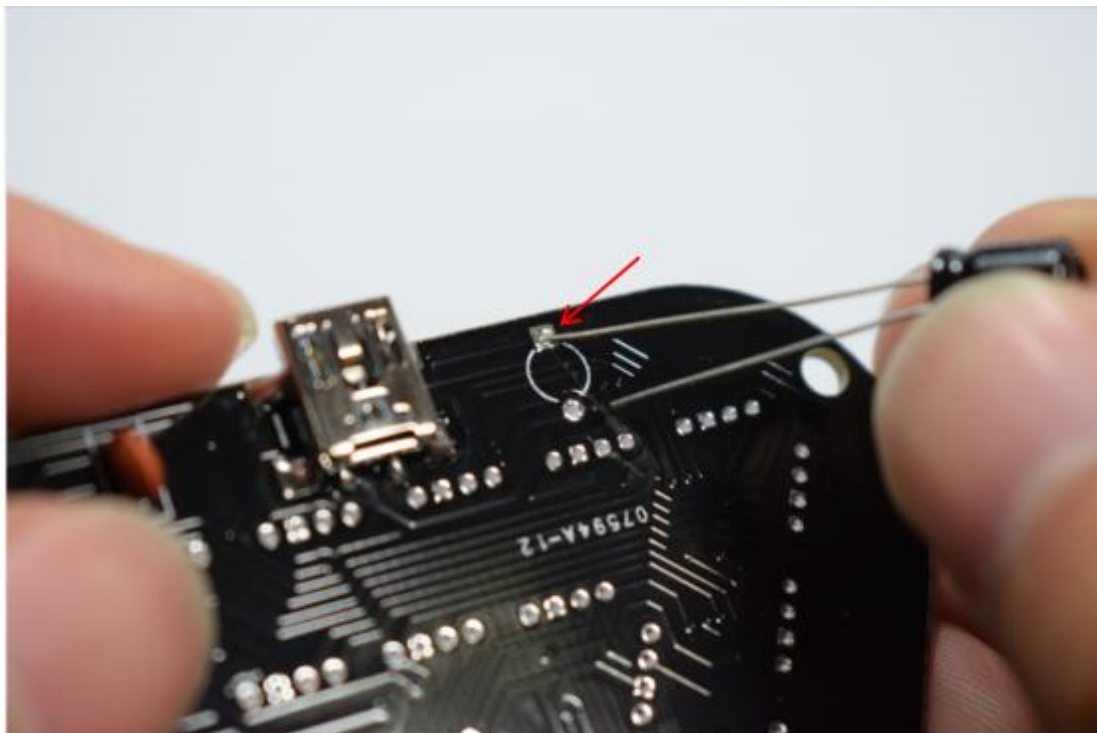
If we use the mini USB socket power supply, first of all, we cut off the Middle 3 pin mini USB socket, leaving two pins is the polarity pins, as shown below:

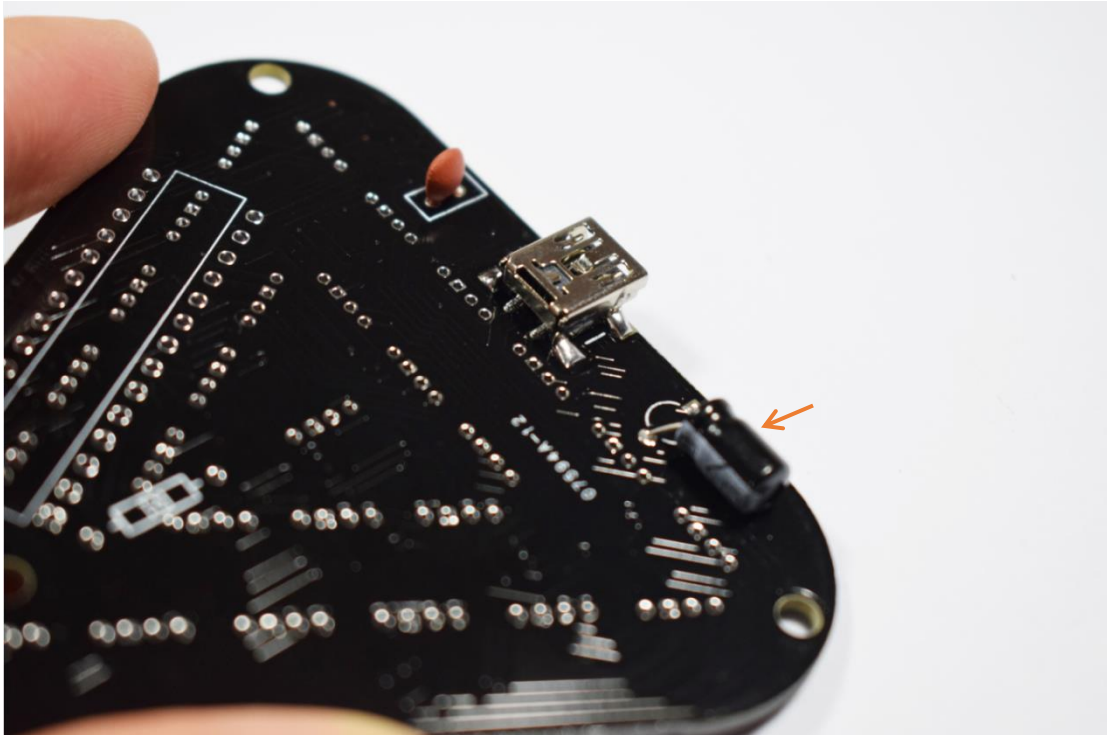


Then put Mini USB socket on the circuit board, first to fix 4 foot, after fixed socket, then solder the two pins:

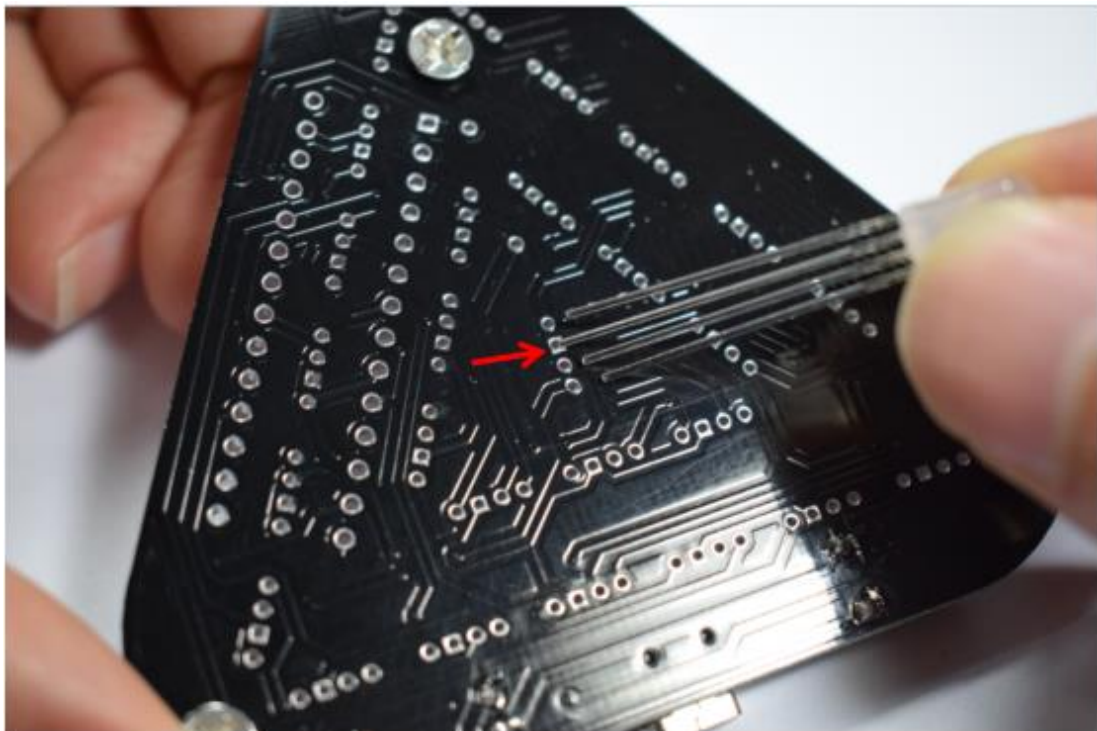


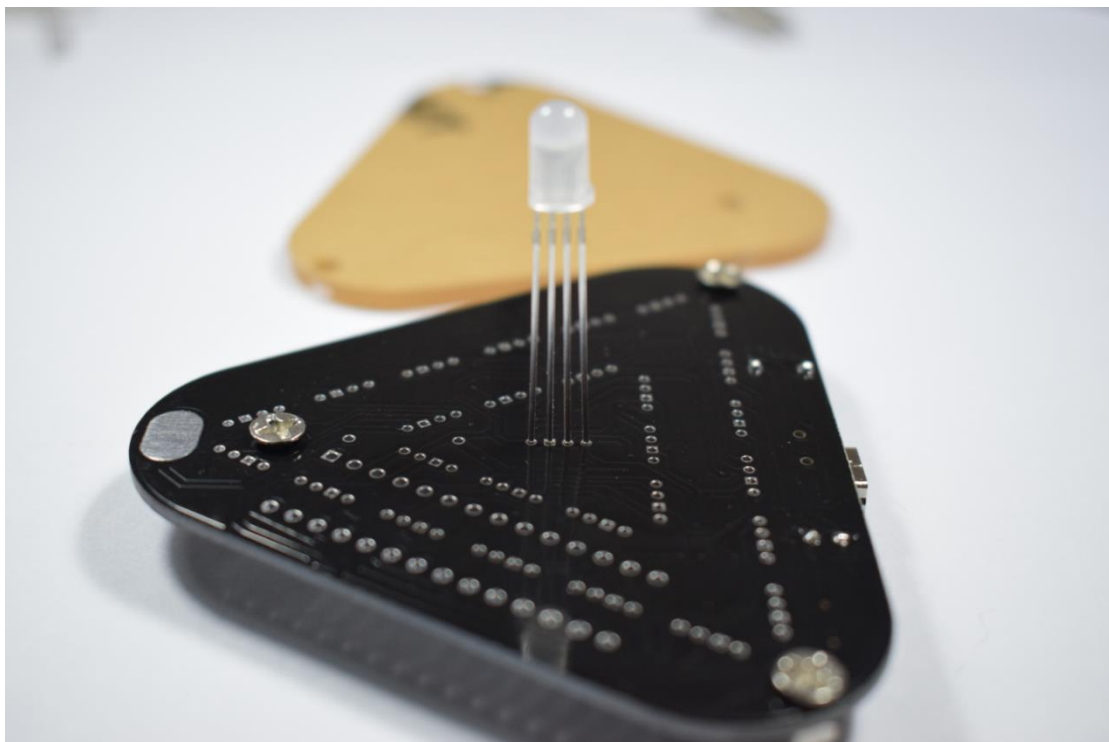
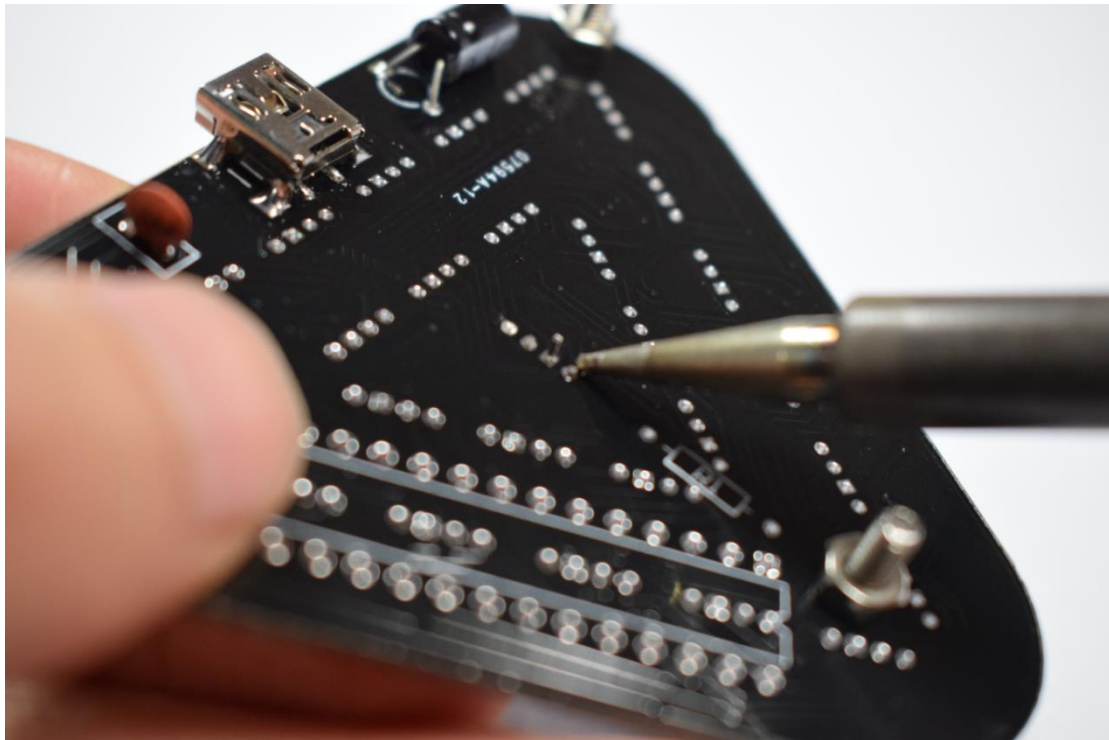
Then solder 100uf capacitor, long pin to rectangular pad, short foot to round pad:



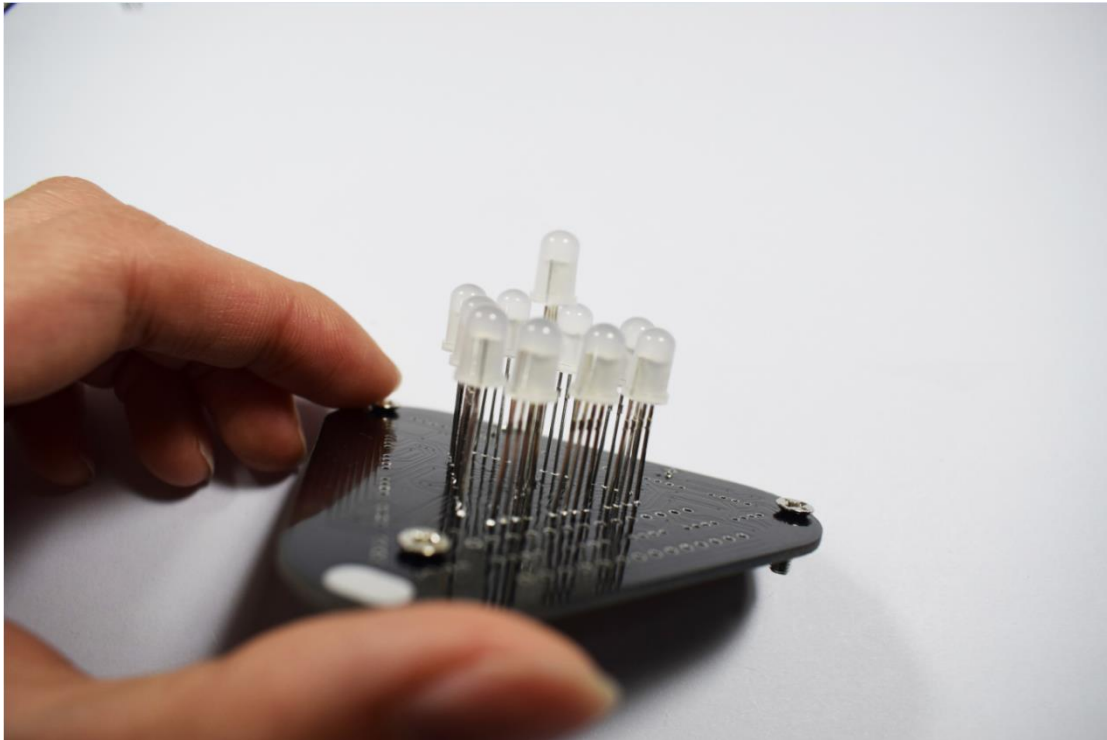


Next Soldering LED, we first twist the 3 screws on the board, let circuit board can supporting up must of height square in desktop , first soldering the middle LED, because need to made Tower-like and stereo sense, so the feet of middle LED must longest, LED long feet corresponds to square soldering pad:



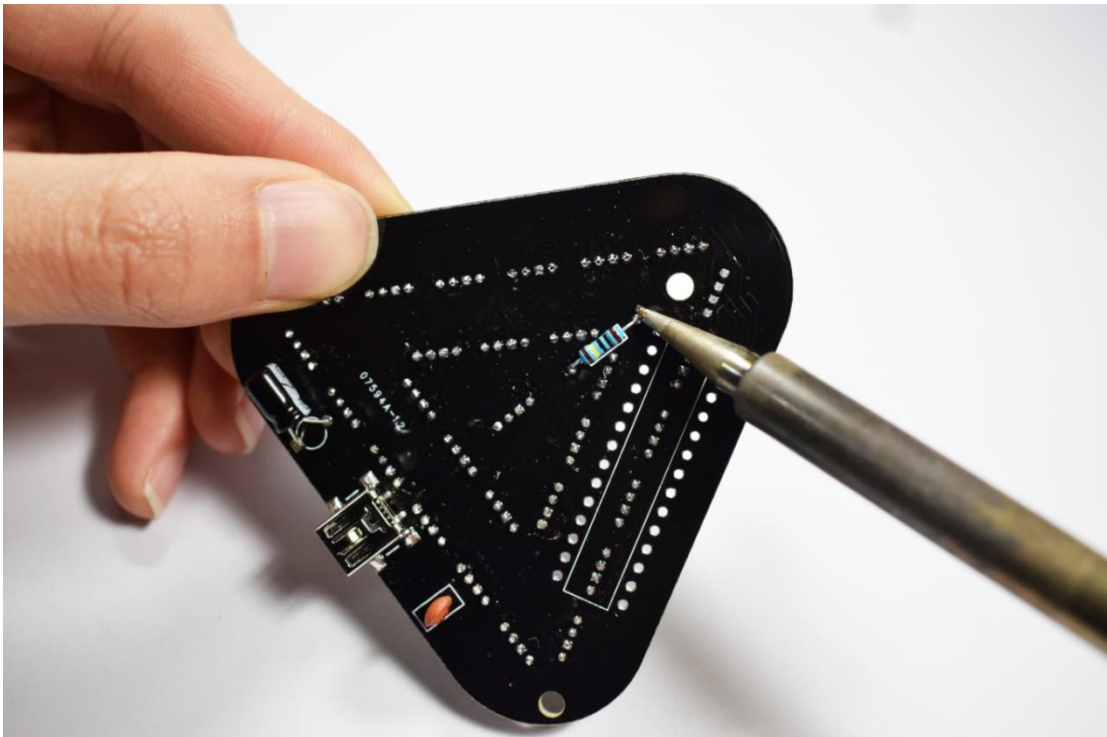


Next we solder second lap LED, height of LED in the second circle should lower than the height of the first circle of the LED high, soldering method are the same as that LED in the Middle:

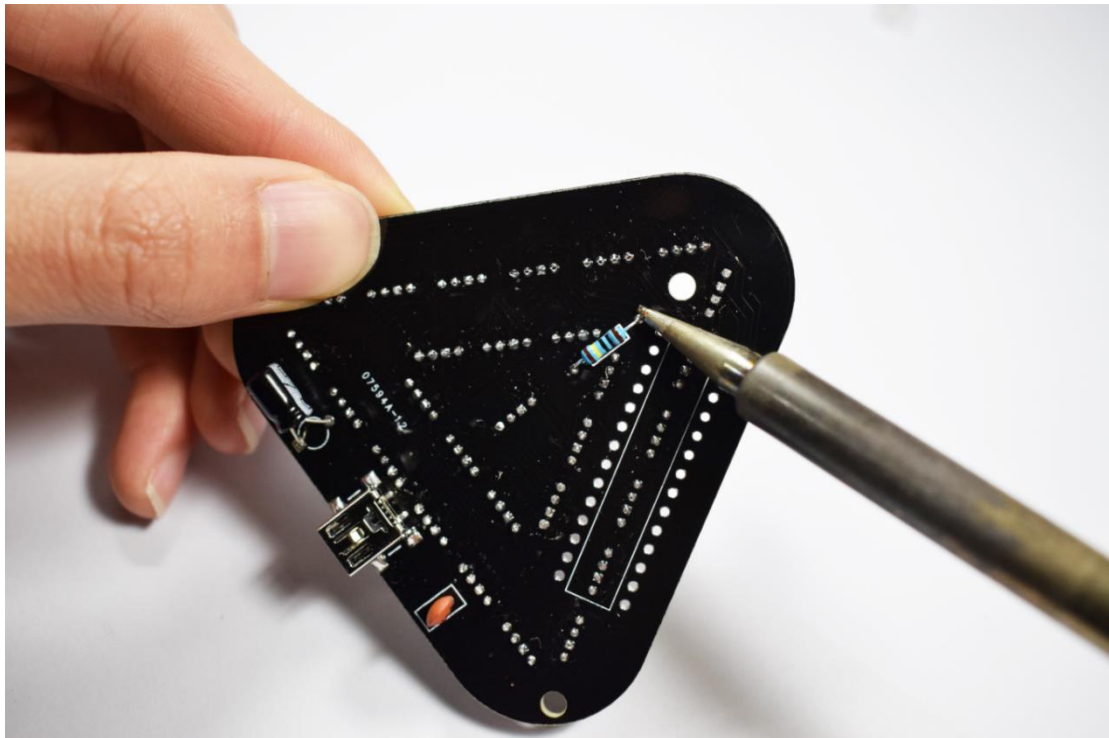


The same to the third lap.height of LED in the third circle should lower than the height of the second circle of the LED high.

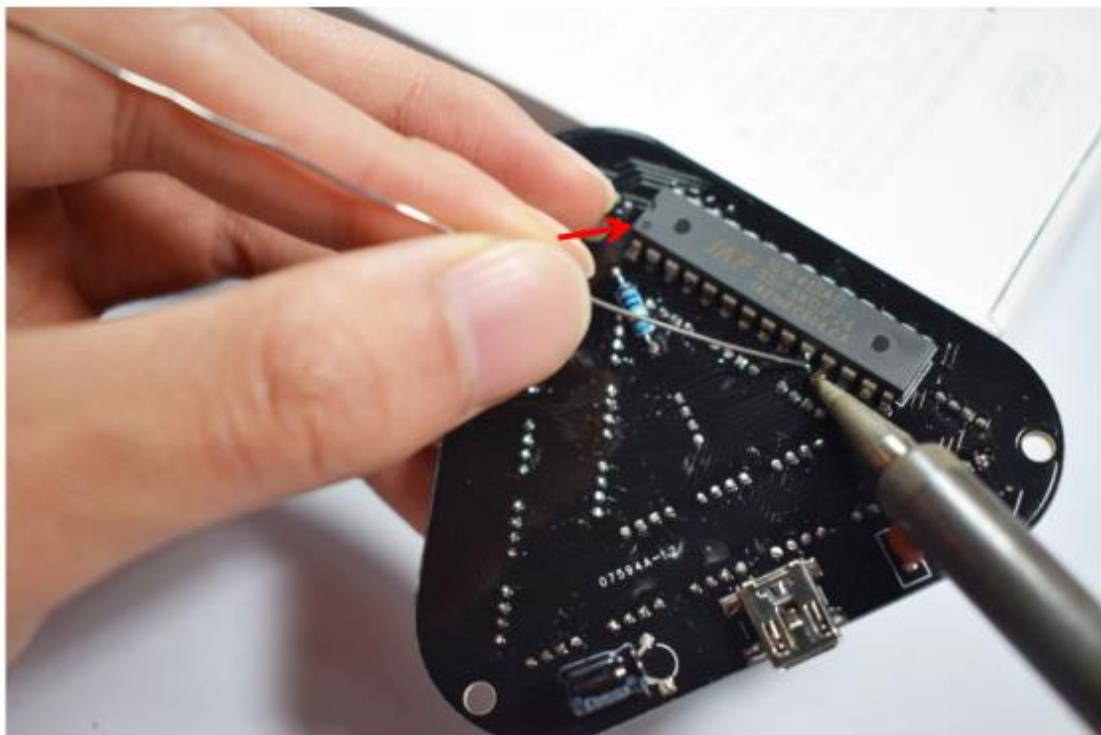
After soldering LED,we solder 1M resistance, first cut the pin to fit length:



Then solder it on the front



Last soldering MCU, Make sure MCU direction do not reverse, can see dot to tell the direction:



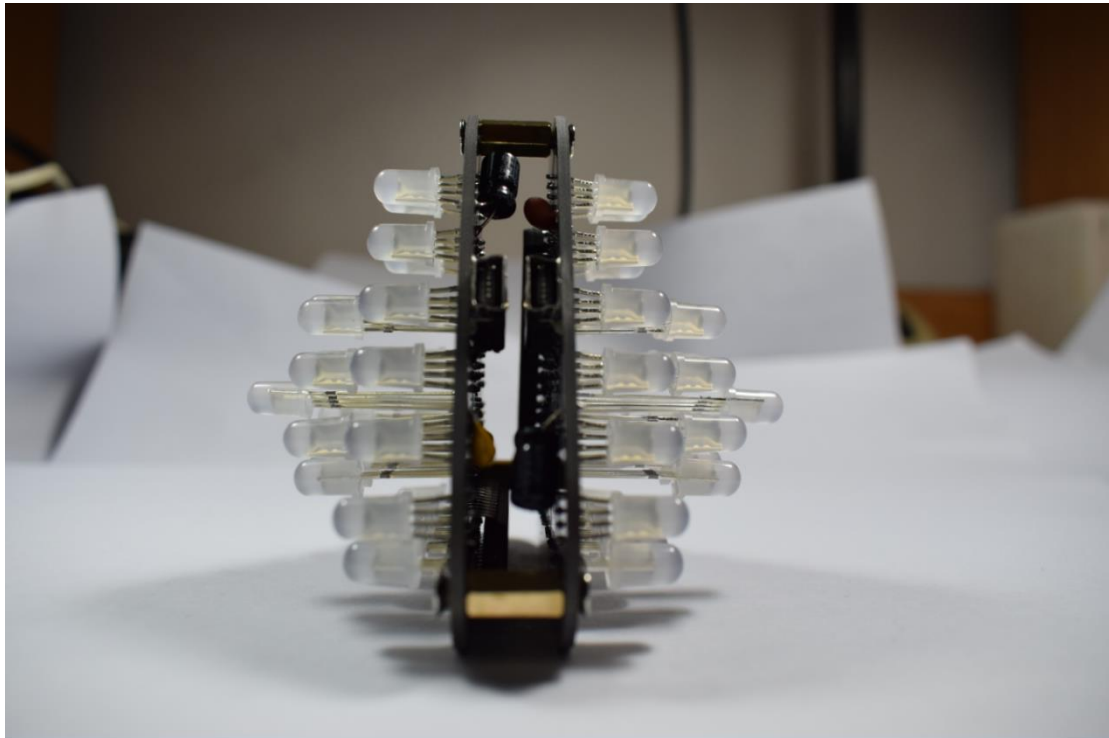
Next is the installation of acrylic:



Finally, plug in the USB power (USB plug to your computer or cell phone charger power supply can be ok):



Wait a minute, there is an Easter egg! if you buy two, this can make the effect of a Tesseract, they can be fitted with bronze columns (not included) and can be combined into one, may have a surprising effect:



Power up, amazing !



**For any questions regarding this kit or others,
feel free to contact us at
support@circuitpop.com!**