MINI CROSS FLOW FANS (BLOWERS)

General Specifications:
- Life Expectancy (L10): >65,000 hours @ 40°C
- Brushless DC Motor: CE/UL/CUL/TÜV
- Triple Ball Bearings
- Operation Temperature: -10°C ~ +70°C
- Storage Temperature: -20°C ~ +75°C
- Material: UL94V-0/PBT GF Filled
- Lead Type: UL157/AWG#28
- Lead Length: 160mm ±5
- Weight: 0.5 oz ~ 1.2 oz.
- RoHS: Yes

<table>
<thead>
<tr>
<th>Model</th>
<th>Voltage (V)</th>
<th>Current (A)</th>
<th>Power (W)</th>
<th>Normal Speed (RPM)</th>
<th>Air Flow (CFM)</th>
<th>Noise (dBA)</th>
<th>Pressure (In.-H₂O)</th>
<th>Ball Bearing</th>
<th>Weight (Grams)</th>
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<tbody>
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Specifications subject to change without notice

Mechanical Specifications (mm)
Speed Sensor/ Tachometer Connection

For H series, select R to make the current less than 10mA.
For example, when Vcc = 5V, R=500 Ohms, the current is 10mA. So, the final R should be greater than 500 ohms, say 2K.

For X series, select R to make the current less than 5mA.
For example, when Vcc = 12V, R=2400 Ohms, the current is 5mA. So, the final R should be greater than 2.4K ohms, say 3K.

Maximum Vcc is 13.2V for 12V fans.
Maximum Vcc is 5.5V for 5V fans.
PWM Speed Control Guide

PWM frequency: 18~30KHz
Duty Cycle: 0~40% is not used. 40~100% controls speed linearly up to maximum speed.

Voltage Speed Control Guide

Speed of both X and H series also can be controlled by regulated voltage with speed signal feedback. For example, the speed of 12V and 5V fan can be controlled by a IC, such as MAX6650, or similar one.
Model Numbering System of OLC Product

CFR [3B] [12] [H] – [ ] – [ ] – [ ]

- **IP rated:**
  - [IPX4]
  - [IP43]
  - [IP55]

- **Speed Control Method:**
  - [ ]: Voltage Control Speed
  - [P]: PWM Control Speed

- **Speed Output (Tachometer Output):**
  - [ ]: No Speed Output (Tach. Output)
  - [S]: Speed Output

- **Performance Rate:**
  - [H]: High Performance
  - [X]: Super Performance

- **Nominal Operation Voltage**
  - [12]: 12VDC
  - [ 5]: 5VDC

- **Rotor Segment:**
  - [1B]: 1 Segment Rotor (1”)
  - [2B]: 2 Segment Rotor (2”)
  - [3B]: 3 Segment Rotor (3”)
  - [4B]: 4 Segment Rotor (4”)

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