



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



SUNON®



*All products are **RoHS** compliant.

DC Brushless Fan & Blower

MagLev®

about Sunon

Sunon was founded in 1980 and has always upheld the philosophy of “Brand, Innovation, and Value” for their business operations. From the start, the Sunon name has become an international trademark that is well recognized and featured on products sold worldwide. Over the years, Sunon has continuously focused on developing and making innovations for their core motor technology, leading the industry in product trends for motors, cooling fans, and cooling modules. Sunon is one of the few operations in the world with a motor R&D team and is fully capable of developing innovative new motor designs. Examples for the R&D efforts are the world’s first MagLev design and Sunon Mighty Mini series, featuring a compact sub-centimeter size that is the world’s smallest and thinnest fan. Today, Sunon is the worldwide leader in precision motors and micro miniature fans, and is widely recognized by the industry as the designated partner for various multinational corporations. Sunon products are widely used in various applications and industries such as information technology, network communications, optoelectronics, and automobile electronics industries, as well as in industrial production equipment, medical equipment, home applications, OA machines, and others.

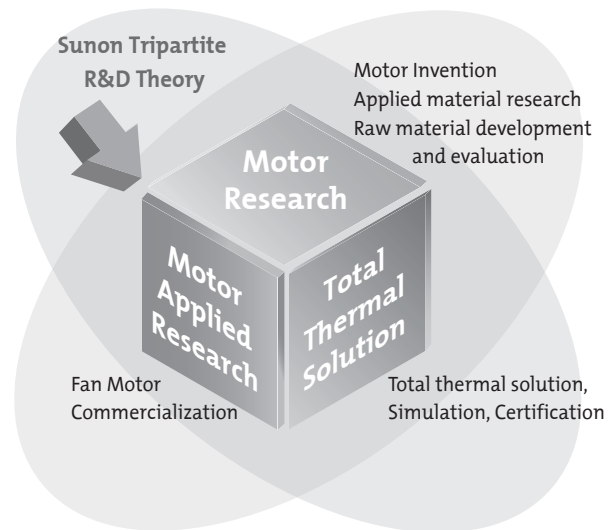
Sunon Research Center the Driving Engine for Inventions and Innovations

Sunon established the “Sunon Research Center” in Kaohsiung in 2002 to promote and execute the innovation blueprint for Sunon Group. Research labs and engineers from Europe, America, Japan, and China are centralized to form a worldwide technological service network for quick and efficient services.

Key Modules for Innovating Core Motor Technology

Sunon has been researching their motor technology for over 30 years and adhering to the Sunon R&D Trinity as their innovation roadmap, focusing on the three major technology fields of “Motor Research,” “Motor Applied Research,” and “Total Thermal Solution.” Sunon strives to expand the endless possibilities and optimization of motor applications and will continue to make breakthroughs and product innovations. The efforts will push Sunon to the front of the technology curve and clients will be able to realize their future dream products with the three key Sunon products of motors, cooling fans, and cooling modules.

Sunon has the capacity to design and implement the complete magnetic, mechanical, and driving circuit of a motor to conform to client design specifications. With the efforts of the mechanism and electrical circuit engineering teams, Sunon recognizes the needs of their clients regarding cooling modules and can provide flexible designs for high performance and high quality cooling fans. Sunon utilizes advanced simulation systems and analysis projects that result in an even more accurate heat analysis and heat dissipation design for the system. Subsequently the most efficient total thermal solution can be provided to the client.



about Sunon MagLev

The Sunon patented MagLev design is based on magnetic principles and forces that not only propel the fan but also ensure stable rotation over its entire 360 degrees of movement. Utilizing the attraction of the magnetic levitation force, MagLev eliminates the wobbling and shaking problems of traditional motor fans. With this new technology, the MagLev fan propeller is suspended in air during rotation so that the shaft and bearing do not come into direct contact with each other to create friction. These features result in a fan with **low acoustic noise level, high-temperature endurance, and longer lifespan.**

Comparison between MagLev and General Motor Fans

(A) Sunon MagLev Fan

Labels: stator, magnet, maglev plate, the center of gravity is lower

Possesses 3 important factors:
the maglev plate, the magnet and the stator

The resulting interaction between the maglev plate and the magnet pulls the rotor downward along the entire 360-degree surface. Due to the lower center of gravity, the rotor runs in a more stable consistent orbit.

(B) General Fan

Labels: stator, magnet, the center of gravity is higher

2 factors:
the magnet and the stator

The general fan utilizes a deviating magnetic center to attract the rotor downward. This technology causes the rotor to vibrate violently, due to the lack of a consistent orbit as well as a deviation of the magnetic center.

SUNON MagLev prevents the defects of conventional fans

	Deficiencies of Traditional Motors	Sunon MagLev Solution
Sleeve Bearing	<ul style="list-style-type: none"> ● Weight of rotor is entirely loaded on to the shaft. Abrasive rotation between shaft and bearing will result in an irregular and rough surface on the inner surface of bearing bore. The fan motor rotation becomes uneven and in turn, causes operational noise and shortens fan life. ● The oil ring and mylar washer not only results in added friction area but also blocks the heated air, which, if not released before solidification, would become nitride particles that clog up in the gap between shaft and bearing bore, then causing a much slower rotation of rotor and noise. 	<ul style="list-style-type: none"> ● The entire weight of the rotor is completely attracted by the magnetic force in any mounted position, keeping the motor rotating evenly at a fixed point in a consistent distance from the inner surface of the bearing. No more traditional rubs and noise will occur. ● The oil rings, the washers are no longer used in MagLev structure. ● For customized use, MagLev design allows an operating temperature higher than 70°C.
Ball Bearing	<ul style="list-style-type: none"> ● When the fan motor is operating, the steel balls inside will generate a higher rotational noise than that of a sleeve bearing. ● The construction of Ball bearings is quite weak and unable to absorb external impact. The bearings can be easily damaged, causing louder rotational noise. 	

SUNON Sound Quality Analysis and Research

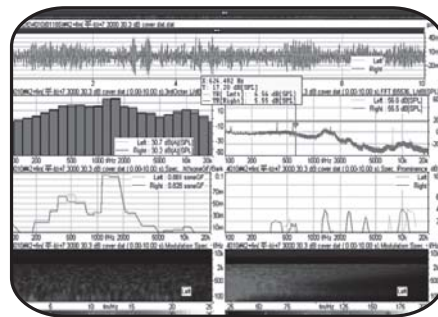
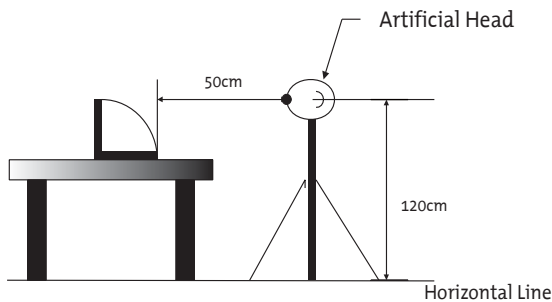
Sunon introduced acoustics engineering in the year 2000 to transform the traditional school of Sound Pressure and Sound Power into the more advanced theory of Sound Quality. Sunon's Sound Quality analysis and research is performed by Head Measurement System (HMS). The HMS system records and simulates the auditory senses of the human ears, where the sounds, vibration, rotation speed, and electrical signals are measured. The software subsequently performs time domain and sound quality parameter analysis to assist the acoustics engineers in allowing Sunon products to feature a more favorable sound quality. The expertise and experience of the acoustics engineer combined with the software analysis will result in an even more user-friendly environment that is rivaled by none.

Sound Quality Testing

Sound quality is measured in a semi anechoic chamber by means of Head Measurement System (HMS).

The Sound quality of fans can be described according to the objective parameter of sound (Loudness, Tonality, Roughness/Fluctuation, Sharpness).

After the recording of acoustic signals, the data is performed the FFT, order Psycho acoustic And modulation analyses and playback diagnosis in order to improve the sound quality of fans.



The mobile Sound Quality Laboratory SQlab II

SQlab II is a compact, mobile multi-channel measurement system for acoustic analysis, vibration investigation and sound design. It is used wherever investigation of sound quality should be combined with vibrational measurements.

The comparison of vibrational measurements with acoustic signals enables the user to draw direct conclusions from sound sources and their sound quality. For this purpose, SQlab II is able to measure aurally-accurate recordings of sound events using an Artificial Head and vibration data with accelerometers, etc. at the same time. Thus, correlations between the subjective aural impressions of sound events (airborne sound) and the related sources (vibration, solid-borne sound) as well as transfer mechanisms become apparent. This is the basis for sound optimization. Moreover, SQlab II can be used as a "stethoscope" for error analysis.

The Analysis Software

It can analyze, filter, display and document acoustic and vibration measurement data in a wide range of modes. Yet an outstanding feature of this software is the possibility of including the aural sense of the human user in signal analysis.

HEADphone Playback System

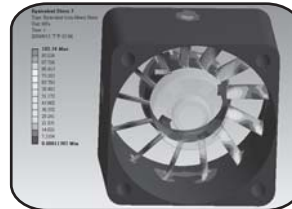
The digital 24 bit HEADphone Playback System HPS IV is complementary to the Head Measuring System HMS III. Conditioning of audio data for aurally-accurate playback is via equalization of the acoustic signal in the programmable Equalizer PEQ IV, with subsequent amplification via the Power Amplifier PVA IV.2. Two electrostatic headphones can be connected to the playback system, which are individually calibrated and correspondingly driven.

SUNON Total Thermal Solution

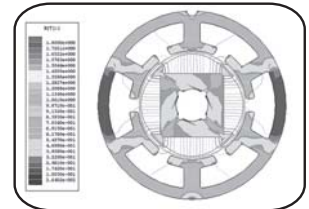
Sunon introduced its first chip cooling module in 1993, it has continued to rely on its impressive R&D team to also succeed in the laptop computer cooling module market. Sunon's innovative technology and superior design talent have consistently won customers' trust. In addition to Sunon's cutting-edge cooling fan products, it also offers laptop, VGA card, Desk Top, and server product designs. Sunon's cooling module product line ranges from low-end to high-end, enabling it the ability to provide customers with "Total Thermal Solutions."

Sophisticated Tools Strengthen Design and Quality

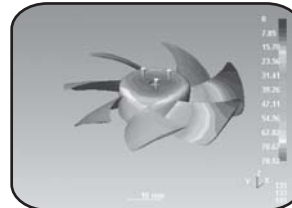
Apart from optimized design and superior R&D, we use infrared (IR) thermal imagers in module design work to make precise measurements of module temperatures, thereby avoiding the use of conventional thermocouples to measure temperatures. Our R&D personnel can instead rely on IR images to get a clear understanding of system temperature distribution. The data from our thermal imaging reports allow us to provide a clear system-wide thermal and cooling design analysis. In order to give customers the best quality guarantee, we go well beyond industry standards in production, assembly, inspection equipment design and deployment. We have also committed large amounts of manpower and material resources, and adopted the newest hardware and software equipment in our quest for quality. For instance, our thermal inspection systems can fully simulate thermal resistance measurements and pressure settings within systems and measure thermal resistance simultaneously at six different points. Precise measurements of pressure settings enable simulation of pressure within the system, making measurements even more accurate and protecting product quality by ensuring that excessive pressure doesn't cause product deformation. Furthermore, independent bar codes on each product ensure effective product tracking and improve the quality of after-sales service. We can satisfy our customers' needs for various types of customized cooling modules while meeting the highest quality requirements.



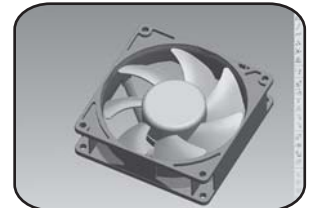
Structural Simulation analysis



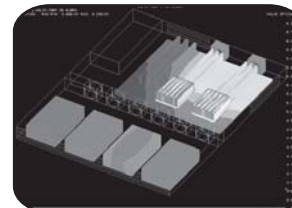
Magnetization Simulation analysis



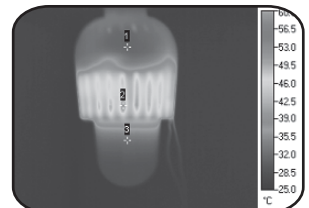
Fluid dynamic analysis



3D model



Thermal analysis



IR thermograph inspect

Advantage for Sunon Thermal Solutions Design

Sunon thermal Solution

Sunon cooling module Dept.

Optimal Design of Overall Product

Customized thermal solutions

Heat Sink + Fan

Current thermal Solution

Heat Sink Vendor

Heat Sink

Fan Vendor

Fan

Separated

Difficult to get total thermal solution

Fan 3rd Wire Signal

Fan with switching driving circuit designed for rpm measurement:

These fan motors have three lead wires:

+:Red,

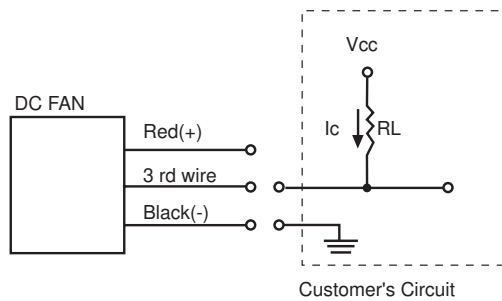
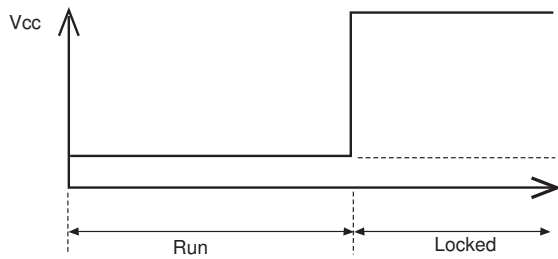
-:Black,

output signal for 3rd wire:

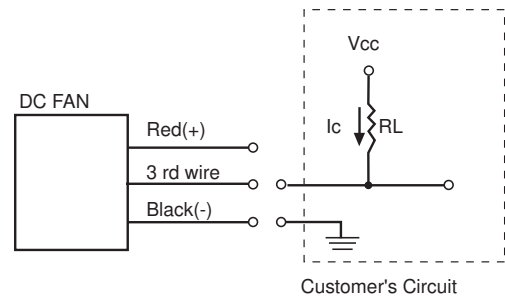
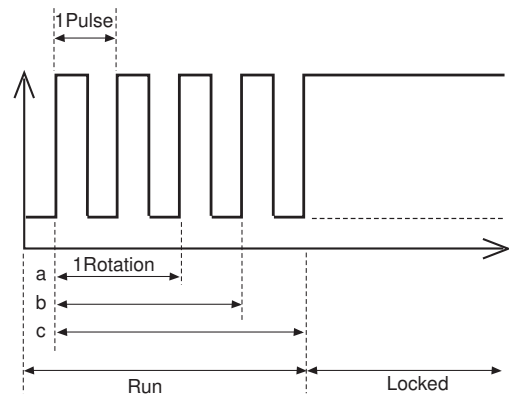
F Type : Yellow

R Type : White

● R Type (Rotation Detector)



● F Type (Frequency Generator)



The relationship between rotation & output pulses signal from 3rd wire are as follows:

(a) 1 Rotation=2 Pulses(4 poles' motor)

(b) 1 Rotation=3 Pulses(6 poles' motor)

(c) 1 Rotation=4 Pulses(8 poles' motor)

Notice:

For 8 poles' motor: normally, 1Rotation=4 pulses, if frequency divided circuit is implemented in this motor then 1Rotation=2 pulses.

Sunon Reliability Verification System

Sunon has 5 reliability testing labs worldwide equipped with the topmost precision verification instruments for testing from the design phase, through pre-production, and into mass production. The complete verification system is computerized and fully automated for precise analysis of product reliability and quality satisfaction to meet the market requirements.

Sunon Production Network

Sunon Group has a total of three manufacturing plants located in both China and Taiwan for production of 8mm~250mm series of fan products, 0.1Watt~60Watt of motor products, and various cooling module products. The overall monthly production output capacity is 16 million units.

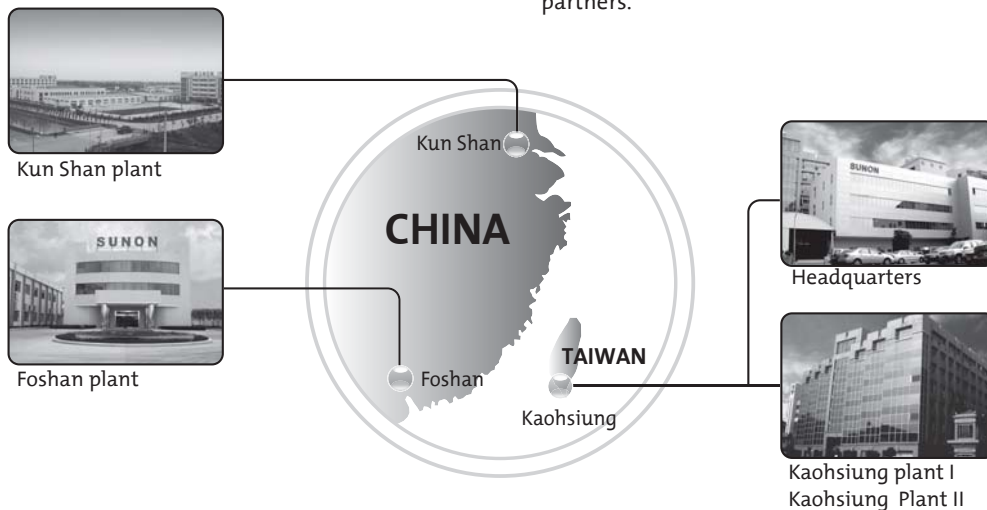
In addition to the MES system that provides clients with the best manufacturing quality, Sunon goes well beyond industry standards in production, assembly, inspection equipment design and deployment. Sunon has also committed large amounts of manpower and material resources, and adopted the newest hardware and software equipment, in our quest for quality. For example, an automated production line for cooling products, the self-developed automated inspection machine for the production line, a heat inspection system capable of six simultaneous measurements, and an independent barcode with each cooling product indicate Sunon's commitment.

Sunon manufacturing bases have obtained certifications for QS9000, ISO9001, ISO14001, ISO/TS16949, and OHSAS18001. Each product has passed UL, TUV, VDE, CCC, CSA certifications and so on.

All Sunon products are RoHS compliant from design phase to mass production.
Sunon is the long-term green partner for SONY, CANON, SAMSUNG and various other multinational companies

Sunon deeply recognizes its corporate duty to protect our earth and the ecosystem and to reduce the use of materials that impact the environment. In light of this, Sunon has been actively promoting green product design, green purchasing, and green manufacturing reforms. All current product series conform to EU RoHS and China RoHS, and Sunon has been selected as the green environment partner for multinational corporations such as SONY, CANON, and SAMSUNG. All of the aforementioned efforts will result in greener products that have the least impact on the worldwide environment.

For improving the quality management system and regulations of hazardous materials contained in the products, Sunon further introduces the IECQ QC080000 to their product production. This will complete the approval and certification process for usage of hazardous materials and the reduction management system, thereby setting up a green quality management system that conforms to international standards for the benefit of Sunon and their partners.



	Page
Sunon research center	p01
Sunon MagLev	p02
Sunon Sound quality	p03
Sunon total thermal solution	p04
Sunon fan 3rd wire signal	p05
Sunon Production Network	p06
Content	p07
DC Fan & Blower Model Numbering System	p08
New DC Fan & Blower Model Numbering Systemn / Certification & Safety	p09

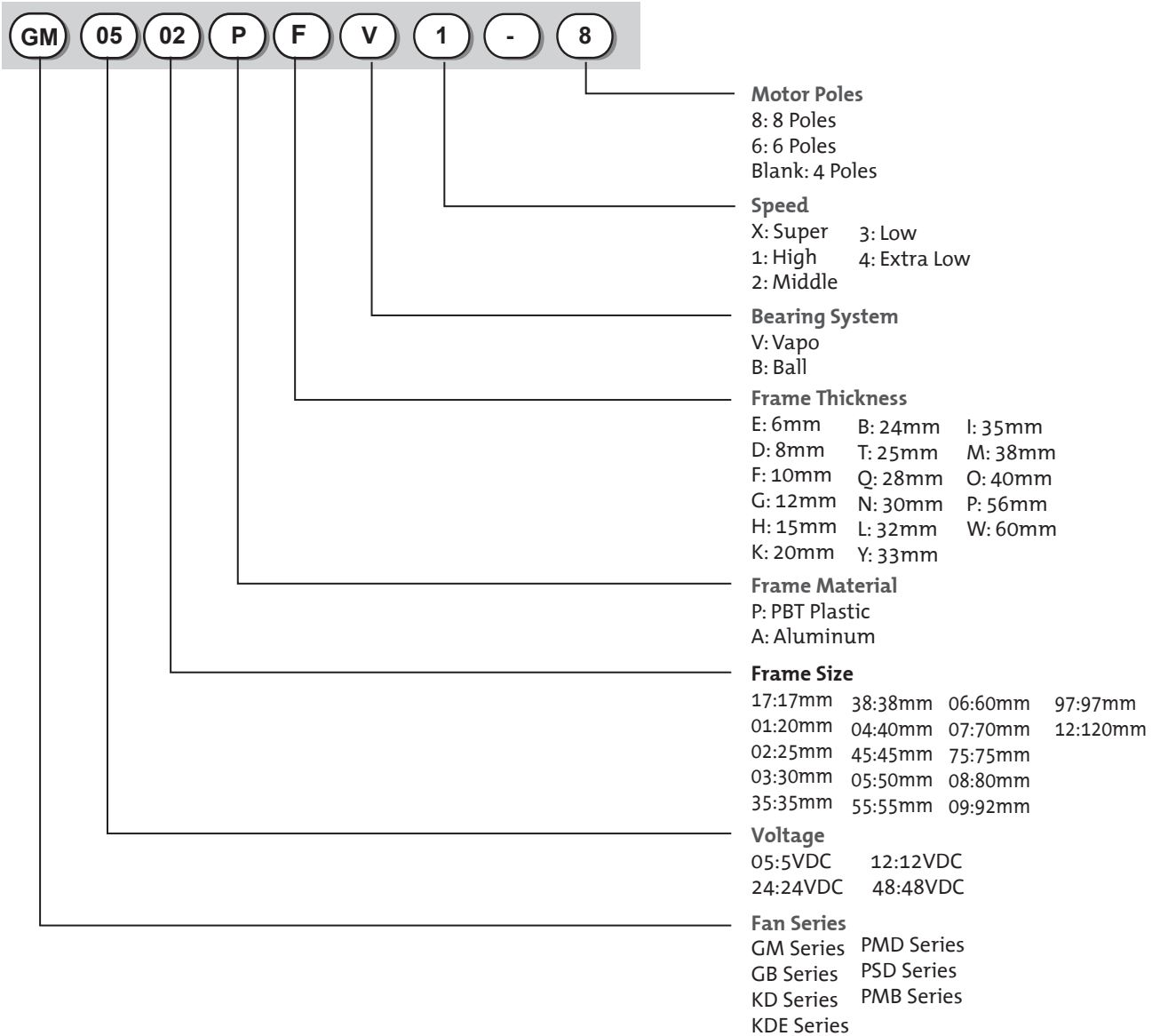
DC Fan

Size (mm)	Air Flow (CFM)	Page	Size (mm)	Air Flow (CFM)	Page
17x17x8	0.7~0.9	p10	60x60x20	19~25.5	p37
20x20x8	1.3~1.6	p11	60x60x25	29~40	p38
20x20x10	1.5~1.9	p12	60x60x25	19.3~27	p39
25x25x6	2.2~3.0	p13	60x60x38	41.5~56.5	p40
25x25x10	3.0~3.5	p14	NEW 60x60x60	67	p41
25x25x15	2.2~3.1	p15	70x70x15	19~27	p42
30x30x6	3.7~4.9	p16	70x70x20	37~43	p43
30x30x10	4.6~5.5	p17	70x70x20	23.5~29	p44
30x30x15	4.8~6.0	p18	70x70x25	40~49	p45
35x35x6	4.3~5.5	p19	70x70x25	24~32.5	p46
35x35x10	6.5~7.0	p20	80x80x15	32~40	p47
38x38x20	10.6~13.5	p21	80x80x20	45~53	p48
38x38x28	12.6~19.0	p22	80x80x20	29~39	p49
40x40x6	5.5~5.9	p23	80x80x25	49~60	p50
40x40x10	7.0~8.0	p24	NEW 80x80x25	53~60	p51
NEW 40x40x15	14	p25	NEW 80x80x25	33~45	p52
40x40x20	6.3~10.8	p26	NEW 80x80x32	61.9	p53
40x40x20	6.3~10.8	p27	80x80x38	59.5~84.1	p54
NEW 40x40x24	21.6	p28	92x92x25	65~77	p55
NEW 40x40x28	23.4	p29	NEW 92x92x25	65~75	p56
NEW 40x40x56	26.7	p30	NEW 92x92x25	39.5~55	p57
45x45x10	9.2~11.0	p31	NEW 92x92x32	79	p58
50x50x10	11~13	p32	92x92x38	91.7~120.2	p59
NEW 50x50x15	10.2~17	p33	120x120x25	120~150	p60
NEW 55x55x15	21.1	p34	NEW 120x120x25	75~108.2	p61
60x60x15	15~21	p35	120x120x38	153~190	p62
60x60x20	27.5~30.5	p36	NEW 120x120x38	93~138	p63

DC Blower

Size (mm)	Air Flow (CFM)	Page	Size (mm)	Air Flow (CFM)	Page
NEW 35x35x7	0.9	p64	NEW 60x60x25	7.3	p69
NEW 45x45x20	4.6	p65	75x75x30	7.5~13.6	p70
50x50x15	2.3~4.7	p66	97x94x33	22.4~30.5	p71
50x50x20	4.8~5.7	p67	120x120x32	31.4~35.9	p72
60x60x15	3.5~5.2	p68			

SUNON DC Fan & Blower Model Numbering System

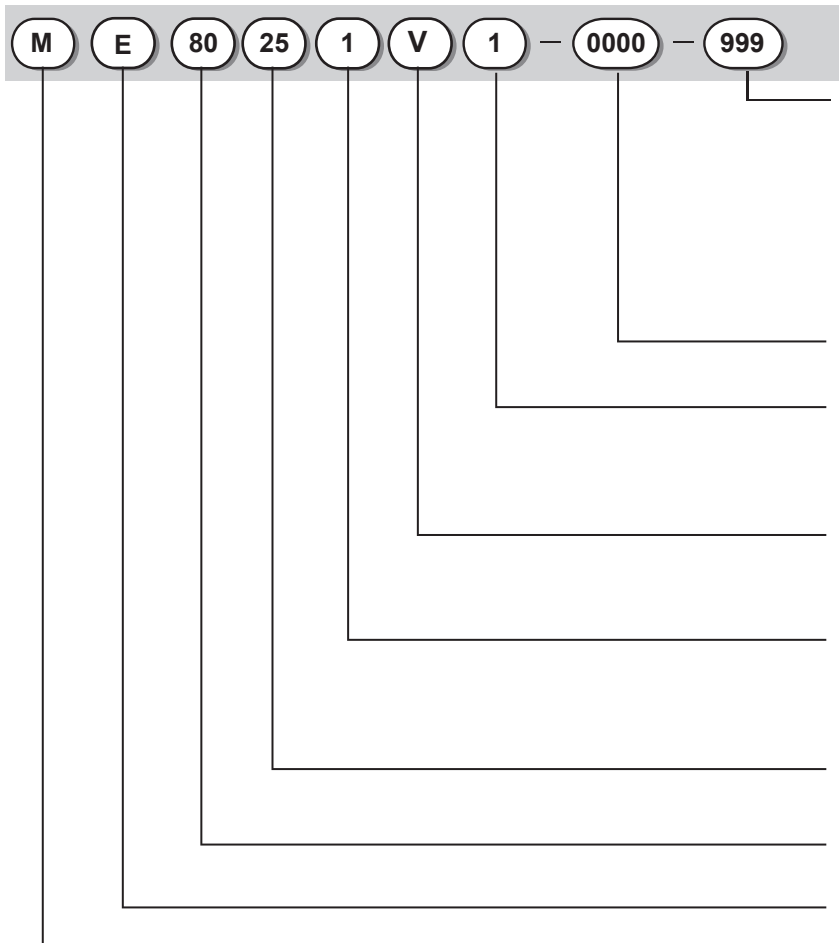


P/N

Example: PMD1206PTVX P/N:U.GN

- 11/13 Motor model
- MS MagLev Design
- (2) Two ball bearing
- G Big hub
- (9) 9 Blades
- N Smaller hub
- A Auto restart
- F 3rd wire with frequency generation waveform
- R 3rd wire with rotation detector waveform
- U Upgrade
- GN RoHS compliance
- X UV Glue
- Z Specific RPM

SUNON New Model Numbering System



Function Code

999: standard model
 A99: AutoRestart
 C99: F type (3rd wire)
 D99: with PWM
 H99: AutoRestart and with PWM
 Q99: AutoRestart , R type and with PWM
 S99: AutoRestart , F type and with PWM

Customer Code

0000 stand for standard model

Speed

X: Super High 3: Low
 1: High 4: Super Low
 2: Medium

Bearing

V: Vapo S: Sleeve
 B: 2 Ball

Voltage

0: 5VDC 3: 36VDC
 1: 12VDC 4: 48VDC
 2: 24VDC

Fan Thickness

0~9; A~Z (except O)

Frame Size

0~9; A~Z (except O)

Motor Type

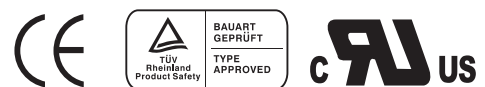
Series Code
 E Series P Series
 M Series

Code	Size(mm)	Code	Size(mm)	Code	Size(mm)	Code	Size(mm)
01~09	01~09	A0~A9	100~109	K0~K9	200~209	V0~V9	300~309
10~19	10~19	B0~B9	110~119	L0~L9	210~219	W0~W9	310~319
20~29	20~29	C0~C9	120~129	M0~M9	220~229	X0~X9	320~329
30~39	30~39	D0~D9	130~139	N0~N9	230~239	Y0~Y9	330~339
40~49	40~49	E0~E9	140~149	P0~P9	240~249	Z0~Z9	340~349
50~59	50~59	F0~F9	150~159	Q0~Q9	250~259		
60~69	60~69	G0~G9	160~169	R0~R9	260~269		
70~79	70~79	H0~H9	170~179	S0~S9	270~279		
80~89	80~89	I0~I9	180~189	T0~T9	280~289		
90~99	90~99	J0~J0	190~199	U0~U9	290~299		

Certification



Safety




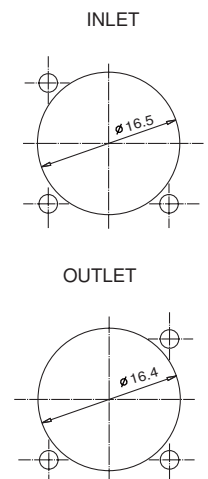
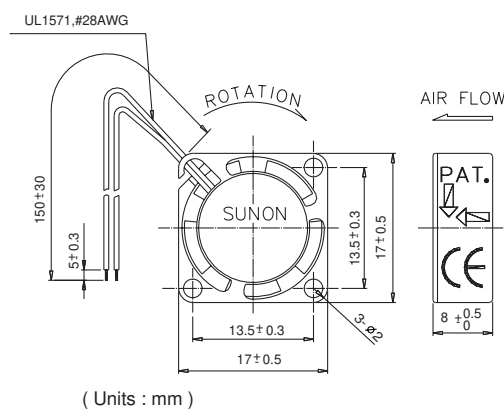
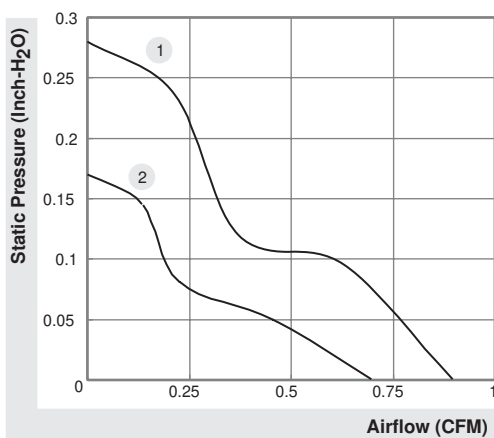
* Note: For critical or extreme environments, including non stop operation, please contact Sunon and we will gladly provide assistance with your product selection to ensure an appropriate cooling product for your application.
 * Note: The "Life Expectancy" of the fan has not been evaluated for use in combination with any end application. Therefore, the Life Expectancy Test Reports(L10 and MTTF Report) that relate to the fan are only for reference.

17x17x8 mm

0.7~0.9 CFM



	P/N	Bearing	Rating Voltage (VDC)	Power Current (AMP)	Power Consumption (WATTS)	Speed (RPM)	Air Flow (CFM)	Static Pressure (Inch-H ₂ O)	Noise (dBA)	Weight (g)	Curve
		● VAPO									
GM0517PDV1-8	GN	●	5	0.16	0.8	20000	0.9	0.28	25	4.36	1
GM0517PDV2-8	GN	●	5	0.11	0.6	15000	0.7	0.17	16	4.36	2




*All model could be customized. Please contact with Sunon Sales.

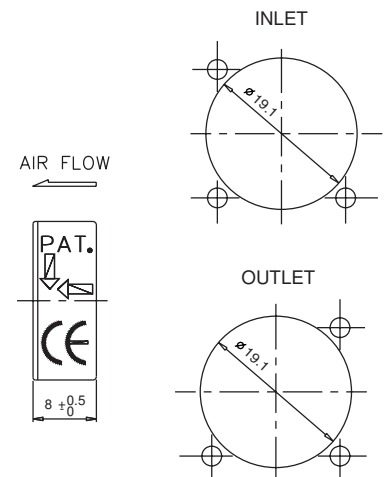
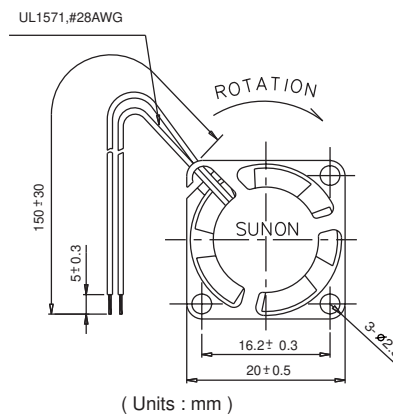
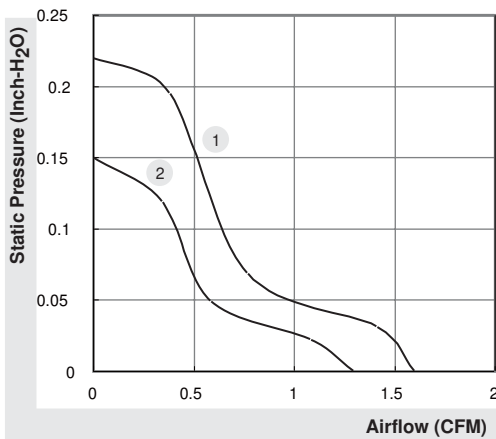
*Specifications subject to change without notice. Please Visit SUNON web site at <http://www.sunon.com> for update information.

20x20x8 mm

1.3~1.6 CFM



	P/N	Bearing	Rating Voltage (VDC)	Power Current (AMP)	Power Consumption (WATTS)	Speed (RPM)	Air Flow (CFM)	Static Pressure (Inch-H ₂ O)	Noise (dBA)	Weight (g)	Curve
GM0501PDV1-8	GN	●	5	0.17	0.9	15000	1.6	0.22	23	4.64	1
GM0501PDV2-8	GN	●	5	0.11	0.6	12000	1.3	0.15	21	4.64	2

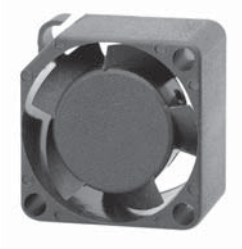



*All model could be customized. Please contact with Sunon Sales.

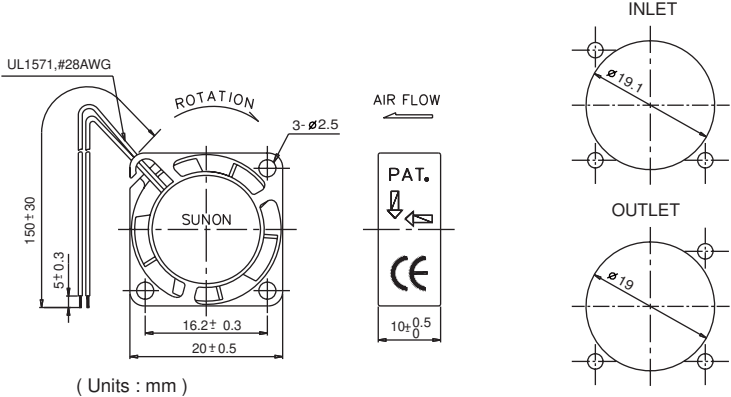
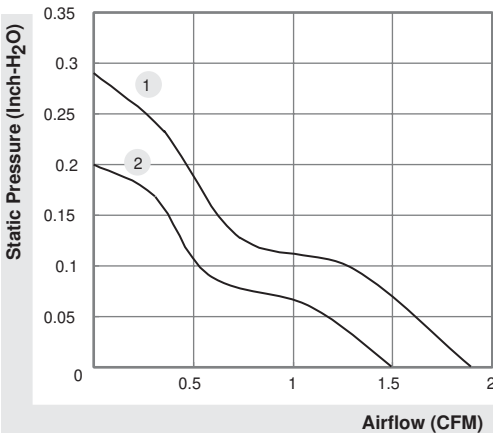
*Specifications subject to change without notice. Please Visit SUNON web site at <http://www.sunon.com> for update information.

20x20x10 mm

1.5~1.9 CFM



	P/N	Bearing	Rating Voltage (VDC)	Power Current (AMP)	Power Consumption (WATTS)	Speed (RPM)	Air Flow (CFM)	Static Pressure (Inch-H ₂ O)	Noise (dBA)	Weight (g)	Curve
											● VAPO
GM0501PFV1-8	N.GN	●	5	0.21	1.1	17000	1.9	0.29	25	5.5	1
GM0501PFV2-8	N.GN	●	5	0.18	0.9	14000	1.5	0.20	20	5.5	2




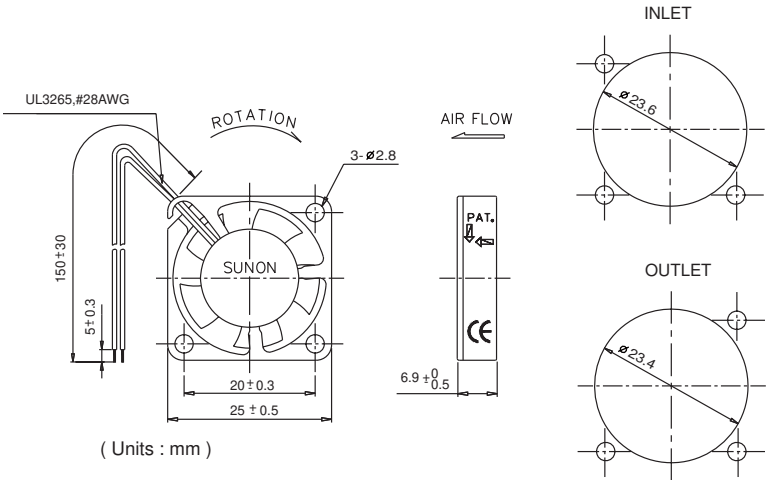
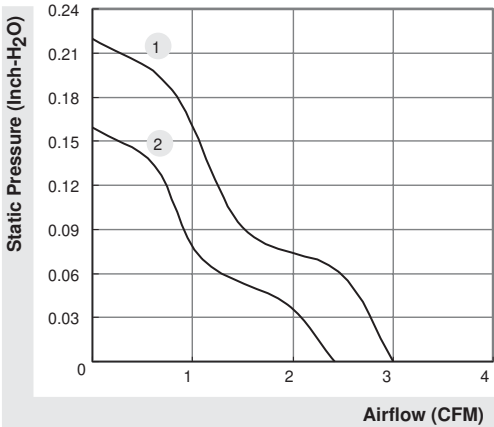
*All model could be customized. Please contact with Sunon Sales.
 *Specifications subject to change without notice. Please Visit SUNON web site at <http://www.sunon.com> for update information.

25x25x6 mm

2.2~3.0 CFM



	P/N	Bearing	Rating Voltage (VDC)	Power Current (AMP)	Power Consumption (WATTS)	Speed (RPM)	Air Flow (CFM)	Static Pressure (Inch-H ₂ O)	Noise (dBA)	Weight (g)	Curve
GM0502PEV1-8	N.GN	●	5	0.11	0.6	13000	3.0	0.22	31	5	1
GM0502PEV2-8	N.GN	●	5	0.08	0.4	10000	2.2	0.16	23	5	2




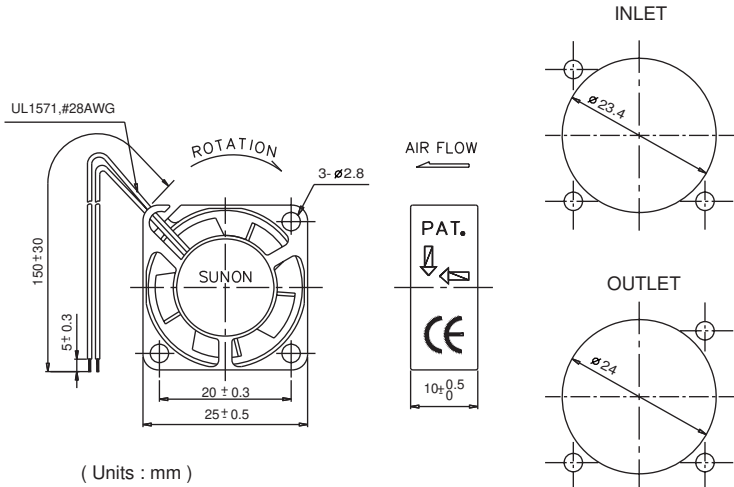
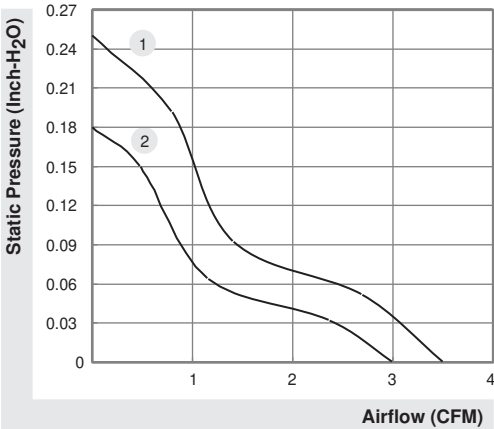
*All model could be customized. Please contact with Sunon Sales.
 *Specifications subject to change without notice. Please Visit SUNON web site at <http://www.sunon.com> for update information.

25x25x10 mm

3.0~3.5 CFM



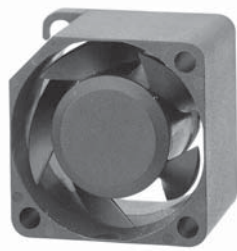
	P/N	Bearing	Rating Voltage (VDC)	Power Current (AMP)	Power Consumption (WATTS)	Speed (RPM)	Air Flow (CFM)	Static Pressure (Inch-H ₂ O)	Noise (dBA)	Weight (g)	Curve
		● VAPO									
GM0502PFV1-8	GN	●	5	0.12	0.6	13000	3.5	0.25	23	7.5	1
GM0502PFV2-8	GN	●	5	0.08	0.4	10000	3.0	0.18	16	7.5	2
GM1202PFV1-8	GN	●	12	0.067	0.8	13000	3.5	0.25	23	7.5	1
GM1202PFV2-8	GN	●	12	0.038	0.5	10000	3.0	0.18	16	7.5	2




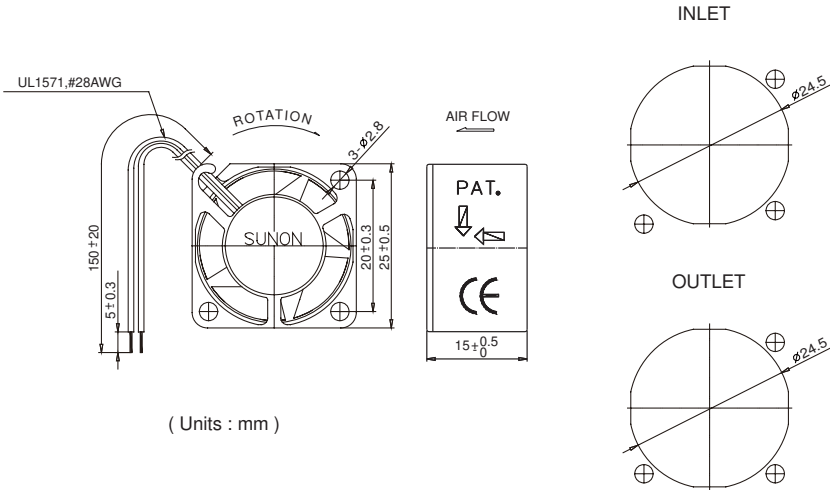
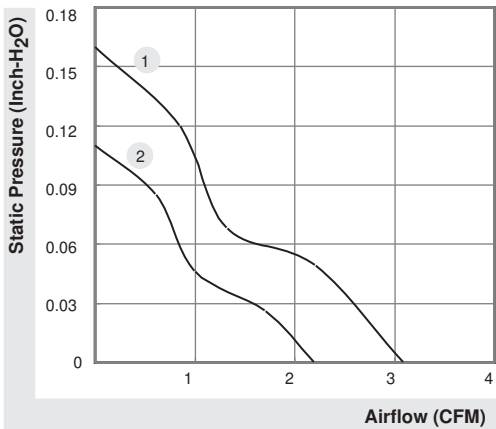
*All model could be customized. Please contact with Sunon Sales.
 *Specifications subject to change without notice. Please Visit SUNON web site at <http://www.sunon.com> for update information.

25x25x15 mm

2.2~3.1 CFM



	P/N	Bearing	Rating Voltage (VDC)	Power Current (AMP)	Power Consumption (WATTS)	Speed (RPM)	Air Flow (CFM)	Static Pressure (Inch-H ₂ O)	Noise (dBA)	Weight (g)	Curve
GM0502PHV1-8	GN	●	5	0.11	0.6	10000	3.1	0.16	20	11	1
GM0502PHV2-8	GN	●	5	0.08	0.4	7000	2.2	0.11	14	11	2
GM1202PHV1-8	GN	●	12	0.048	0.6	10000	3.1	0.16	20	11	1
GM1202PHV2-8	GN	●	12	0.029	0.4	7000	2.2	0.11	14	11	2




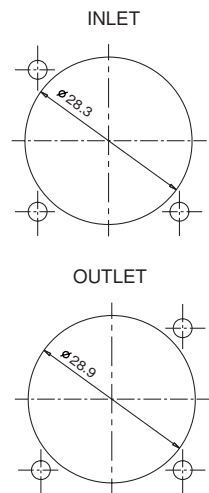
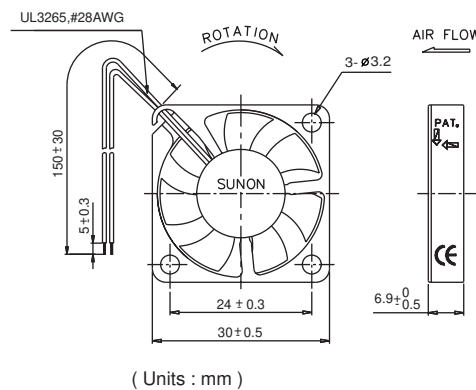
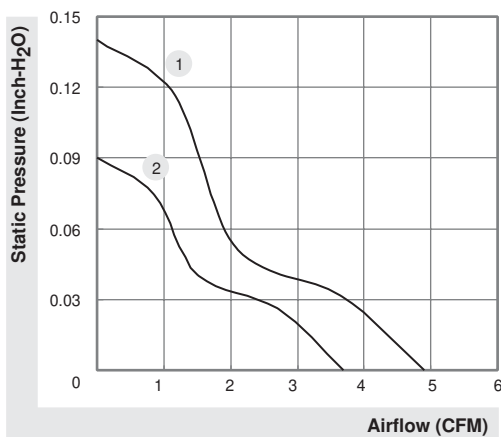
*All model could be customized. Please contact with Sunon Sales.
 *Specifications subject to change without notice. Please Visit SUNON web site at <http://www.sunon.com> for update information.

30x30x6 mm

3.7~4.9 CFM



	P/N	Bearing	Rating Voltage (VDC)	Power Current (AMP)	Power Consumption (WATTS)	Speed (RPM)	Air Flow (CFM)	Static Pressure (Inch-H ₂ O)	Noise (dBA)	Weight (g)	Curve
		● VAPO									
GM0503PEV1-8	N.GN	●	5	0.13	0.7	9500	4.9	0.14	28	6	1
GM0503PEV2-8	N.GN	●	5	0.08	0.4	7500	3.7	0.09	24	6	2




*All model could be customized. Please contact with Sunon Sales.

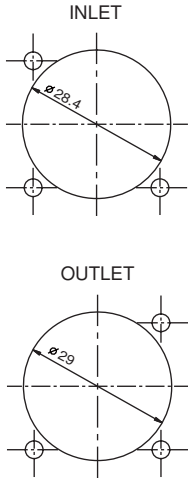
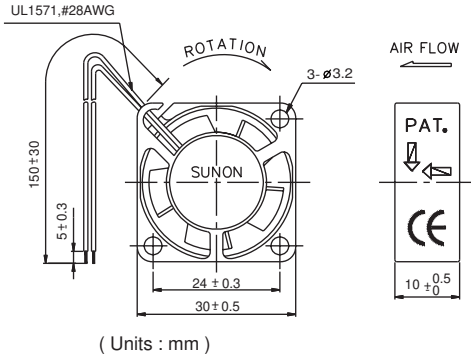
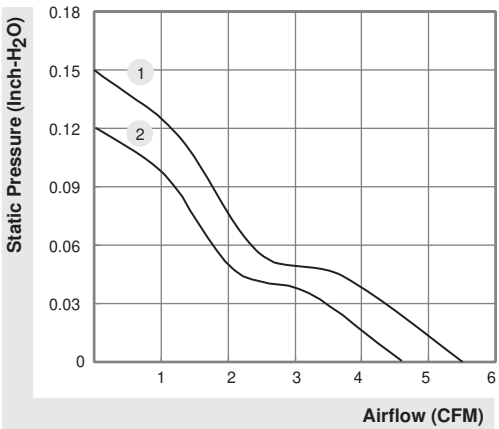
*Specifications subject to change without notice. Please Visit SUNON web site at <http://www.sunon.com> for update information.

30x30x10 mm

4.6~5.5 CFM



	P/N	Bearing	Rating Voltage (VDC)	Power Current (AMP)	Power Consumption (WATTS)	Speed (RPM)	Air Flow (CFM)	Static Pressure (Inch-H ₂ O)	Noise (dBA)	Weight (g)	Curve
GM0503PFV1-8	GN	●	5	0.14	0.7	9500	5.5	0.15	23	8.6	1
GM0503PFV2-8	GN	●	5	0.10	0.5	8000	4.6	0.12	20	8.6	2
GM1203PFV1-8	GN	●	12	0.078	1.0	9500	5.5	0.15	23	8.5	1
GM1203PFV2-8	GN	●	12	0.042	0.5	8000	4.6	0.12	20	8.5	2




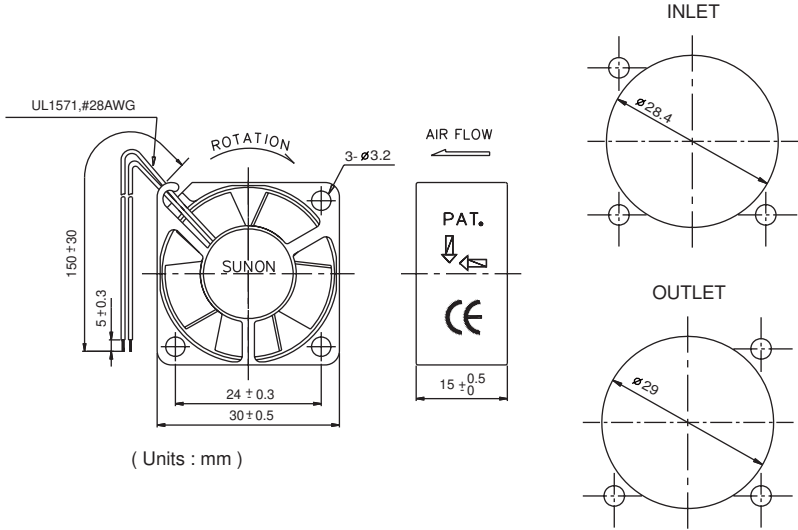
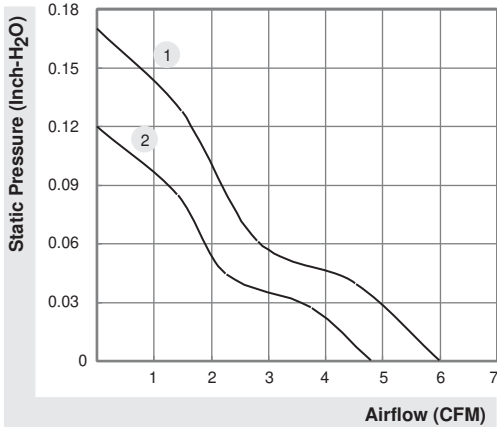
*All model could be customized. Please contact with Sunon Sales.
 *Specifications subject to change without notice. Please Visit SUNON web site at <http://www.sunon.com> for update information.

30x30x15 mm

4.8~6.0 CFM



	P/N	Bearing	Rating Voltage (VDC)	Power Current (AMP)	Power Consumption (WATTS)	Speed (RPM)	Air Flow (CFM)	Static Pressure (Inch-H ₂ O)	Noise (dBA)	Weight (g)	Curve
GM0503PHV1-8	GN	●	5	0.11	0.6	8500	6.0	0.17	27	13.5	1
GM0503PHV2-8	GN	●	5	0.07	0.4	7000	4.8	0.12	20	13.5	2
GM1203PHV1-8	GN	●	12	0.054	0.6	8500	6.0	0.17	27	13.2	1
GM1203PHV2-8	GN	●	12	0.029	0.4	7000	4.8	0.12	20	13.2	2




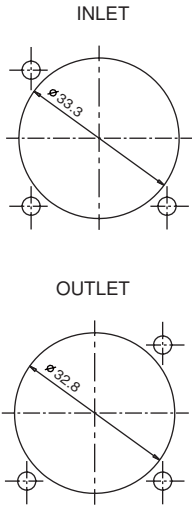
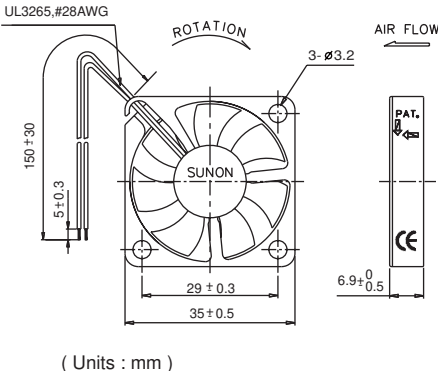
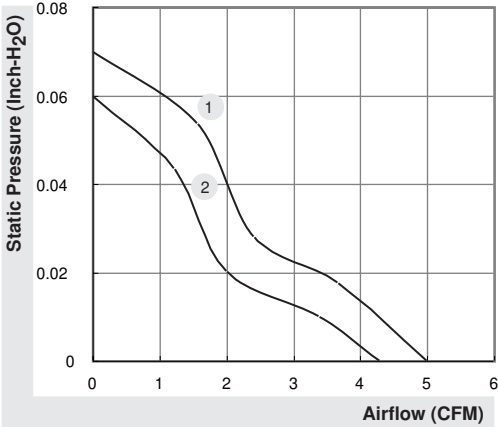
*All model could be customized. Please contact with Sunon Sales.
 *Specifications subject to change without notice. Please Visit SUNON web site at <http://www.sunon.com> for update information.

35x35x6 mm

4.3~5.5 CFM



	P/N	Bearing	Rating Voltage (VDC)	Power Current (AMP)	Power Consumption (WATTS)	Speed (RPM)	Air Flow (CFM)	Static Pressure (Inch-H ₂ O)	Noise (dBA)	Weight (g)	Curve
											● VAPO
GM0535PEV1-8	N.GN	●	5	0.14	0.7	7600	5.5	0.08	26	7	1
GM0535PEV2-8	N.GN	●	5	0.09	0.5	5800	4.3	0.06	19	7	2




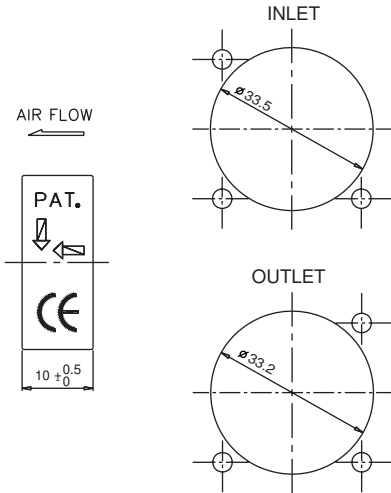
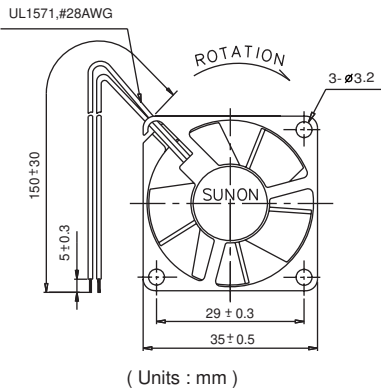
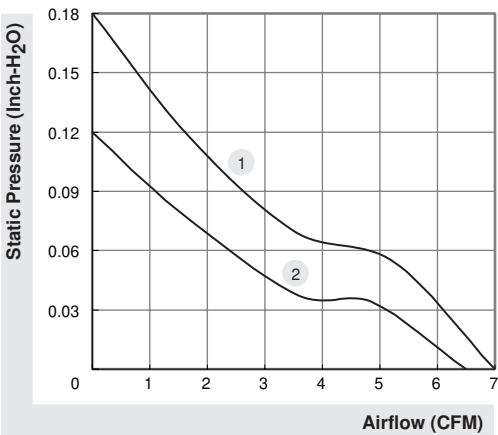
*All model could be customized. Please contact with Sunon Sales.
 *Specifications subject to change without notice. Please Visit SUNON web site at <http://www.sunon.com> for update information.

35x35x10 mm

6.5~7.0 CFM



	P/N	Bearing ● VAPO	Rating Voltage (VDC)	Power Current (AMP)	Power Consumption (WATTS)	Speed (RPM)	Air Flow (CFM)	Static Pressure (Inch-H ₂ O)	Noise (dBA)	Weight (g)	Curve
GM0535PFV1-8	GN	●	5	0.15	0.8	9500	7.0	0.18	28	10.5	1
GM0535PFV2-8	GN	●	5	0.10	0.5	7500	6.5	0.12	22	10.5	2
GM1235PFV1-8	GN	●	12	0.08	1.0	9500	7.0	0.18	28	10.5	1
GM1235PFV2-8	GN	●	12	0.043	0.5	7500	6.5	0.12	22	10.5	2




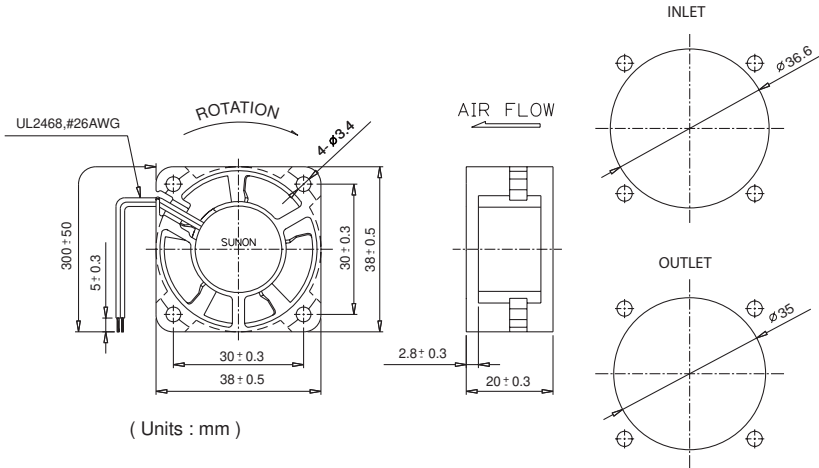
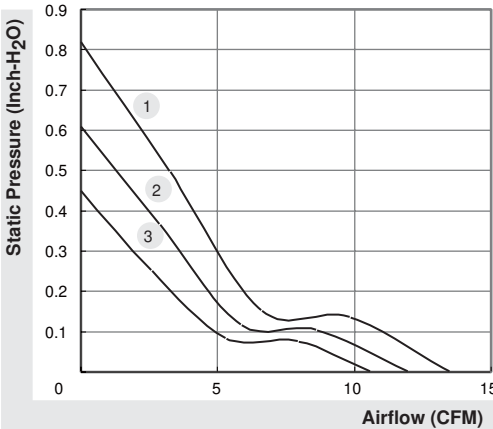
*All model could be customized. Please contact with Sunon Sales.
 *Specifications subject to change without notice. Please Visit SUNON web site at <http://www.sunon.com> for update information.

38x38x20 mm

10.6~13.5 CFM



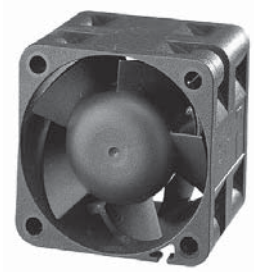
	P/N	Bearing	Rating Voltage (VDC)	Power Current (AMP)	Power Consumption (WATTS)	Speed (RPM)	Air Flow (CFM)	Static Pressure (Inch-H ₂ O)	Noise (dBA)	Weight (g)	Curve
PMD1238PKBX-A	(2).GN	☉	12	0.36	4.3	15000	13.5	0.82	48.0	27	1
PMD1238PKB1-A	(2).GN	☉	12	0.26	3.1	13000	12.0	0.61	44.0	27	2
PMD1238PKB2-A	(2).GN	☉	12	0.21	2.5	11000	10.6	0.45	39.0	27	3




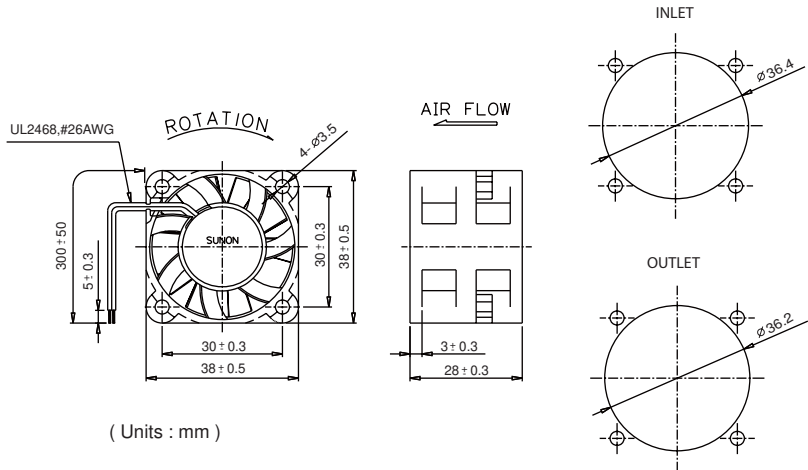
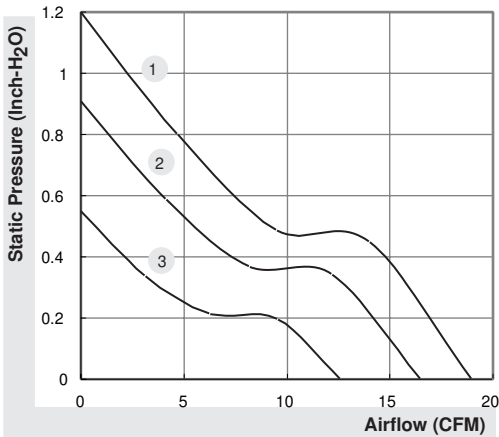
*All model could be customized. Please contact with Sunon Sales.
 *Specifications subject to change without notice. Please Visit SUNON web site at <http://www.sunon.com> for update information.

38x38x28 mm

12.6~19.0 CFM



	P/N	Bearing	Rating Voltage (VDC)	Power Current (AMP)	Power Consumption (WATTS)	Speed (RPM)	Air Flow (CFM)	Static Pressure (Inch-H ₂ O)	Noise (dBA)	Weight (g)	Curve
PMD1238PQBX-A	(2).GN	☉	12	0.48	5.8	15000	19.0	1.20	52.0	35.2	1
PMD1238PQB1-A	(2).GN	☉	12	0.30	3.6	13000	16.5	0.91	47.0	35.2	2
PMD1238PQB2-A	(2).GN	☉	12	0.19	2.3	10000	12.6	0.55	42.0	35.2	3




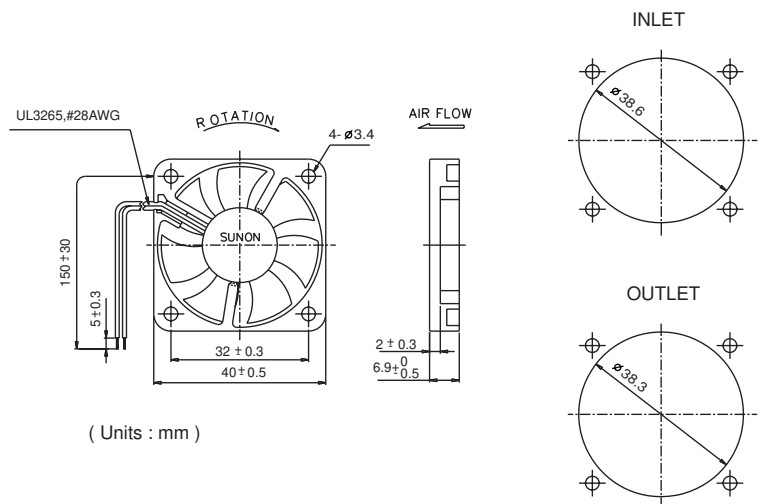
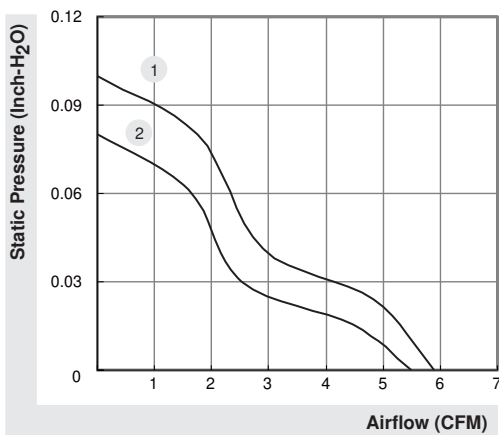
*All model could be customized. Please contact with Sunon Sales.
 *Specifications subject to change without notice. Please Visit SUNON web site at <http://www.sunon.com> for update information.

40x40x6 mm

5.5~5.9 CFM



	P/N	Bearing	Rating Voltage (VDC)	Power Current (AMP)	Power Consumption (WATTS)	Speed (RPM)	Air Flow (CFM)	Static Pressure (Inch-H ₂ O)	Noise (dBA)	Weight (g)	Curve
		● VAPO									
GM0504PEV1-8	GN	●	5	0.09	0.5	7000	5.9	0.10	32	7.5	1
GM0504PEV2-8	GN	●	5	0.07	0.4	6000	5.5	0.08	26	7.5	2




*All model could be customized. Please contact with Sunon Sales.


*Specifications subject to change without notice. Please Visit SUNON web site at <http://www.sunon.com> for update information.

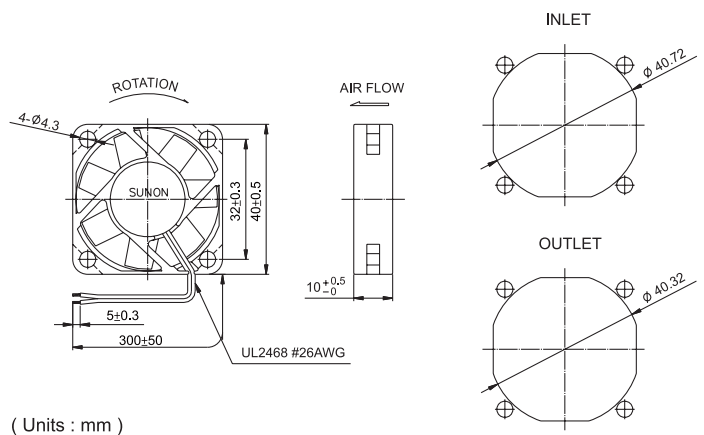
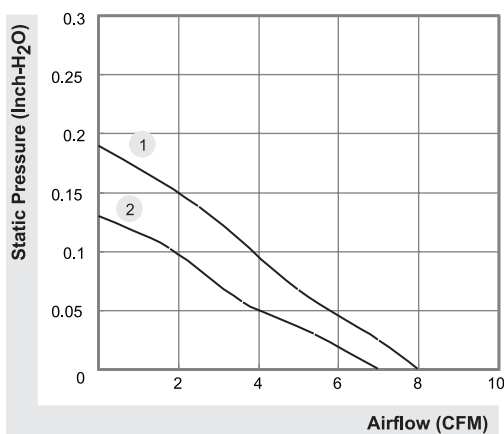
40x40x10 mm

7.0~8.0 CFM



	P/N	Bearing	Rating Voltage (VDC)	Power Current (AMP)	Power Consumption (WATTS)	Speed (RPM)	Air Flow (CFM)	Static Pressure (Inch-H ₂ O)	Noise (dBA)	Weight (g)	Curve
		● VAPO									
KDE0504PFV1	11.MS.A.GN	●	5	0.24	1.2	7000	8.0	0.19	32	17	1
KDE0504PFV2	11.MS.A.GN	●	5	0.14	0.7	5800	7.0	0.13	27	17	2
KDE1204PFV1	11.MS.A.GN	●	12	0.09	1.1	7000	8.0	0.19	32	17	1
KDE1204PFV2	11.MS.A.GN	●	12	0.08	1.0	5800	7.0	0.13	27	17	2

Model	P/N		Rating Voltage (VDC)	Power Current (AMP)	Power Consumption (WATTS)	Speed (RPM)	Air Flow (CFM)	Static Pressure (Inch-H ₂ O)	Noise (dBA)	Weight (g)	Curve
			○								
KD0504PFS1	11.GN	○	5	0.26	1.3	7000	8.0	0.19	32	17	1
KD0504PFS2	11.GN	○	5	0.161	0.8	5800	7.0	0.13	27	17	2
KD1204PFS1	11.GN	○	12	0.106	1.3	7000	8.0	0.19	32	17	1
KD1204PFS2	11.GN	○	12	0.092	1.1	5800	7.0	0.13	27	17	2



*All model could be customized. Please contact with Sunon Sales.

*Specifications subject to change without notice. Please Visit SUNON web site at <http://www.sunon.com> for update information.