

3 x 3 x 3 LED Cube Project

Constructing the LED Array

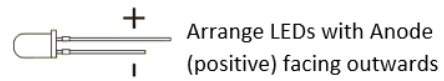
1. Gather Materials

- 27 'superbright' LEDs
- Soldering jig



2. Arrange LEDs

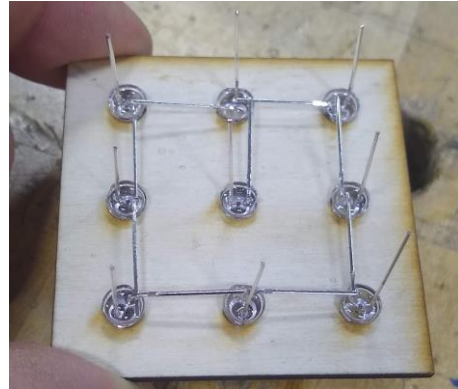
- All anodes (positive) facing outwards
- Press into jig to prevent movement



Soldering Jig – 0.75" spacing

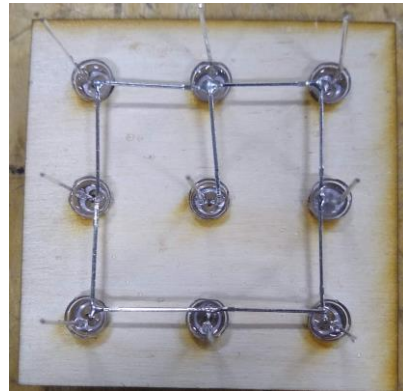
3. Bend Cathodes

- Bend all cathodes (negative) 90 degrees to form a continuous pathway
- Bend the centre LEDs cathode to connect to any of the outer LED cathodes



4. Solder cathode connections


- Solder each negative connection
- Take care to use minimal solder and the leads straight/square to help keep the overall project looking tidy



5. Test 1st layer

- Set a power supply to 5V
- Clip a 220 ohm (or near) resistor to the positive power supply lead
- Clip the negative power supply lead to the soldered connections
- One by one touch the free end of the resistor to the positive lead of each LED
- Correct any issues



<p>6. Repeat the process in steps 2 through 5</p>	
<p>7. Connecting the layers</p> <ul style="list-style-type: none">• Use alligator clips to temporarily hold layers together• Carefully position leads to be connected to on another focusing on, and soldering, one at a time.• Take care to use an appropriate amount of solder to keep things looking tidy.	
<p>8. Testing</p> <ul style="list-style-type: none">• Set the power supply to 5 volts• Attach the negative lead to the negative path for one layer• Using a 220 resistor attached to the positive lead of the power supply, test each led by touching the anode (positive lead) from the base of the array.• Move the negative lead to the next layer and repeat the test, again touching the resistor (positive) to the	