

Meet your demand for optimal miniature cooling design  
Expert on forced air convection and heat dissipation in miniature mechanisms



Sunon was founded in 1980 and is a leader in precision motors and miniature cooling fans. In 2007, the company successfully launched its Mighty Mini cooling technology and mass-produced 3cm below miniature cooling products. It offered the smallest (8mm), the thinnest (3mm) and the lowest energy-consuming innovative design. The mature technology has passed rigorous reliability verification and been introduced into new-generation products of computer information, network communications, consumer electronics, medical equipment, security surveillance, etc.

Sunon has taken out 110 patents from around the globe for the Mighty Mini cooling technology. Accompanied by our flexible custom-made design ability, we have successfully assisted clients across the world with solving their cooling problems in various miniature mechanisms and become the best cooling design advisor for clients developing new-generation miniature electronic products.

Innovative Solution

UMPC & MID

Pico Projector

Medical Air Detector

Samrt Phone

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Fan Size: ● 80mm



● 30mm

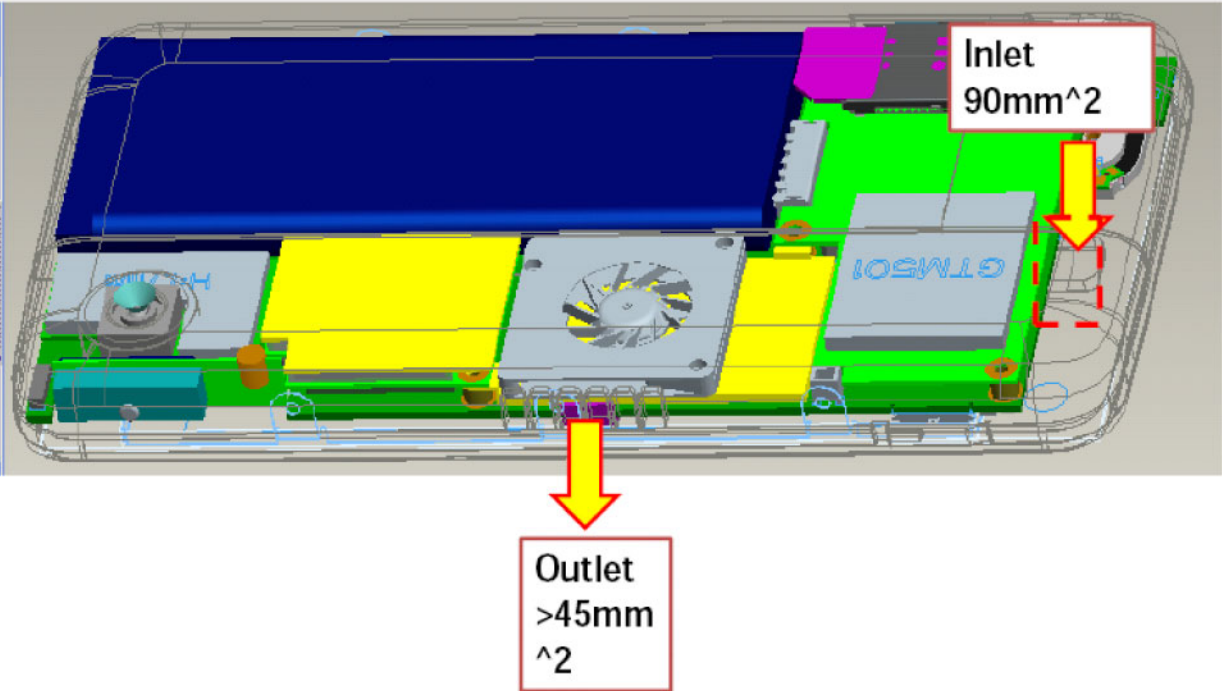


● 8mm

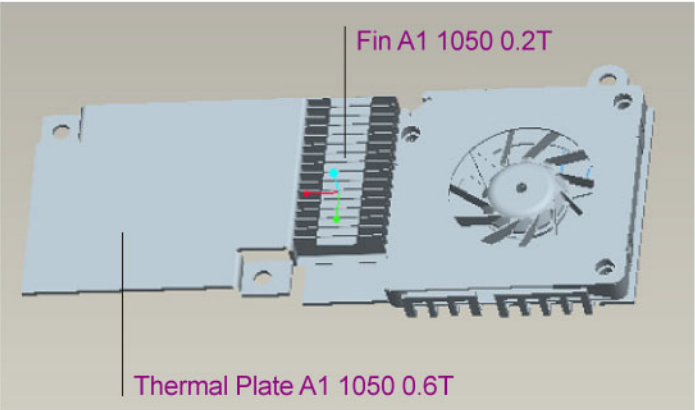
|               | Size      | Model     | Operating Voltage(V) | Voltage (V) | Power Current (mA) | Power Consumption (Watts) | Speed (RPM) | Air Flow (l/min) | Static Pressure (Pa) | Noise(dBA)   | Weight (g) |
|---------------|-----------|-----------|----------------------|-------------|--------------------|---------------------------|-------------|------------------|----------------------|--------------|------------|
| Fan Series    | 8x8x3mm   | UF383-100 | 2.1-3.5              | 3           | 93                 | 0.3                       | 13500       | 0.2              | 1.56                 | 2.1dBA/0.2M  | 0.3        |
|               | 8x8x5mm   | UF385-100 | 2.0-3.5              | 3           | 49                 | 0.1                       | 17000       | 0.6              | 2                    | 17.1dBA/0.3M | 0.44       |
|               | 10x10x5mm | UF3A5-100 | 2.7-3.5              | 3           | 51                 | 0.2                       | 14600       | 1.3              | 3.93                 | 1.4dBA/1M    | 0.68       |
|               | 12x12x5mm | UF3C5-100 | 2.3-3.5              | 3           | 33                 | 0.1                       | 7200        | 1.6              | 2.63                 | 1.9dBA/0.2M  | 0.88       |
|               | 15x15x3mm | UF3F3-100 | 2.2-3.5              | 3           | 30                 | 0.09                      | 1000        | 5.8              | 13.7                 | 16.8dBA/30cm | 0.76       |
|               | 15x15x5mm | UF3F5-100 | 2.3-3.5              | 3           | 28                 | 0.1                       | 7200        | 3.7              | 4.65                 | 3.7dBA/0.3M  | 1.2        |
|               | 17x17x3mm | UF3H3-100 | 2.55-3.5             | 3           | 42                 | 0.1                       | 6500        | 6.5              | 5.27                 | 5.3dBA/1M    | 0.96       |
| Blower Series | 9x9x3mm   | UB393-100 | 2-3.5                | 3           | 56                 | 0.1                       | 12000       | 0.91             | 7.76                 | 12.7dBA/1M   | 0.47       |
|               | 12x12x3mm | UB3C3-100 | 2.2-3.5              | 3           | 41                 | 0.13                      | 8400        | 1.6              | 10.59                | 14.2dBA/1M   | 0.54       |
|               | 15x15x3mm | UB3F3-100 | 2.0-3.5              | 3           | 42                 | 0.1                       | 6800        | 2.6              | 14.45                | 16.0dBA/1M   | 0.7        |
|               | 17x17x3mm | UB3H3-100 | 2.2-3.5              | 3           | 42                 | 0.1                       | 5600        | 3.0              | 12.9                 | 21.2dBA/1M   | 0.78       |
|               | 30x30x3mm | UB5U3-100 | 3.5-6                | 5           | 62                 | 0.3                       | 4300        | 7.5              | 19.54                | 16.8dBA/1M   | 0.36       |

\*Please Visit SUNON web site at <http://www.sunon.com> for update information.

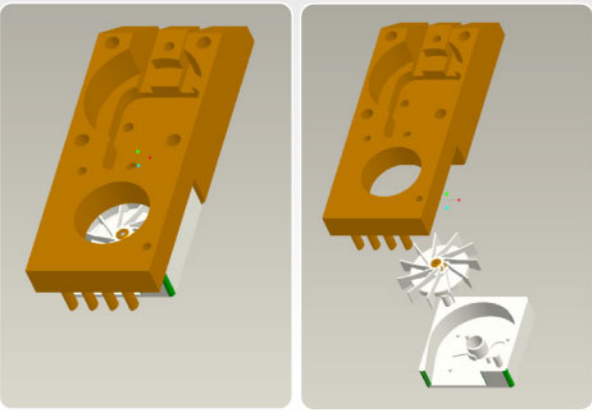
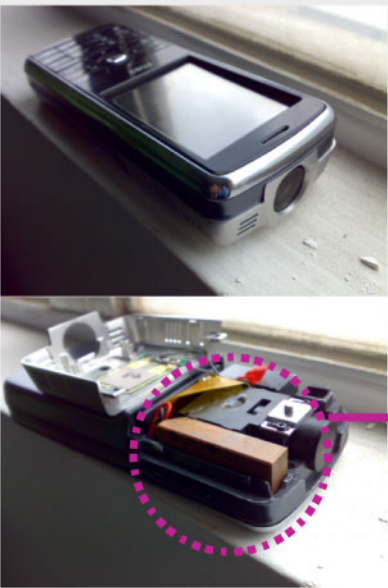
UMPC & MID



- Application : UMPC
- Dimension : 15.7x7.5x1.5cm
- CPU : 0.25W
- Chipset : 1.1W
- Cooling Solution : Cooling Module with Mighty Mini Blower (30x30x3mm).

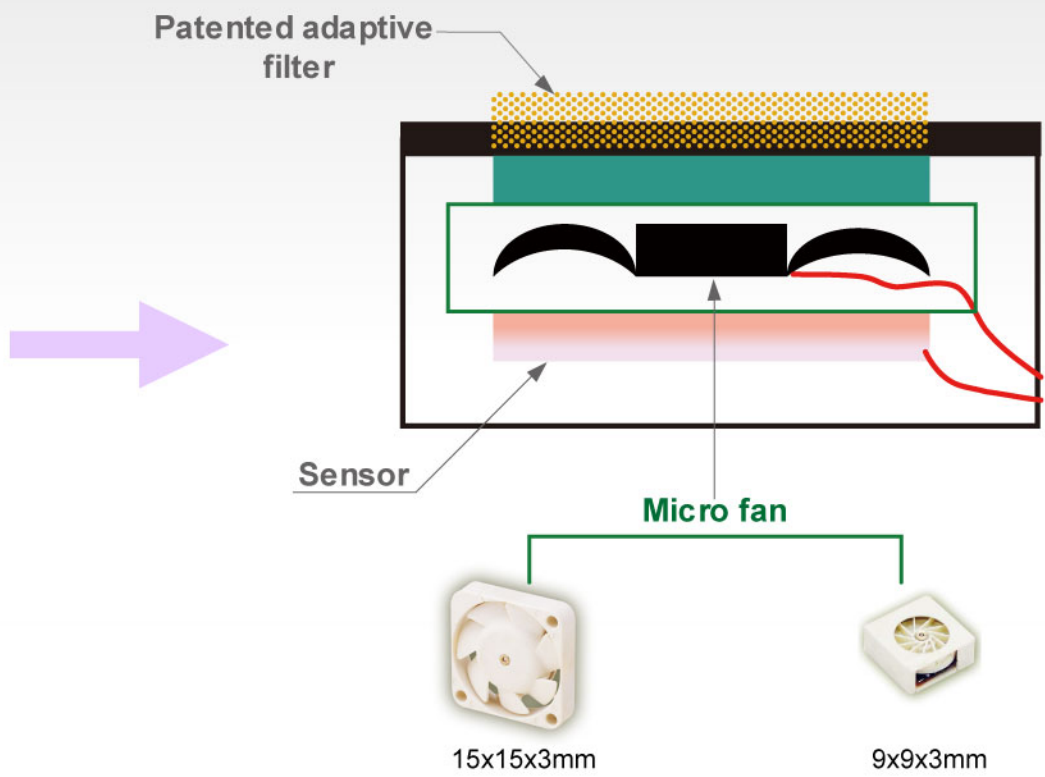


PICO Projector



- Application : Pico Projector
- Lumens : 10 lm
- Cooling Solution : Cooling Module with Mighty Mini Blower (12x12x3mm)

## Medical Air Detector



**Application :** Medical Air Detector

**Demands of Fan :** Micro fan for ultra wearable device.  
Need a fan to inhale the air.

**Solution :** Mighty Mini Blowers  
(9x9x3mm and 15x15x3mm)

## Smart Phone



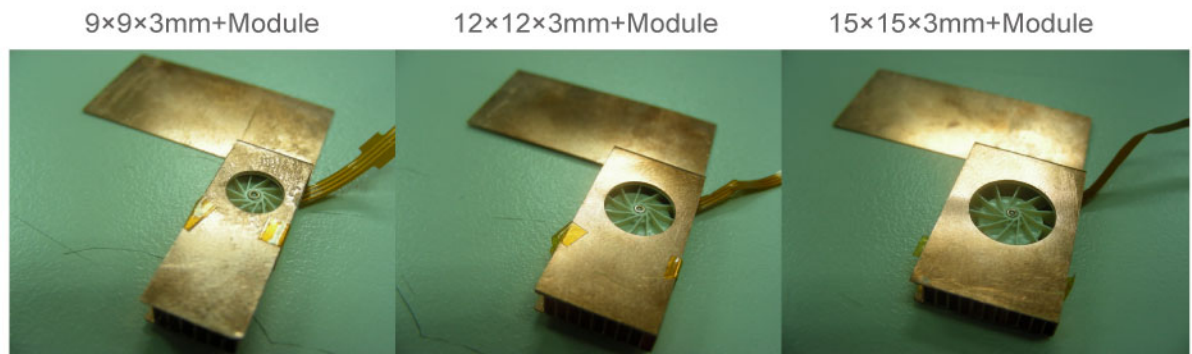
**Application :** Smart Phone

**Product size :** 11.5 x 5.6 x 2cm

**Power Consumption :** 2.5W

**Cooling Solution :**

Cooling Module with Mighty Mini Blower  
(9x9x3mm, 12x12x3mm, and 15x15x3mm)



● We proceeded respectively airflow testing, temperature testing, vibration testing and noise testing. Below form is the result.

| Testing condition | Voltage (V) | Current (A) | Power (W) | Q (CFM) | Ta (°C) | Tc (°C) | ΔTa (°C) | SPL@0.25m (dBA) | SPL@0.25m R(dBA) | Vibration-back (m/s <sup>2</sup> ) | Vibration-sind (m/s <sup>2</sup> ) |
|-------------------|-------------|-------------|-----------|---------|---------|---------|----------|-----------------|------------------|------------------------------------|------------------------------------|
| none              |             |             |           |         | 27.24   | 128.0   |          |                 |                  |                                    |                                    |
| 0903+module       | 3           | 0.03        | 0.09      | 0.03    | 27.19   | 101.9   | 26.1     | 22.9            | 21.3             | 0.426                              | 0.217                              |
| 1203+module       | 3           | 0.04        | 0.12      | 0.05    | 27.24   | 96.8    | 31.2     | 24.1            | 22.7             | 0.389                              | 0.271                              |
| 1503+module       | 3           | 0.04        | 0.12      | 0.10    | 27.45   | 93.5    | 34.5     | 24.6            | 23.0             | 0.510                              | 0.236                              |

- The **temperature** of Smart Phone with 3W power can be reduced **26°C to 35 °C** by the thermal solution.
- Noise** level of smart phone is under **25 dBA** at the highest loading. (Background noise of ordinary office :40~50 dBA).
- Vibration** on smart phone induced by mini-Fan is **0.5 m/s2**. (Vibration of ordinary Mobile Phone:15 m/s2 )
- The **module** with **mini-Fan** is the best solution for promoting the performance of Smart Phone. **High** thermal dissipation, **Low** noise and **Low** Vibration.