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**icecube**

**sunfounder**

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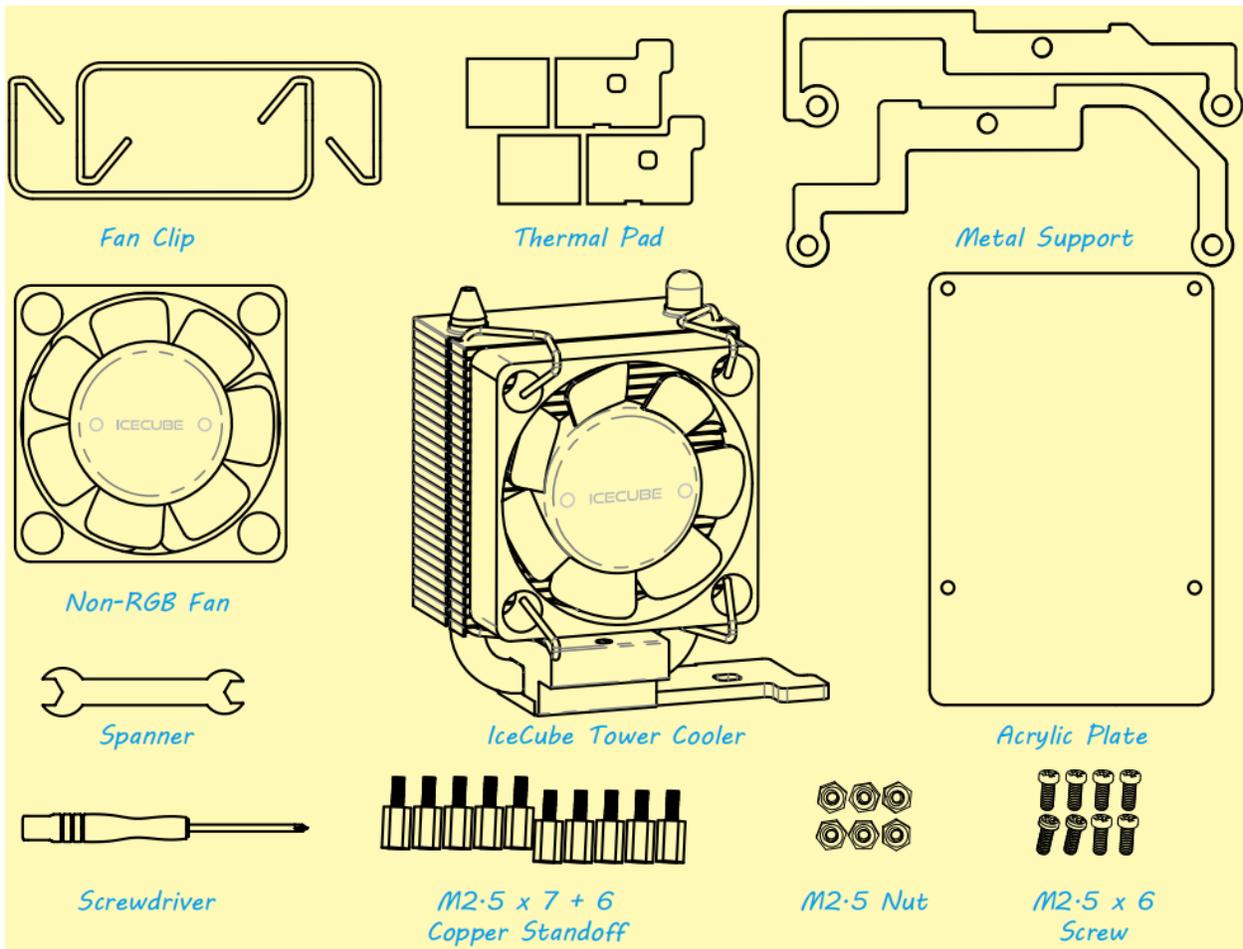
- Product Size: 55.75\*35.5\*61mm
- Fan Size: 40\*40\*10mm
- HS Material: Aluminum
- Fan speed: 3500RPM
- Bearing Type: sleeve bearing
- Rated Voltage: 5V
- RGB LED

This is a tower cooler designed for Raspberry Pi 3B+/4B, it has the following advantages.

- Compatible with Raspberry Pi 4 B and Raspberry Pi 3 B+, easy to assemble.
- Super Cooler - (Ambient temperature 25°C) Raspberry Pi 4 Model B 2gb version Idle Test: around 29°C; Full Load: less than 37°C; Overclock2147 MHz: less than 46°C
- Tower Structure - 28 Aluminium Fins and 5mm Copper Pipe provides effectively excellent heat dissipation.

- Silent RGB LED Fan - Speed: 3500RPM; Air Flow: 2.46CFM; Noise Level: 22.32dBA; Rated Power: 0.4W @5V, 0.08A.
- Cooling 4 Chips - Not just the CPU, the cooling base also covers the RAM, Ethernet and USB chips.

COMPONENTS LIST





## ASSEMBLE INSTRUCTIONS

**M2.5 x 7 + 6 Copper Standoff**  
**Raspberry Pi 4**  
**Acrylic Plate**  
**M2.5 x 6 Screw**

**Step 1 : Attach the Raspberry Pi to the acrylic plate!**

**Metal Support**  
**M2.5 x 6 Screw**

**Step 2 : Complete the IceCube! Note that the text on the two metal supports is facing upwards.**

**Thermal Pad**

**Step 3 : Put the Thermal Pads on the bottom of the IceCube.**

**M2.5 x 6 Screw**

**Step 4 : Attach the IceCube on the Raspberry Pi.**

**Step 5 : Power the IceCube.**

For more information, please refer to the online tutorial: [icecube.rtfid.io](http://icecube.rtfid.io). In addition, you can learn how to replace the spare Non-RGB Fan.



## SPECIFICATIONS

### 3.1 Mechanical and Electrical Parameters

Table 1: Mechanical and Electrical Parameters

External dimension	40 * 40 * 10MM
Weight	13.5±5g/pcs
Bearing	sleeve bearing
life	40,000 hours (Ambient temperature 25°C)

Table 2: Electrical Parameters

Rated voltage	5V
Rated current	0.08 A(Max: 0.10 A)
Rated input power	0.40 W(Max: 0.50 W)

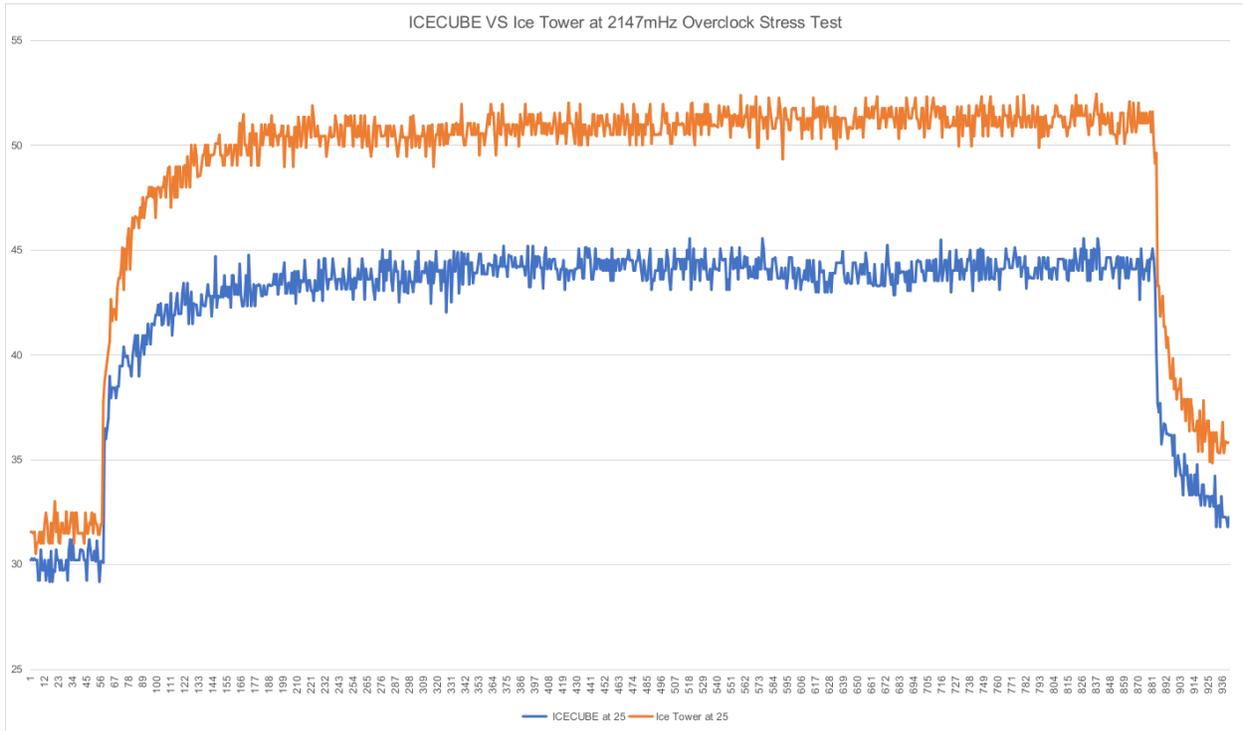
Table 3: Efficiency

Rated speed	3500±10%RPM (tested in Ambient temperature 25°C after 3 minutes of operation)
Maximum air flow	2.46CFM
Maximum air pressure	0.62mm-H2O
Accoustic sound	22.31dBA

Table 4: Characteristics

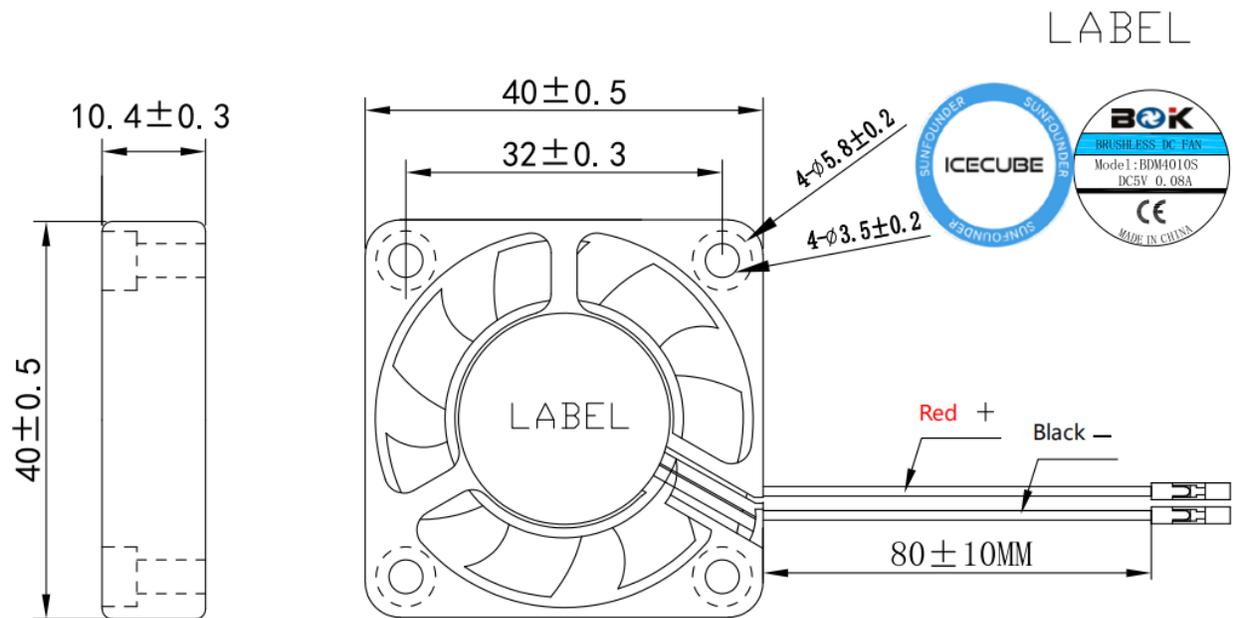
Operating voltage range	3V ~ 5.5V
Starting voltage	3V
Operating temperature	-10°C ~ +70°C
Storage temperature	-30°C ~ +85°C

### 3.2 Characteristic Curve

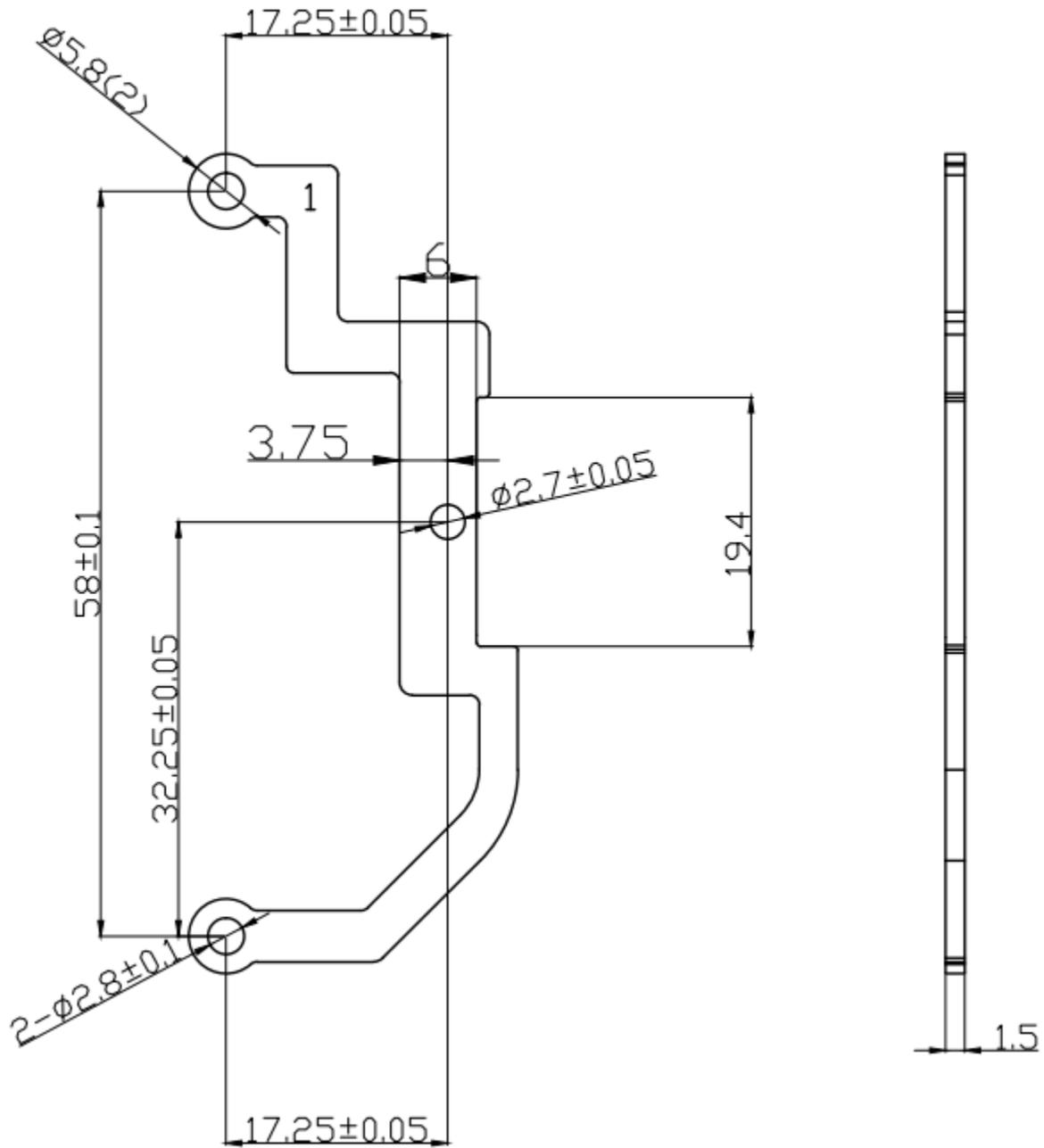


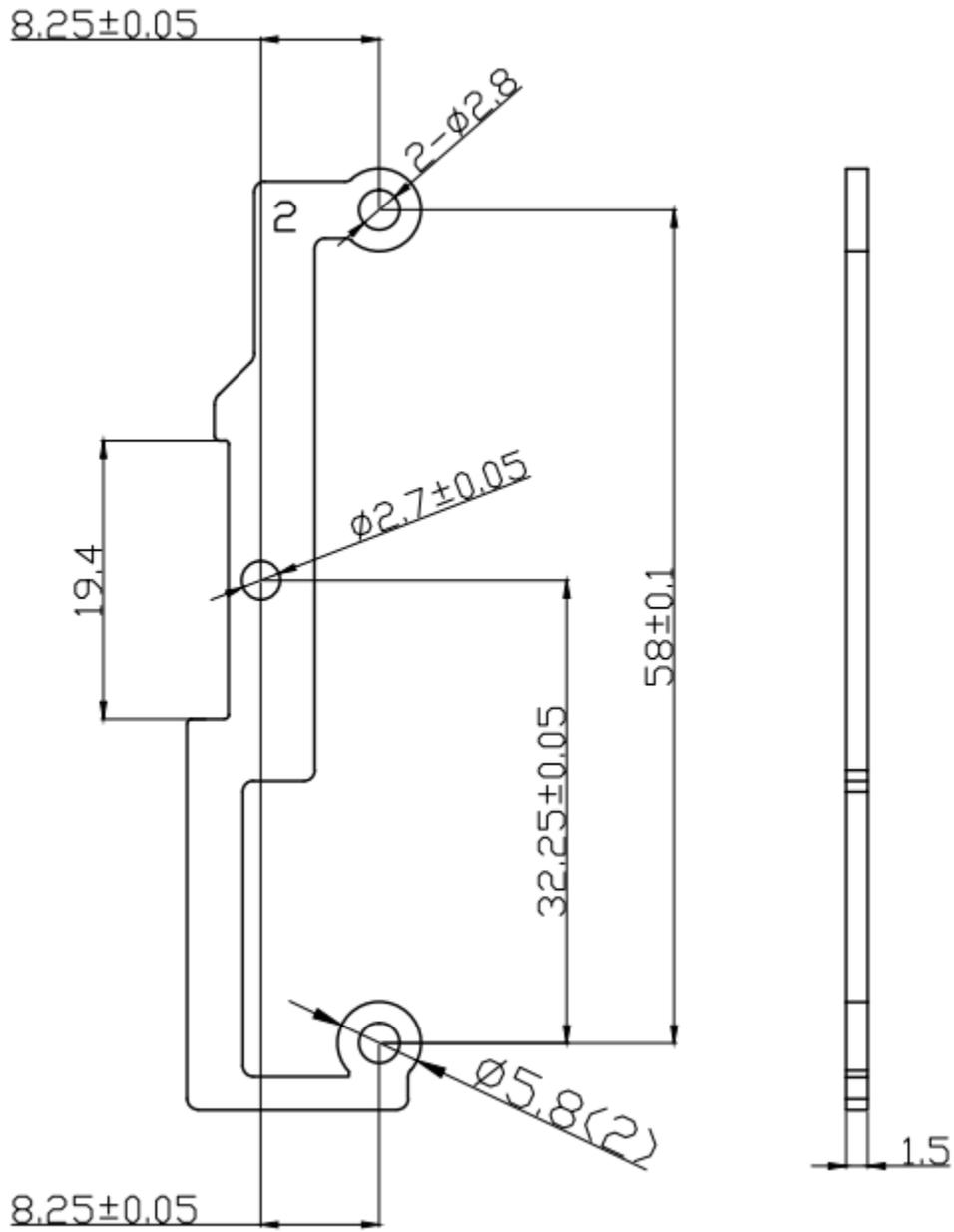
### 3.3 Dimensional Drawing

#### Fan

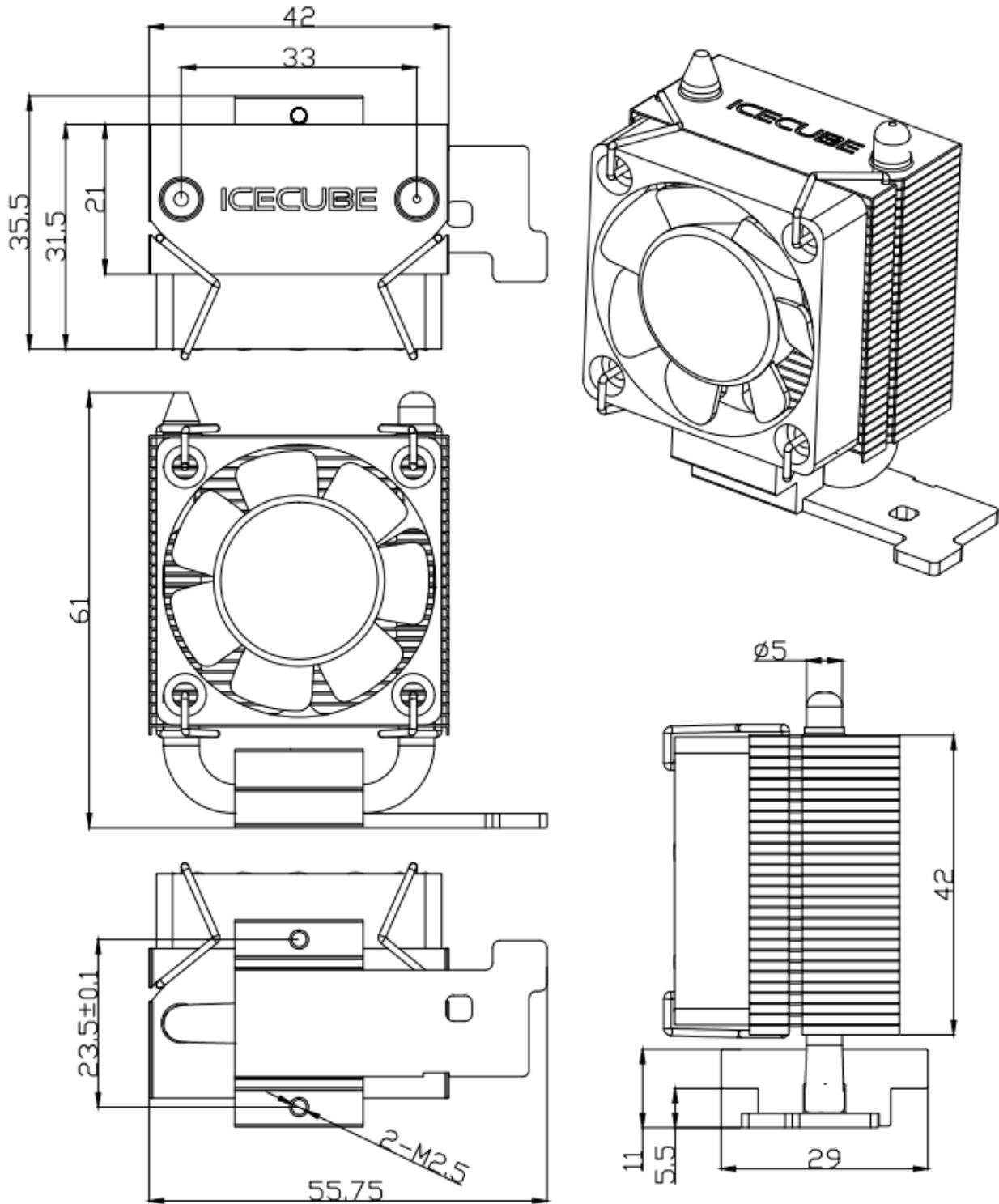


#### Metal Support





Tower Cooler



## 3.4 Warning

- Do not touch the blades, or let the power wires wrap around the fan, or pull the power wires with force to avoid damaging the fan.
- Do not use in environments with flammable gases or any danger.
- When the fan is working, please do not try to lock the fan for a long time. If you do so, the fan will burn out due to the high heat generated by the continuous stoppage.
- When assembling the fan, please pay special attention to the noise generated by resonance or vibration.
- Do not drop the Icecube Tower Cooler from height, as this may affect the balance of the fan's blades.

## HOW TO REPLACE FAN

If you do not like this current fan with RGB or the pre-installed fan has broken, you can refer to the following tutorial to replace it.

### Materials to prepare

- 1 x Non-RGB Fan
- 2 x Fan Clip
- 1 x Wrench

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### Note:

- Please power off the Raspberry Pi first.
  - You need to be careful when removing the fan clip, it may pop out.
  - Pay attention to the direction of the Non-RGB fan (black), the side with the label (ICECUBE) should be facing you.
  - A wrench is used to keep the Fan Clip in the right position.
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