This link is a video of the installation instructions: https://www.youtube.com/watch?v=4a3OMpjdTn8

The Quickstart Tutorial for iCubeSmart 3D8S DIY

Dear friend,

This is a simple DIY instructions, which can help you quickly be familiar with the DIY production.

If you need more detailed DIY tutorial, please send the name or the picture of the products you bought to **icubesmart@gmail.com**, then we will send more detailed DIY tutorial and HD pictures of DIY steps to you via email. If you encounter any problems in the production, also please feel free to email us. We have professional technicians to help you solve them, Thank you !

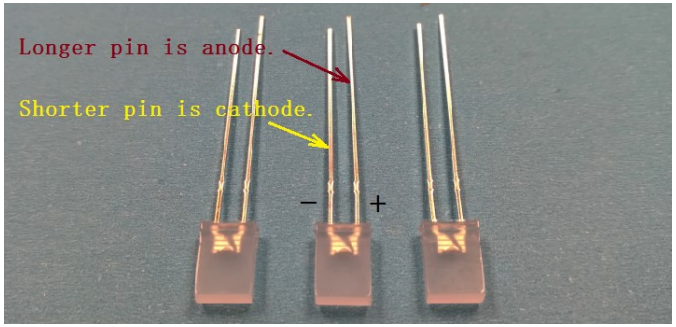
Before you install the cube, please check your accessories pack,

You will get the follow accessories:

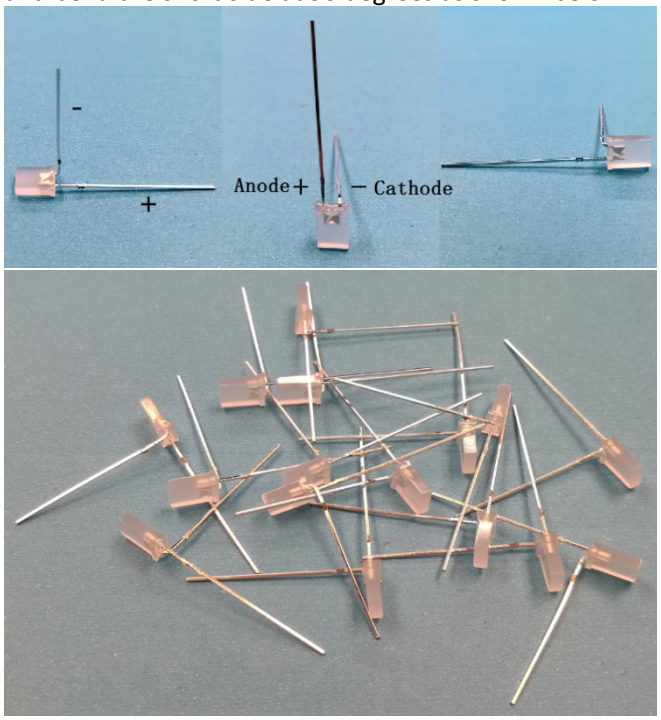
Welded and tested main board (size 18*18.5cm)	1 Pcs
CP2102 usb download tool	1 Pcs
Micro USB Cable	1 Pcs
0.8mm tinned wire	80 cm
White electric wires	100 cm
2mm plastic strip (for bending led anode pin)	1 Pcs
Blue version is : Blue LED 600PCS Multi-color versions is Red LED 200PCS Green LED 200PCS Blue LED 250PCS	
LED testing tool (line)	1 Pcs

Start DIY, weld the light body

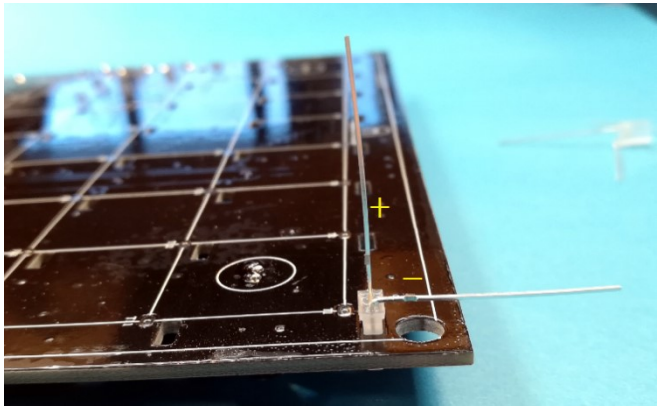
Step1. Identify the polarity of the LED light, the long side is anode and the short side is cathode.



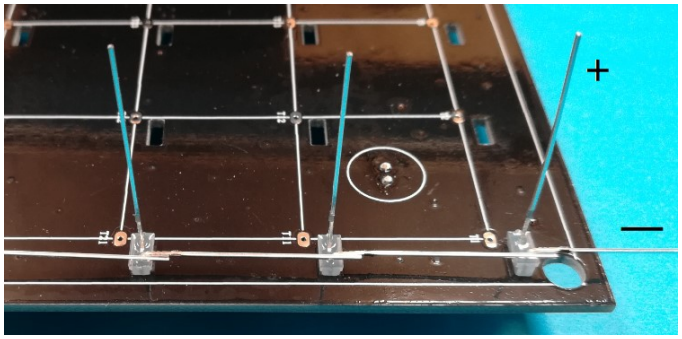
Step2. Bend the cathode (negative electrode) of the LED and bend the short side at 90 degrees as shown below.



Step3. Insert the bent LED into the square hole of the main board. There are 64 square holes on the main board to fix the LED at equal spacing.In this way, you can weld them neatly.



Step4. Insert the LEDs one by one into the square hole on the main board.The cathode of the front LED is placed on the cathode of the next LED.insert all 64 LEDs.

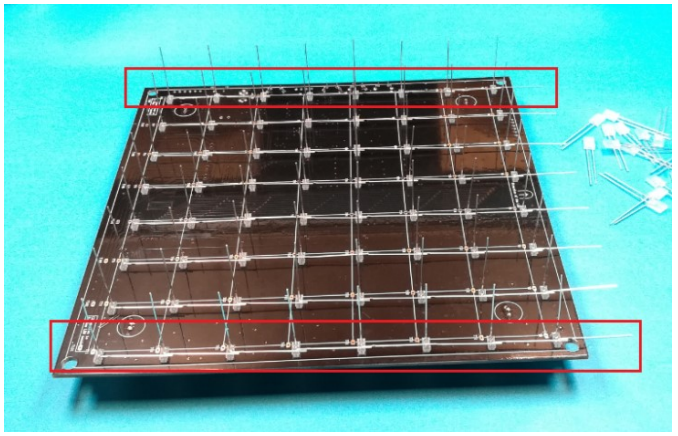


Attention on this step:

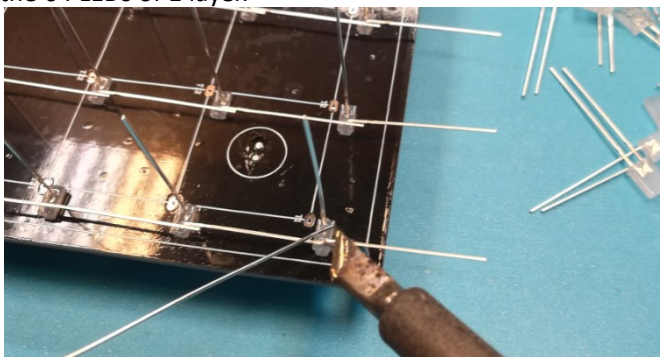
All the LEDs are blue for the blue version of DIY light cube, you don't need to care about the position of the lamp.

For multi-color versions light cubes, we recommend placing LEDs in the following order. In one kit, there are 8 layers of LED lights, each with 64 lights. 2 layers of them are blue, the other three layers are as shown in the picture: The two rows in red frames are **blue** LEDs(16 pieces), and the middle six rows are **green** LEDs(48pieces), The other three layers are the same: the two rows in red frames are **blue** LEDs(16 pieces) and the middle six rows of 48 are **red** LEDs(48pieses).

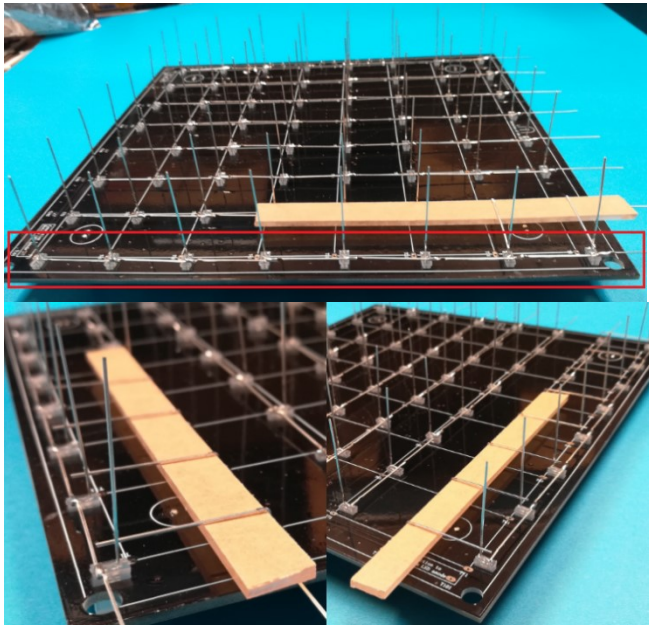
Of course, you can also arrange the LEDs according to your own ideas.

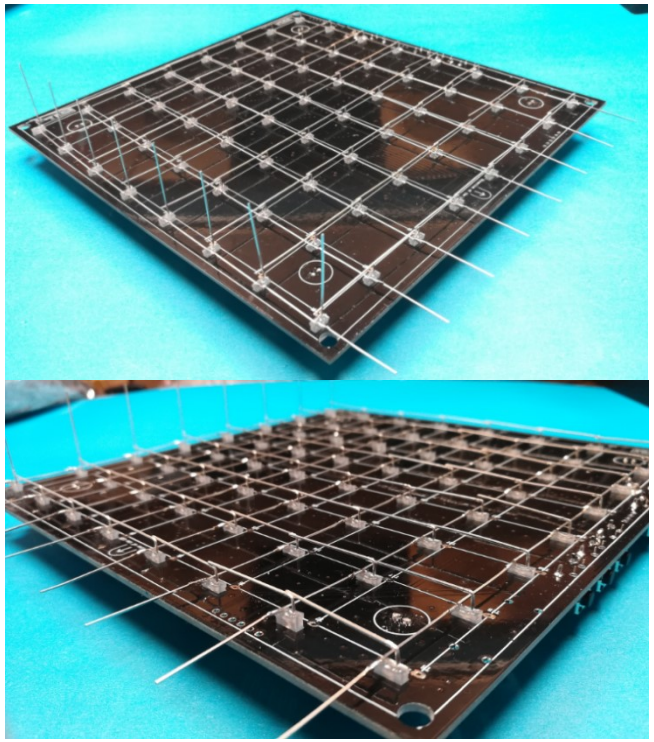


Step5. Start welding the connection between one LED cathode and the next one, Soldering iron temperature is recommended below 350 degrees Celsius. The soldering time is recommended not to exceed 3 seconds. Solder all the 64 LEDs of 1 layer.

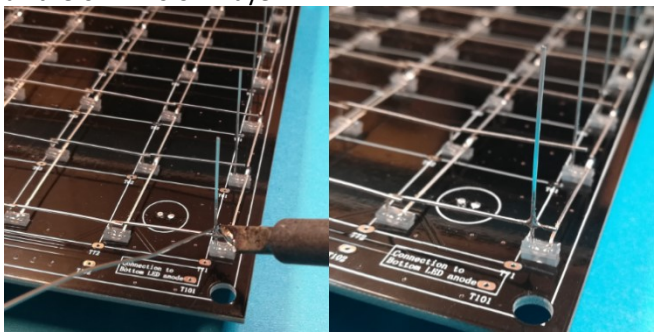


Step6. Use the plastic strip to bend the anode (positive electrode) of the LED. As is shown in the below pictures, the LED pins in the first row of red frame do not need to bent, start to bend pins from the second row.
When bending, the anode of the front LED is placed with the anode of the next LED.

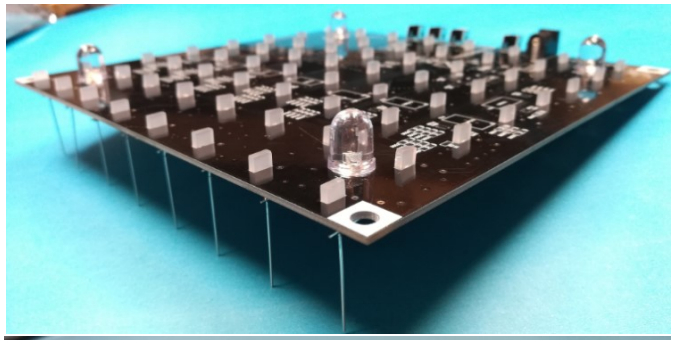


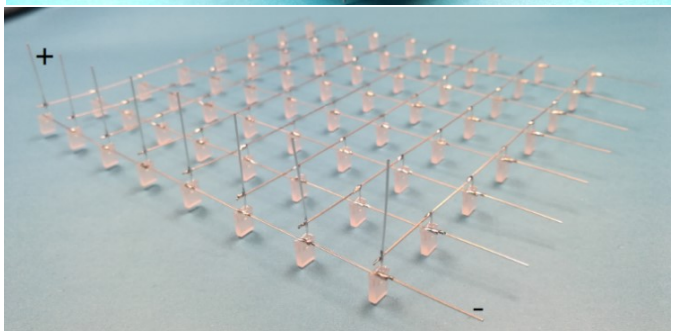


Step7. Start welding the connection between one LED cathode and the next one, soldering iron temperature is recommended below 350 degrees Celsius. The soldering time is recommended not to exceed 3 seconds. Solder all the 64 LEDs of 1 layer.

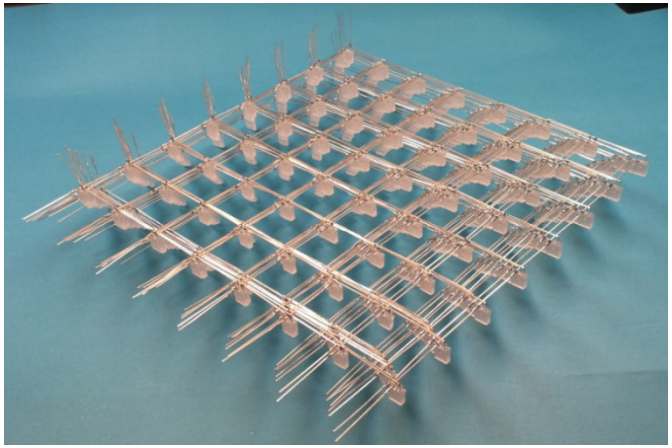


Step8. Take out the soldered LED Layer from the main board. Turn over the main board, and press the LED light body evenly, then you can take out the LED layer.

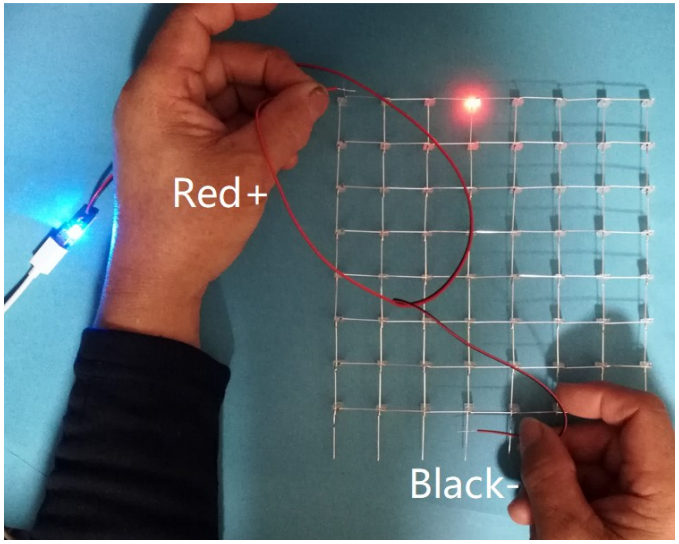


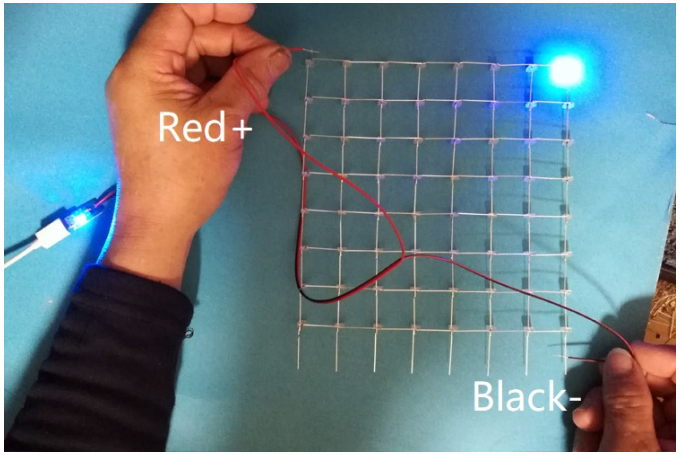


Step9. Repeat steps 4th through 8th, solder all 8 layers of the light, please pay special attention to the notes in the 4th step. (Blue version are 8 layers blue LED lights)
In the Mutil-color version:
2 layers x all **blue**,
3 layers x (two rows **blue**+the middle six rows **green**),
3 layers x (two rows **blue**+the middle six rows **red)**.

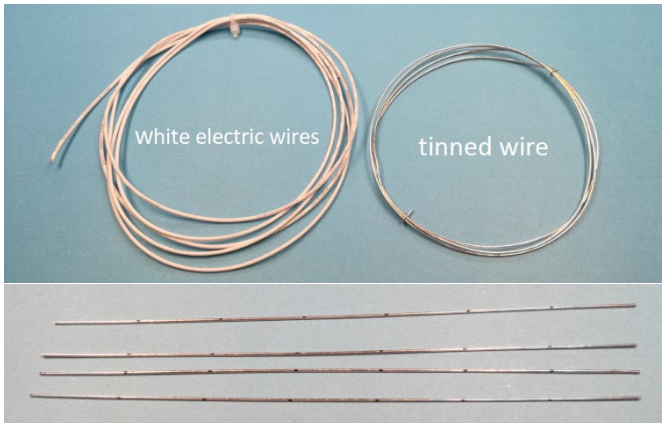


Step10. Test the slodered LEDs. The horizontal 8 rows of LED pins are positive, the vertical 8 rows of LED pins are all negative. Plug the test board into the 5V power supply, then the indicator light on the test board will light up. At this time, connect the red line on the test board with the positive pole of the soldered LED, and connect the black line on the test board with the negative pole of the soldered LED,then the LED light will be on.You should test each LED light in this way to ensure that the soldered LED can be lit.

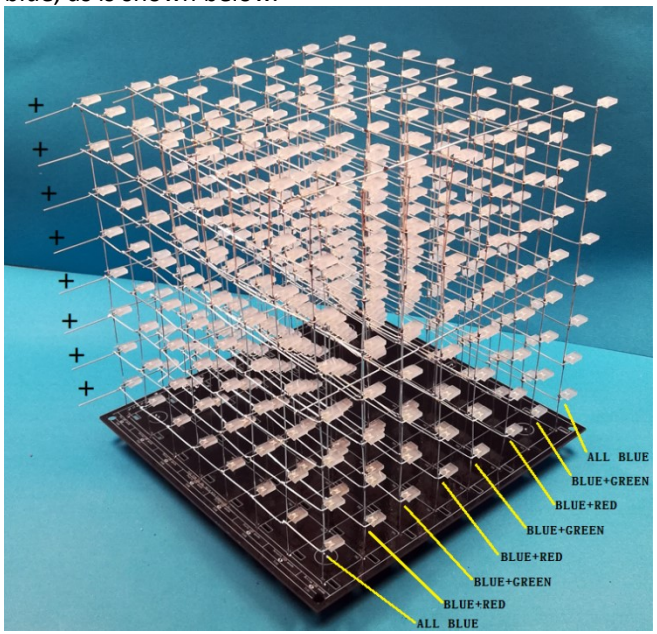




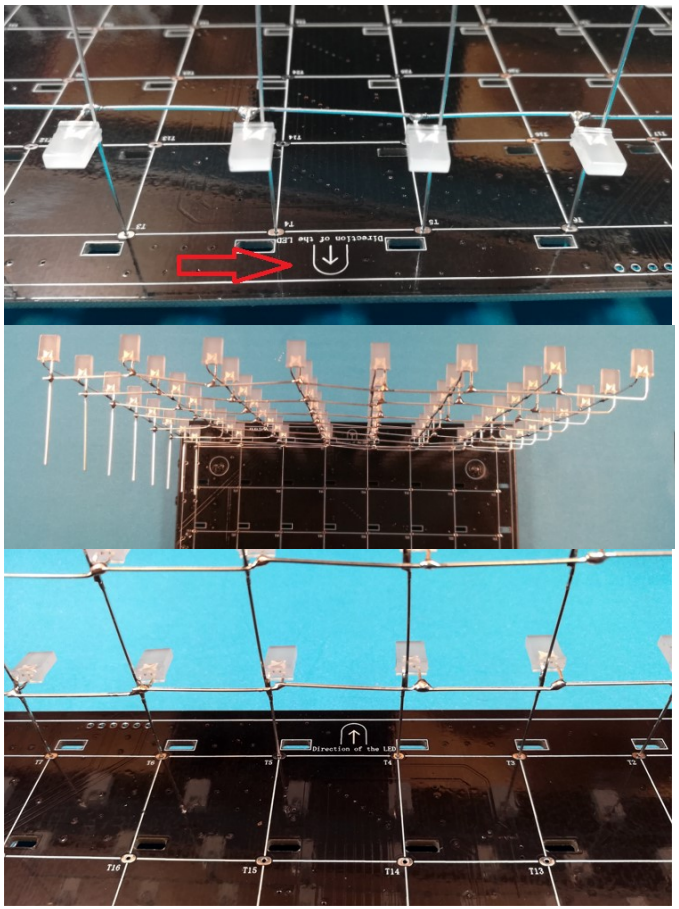
Step11. Find out the tinned wire in accessories.(As the below picture) then straighten them, cut out 4 x 16cm wires, and mark at 2.3cm spacing.



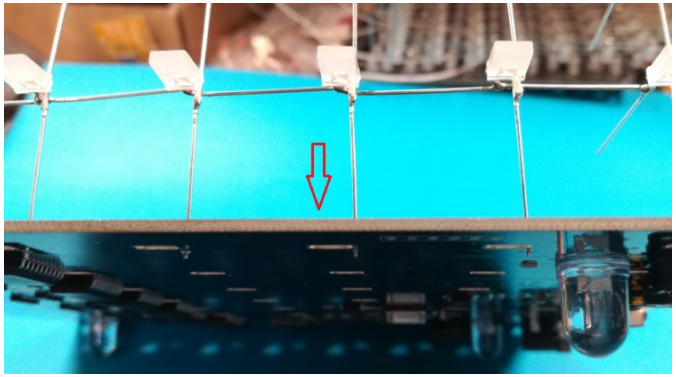
Step12. Insert the light layers into the main board.
Blue version light cube, all the 8 layers are blue, you can place the position as you want.
In the Mutil-color version:
2 layers x all **blue**, 3 layers x (two rows **blue**+the middle six rows **green**), 3 layers x (two rows **blue**+the middle six rows **red)**.
We recommend the first layer blue, the second layer blue-green, the third layer blue-red, the fourth layer blue-green, the fifth layer blue-red, the sixth layer blue-green, the seventh layer blue-red, the eighth layer blue, as is shown below.



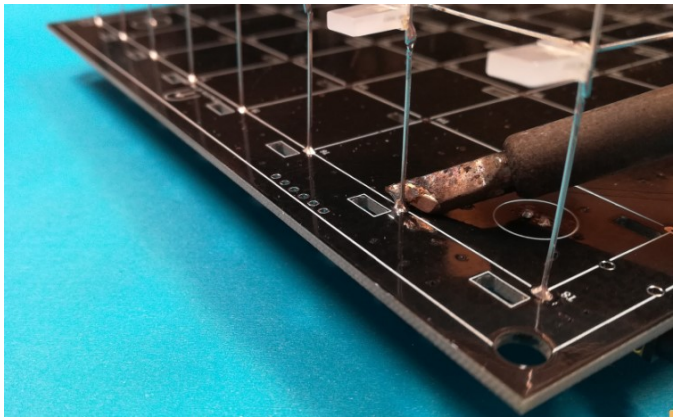
Note that the orientation of the LED is consistent with the direction marked on the main board.



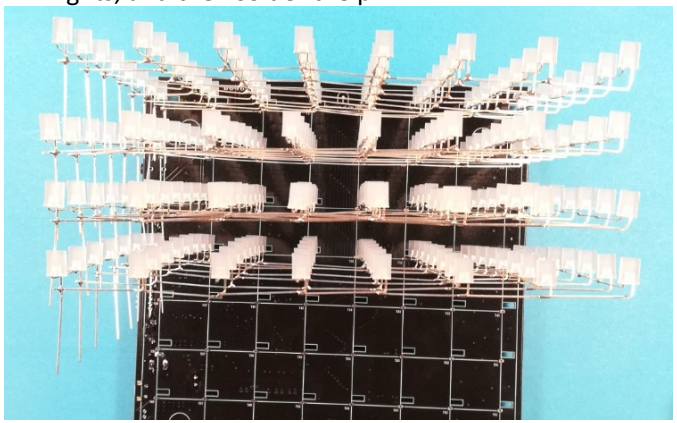
Just insert the pin of the LED a little bit outside the main board.



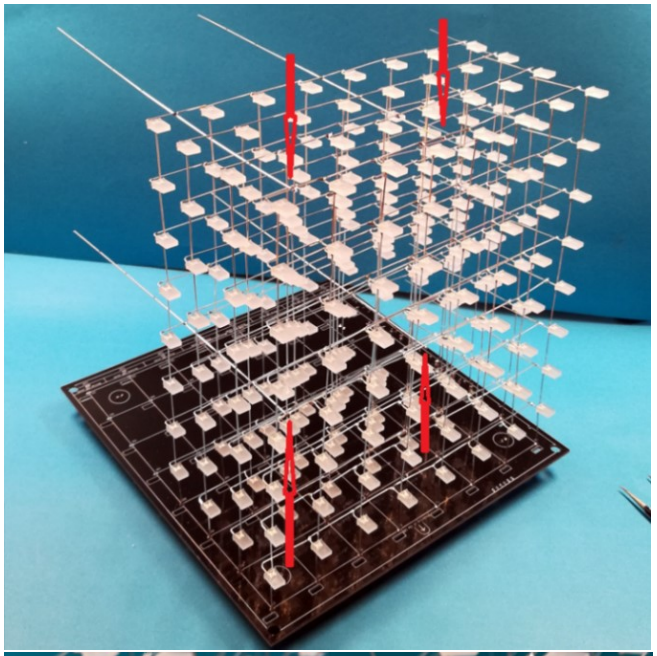
Step13. Solder the pin of the first row of LEDs to the main board.

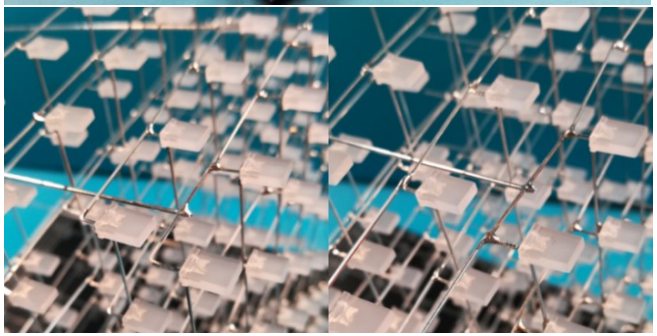


Step14. According to the twelfth step, insert four layers LED lights, and then solder the pin.

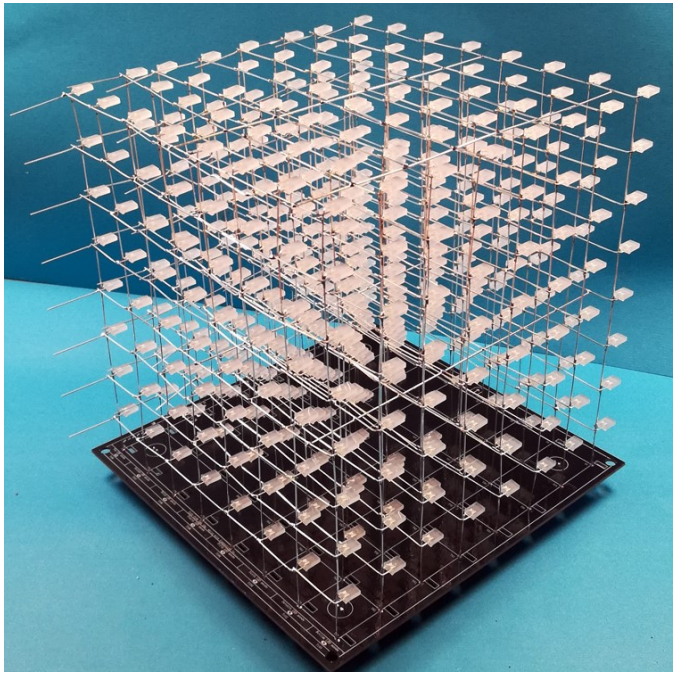


Step15. Solder the prepared tinned wire in the step 11 to the anode of the horizontal layer according to the marked equally spaced marks. Please make sure to weld them on the anode. The anode of the same level is an integral anode. This wire is mainly used for fixing, which makes the cube more neat. We recommend welding them in middle and left of the top and fifth anodes.

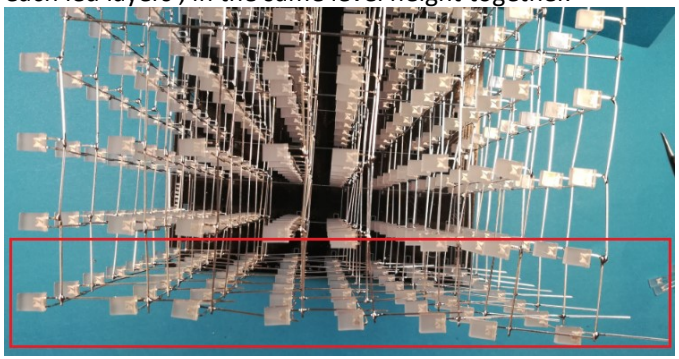


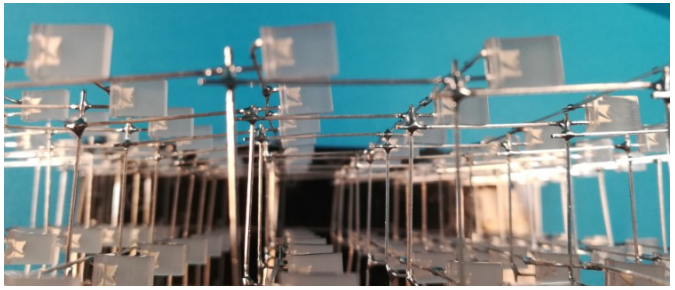


Step16. Insert the last 4 layers into the main board and solder the tinned wires at equal intervals.

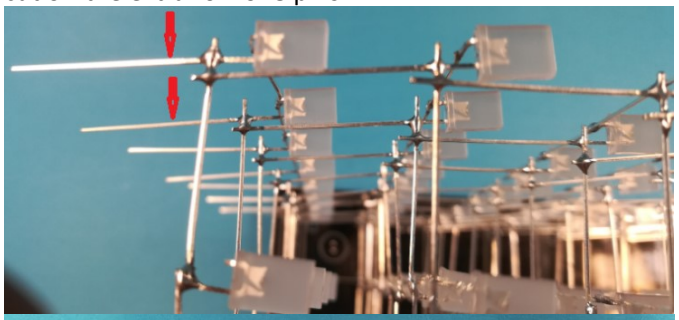


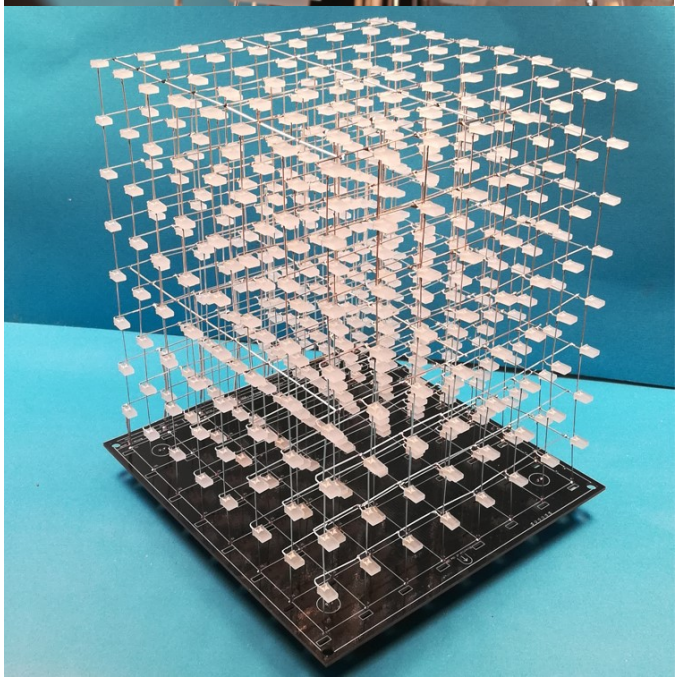
Step17. Solder the extra anodes pins,that in the side of each led layers , in the same level height together.



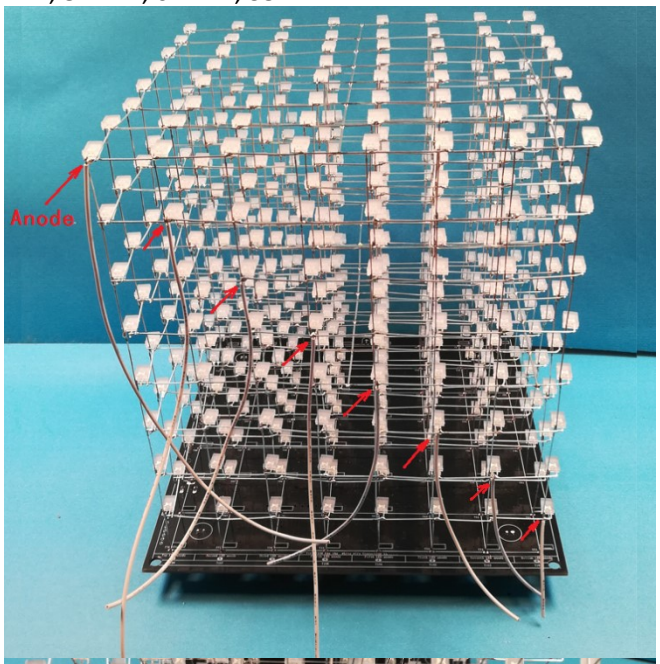


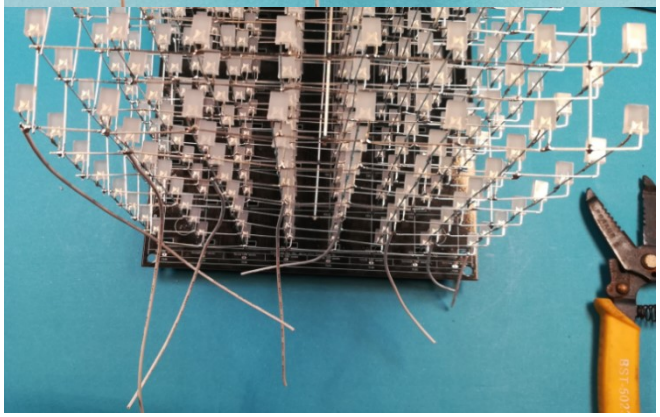
Step18. After finish soldering the LED anodes in the side, cut off the extra row of 8 pins.

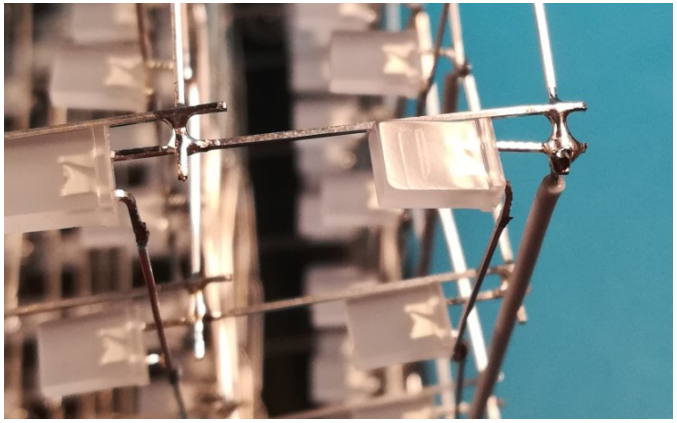


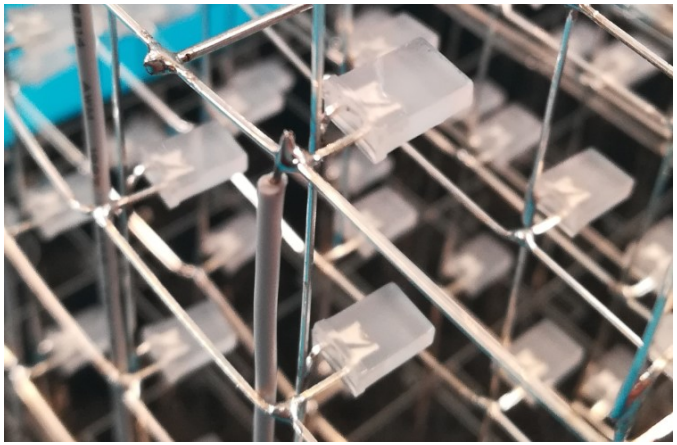


Step19. Using a white electric wires, solder the horizontal positive layer of the cubic matrix to the main board. Note that the white electric wires is soldered to the positive side of the horizontal layer. The length of the wires is 199mm, 176 mm, 153 mm, 130 mm, 107 mm, 84 mm, 61 mm, 38 mm.

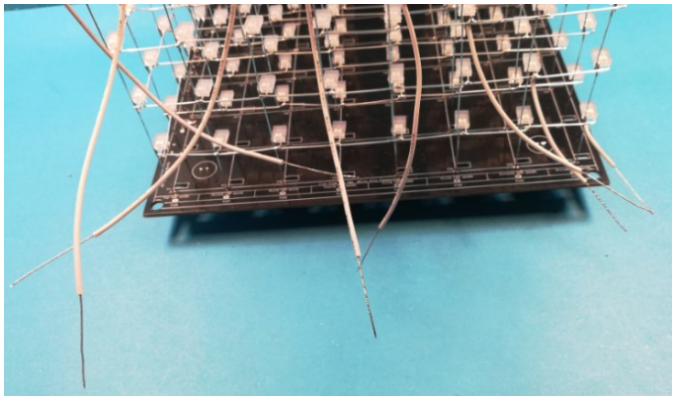




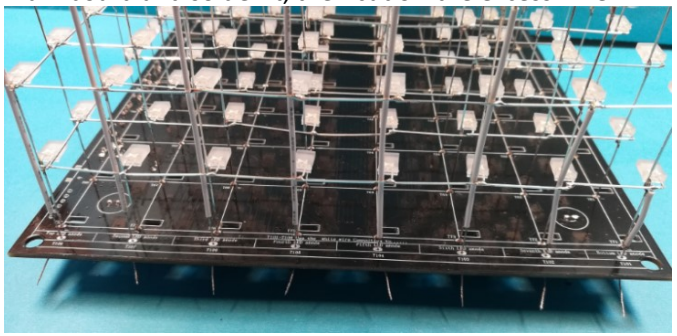


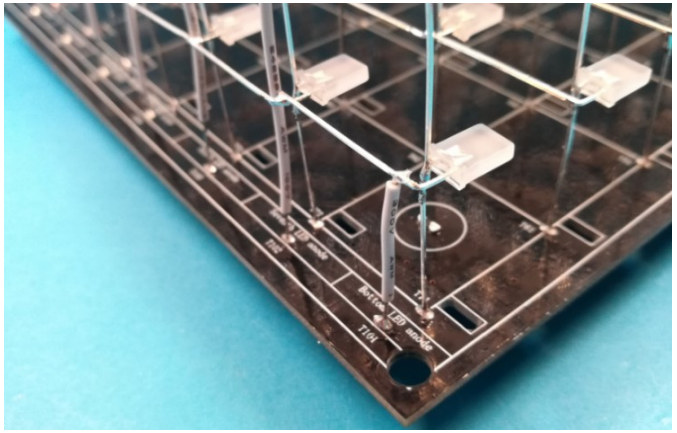


Step20. Strip the wire about 15mm, then use a soldering iron to solder the wire.



Step21. Insert the wire into the T101-T108 hole of the main board and solder it, then cut off the excess wire.





After completing the above steps, the cube welding is finished. Just power on and the 3D animations can display. As the main board has been downloaded the animation programm, it can be used directly.

For more high-definition pictures, and tools for modifying animations and tutorial for them, please send your product name or product image to our email at icubesmart@gmail.com, and we will send them to you by email. If you encounter any problems in production, you can also email us. we have professional technicians to help you solve them. Thank you for your purchase, I wish you a happy life!

Here are some picture of the led cube.