

# San Ace 80 GV type

DC Fan 80mm

## Features

### Large air flow and high static pressure

- Maximum airflow : increased by approx. 40%
- Maximum static pressure : increased by approx. 115% compared with our conventional product\*.

### Energy-Saving Design

- Power consumption : reduced by approx. 16% with airflow performance that is identical to our conventional product\*.

\* Our conventional product is the DC cooling fan :  
80 mm square x 25 mm thick fan "San Ace 80" (109R0812G401)



ECO PRODUCTS

**80mm square** × **25mm thick**

## Specifications

Model No.	Rated Voltage (V)	Operating Voltage Range (V)	PWM duty cycle* (%)	Rated Current (A)	Rated Input (W)	Rated Speed (min <sup>-1</sup> )	Air Flow (m <sup>3</sup> /min) (CFM)		Static Pressure (Pa) (inchH <sub>2</sub> O)		SPL (dB [A])	Operating Temperature Range (°C)	Life Expectancy (h)
9GV0812P4K03 (031)	12	10.2 to 13.8	100	0.87	10.4	5,600	2.12	75.6	173.0	0.69	52	- 10 to +70	40,000
			0	0.10	1.2	1,400	0.53	18.7	10.8	0.04	18		
9GV0812P4J03 (031)			100	0.47	5.6	4,500	1.72	60.8	110.0	0.44	46		
			0	0.07	0.8	1,200	0.46	16.2	7.8	0.03	14		

The numbers in ( ) represent ribless models.

※PWM Frequency:25kHz

## Common Specifications

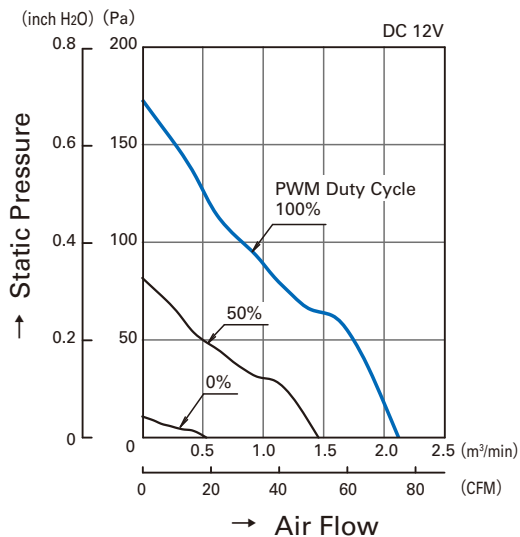
- Material ..... Frame: Plastics (Flammability: UL94V-0) , Impeller: Plastics (Flammability: UL94V-1)
- Life Expectancy ..... Varies for each model  
(L10: Survival rate: 90% at 60°C, rated voltage, and continuously run in a free air state)
- Motor Protection System ..... Current blocking function and Reverse polarity protection
- Dielectric Strength ..... 50/60 Hz, 500VAC, 1 minute (between lead conductor and frame)
- Sound Pressure Level (SPL) ..... Expressed as the value at 1m from air inlet side
- Operating Temperature Range ..... Varies for each model (Non-condensing)
- Lead Wire ..... ⊕red ⊖black Sensor: yellow Control: brown
- Mass ..... 125g

80mm

# San Ace 80 GV<sub>type</sub>

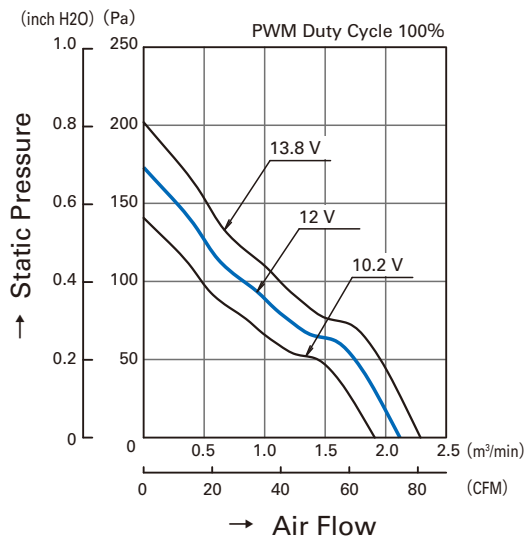
## Air Flow and Static Pressure Characteristics

### • PWM Duty Cycle

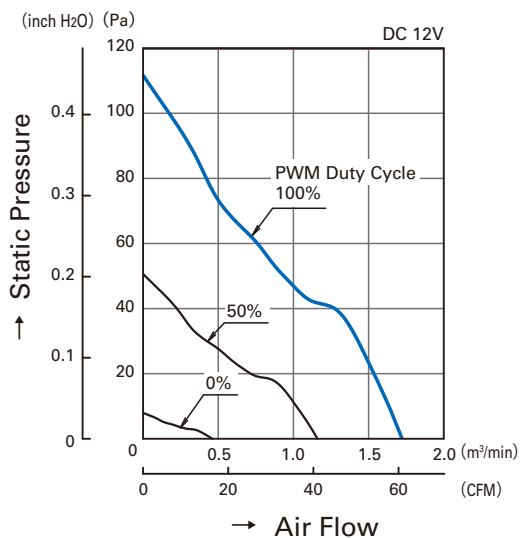


**9GV0812P4K03 (031)**

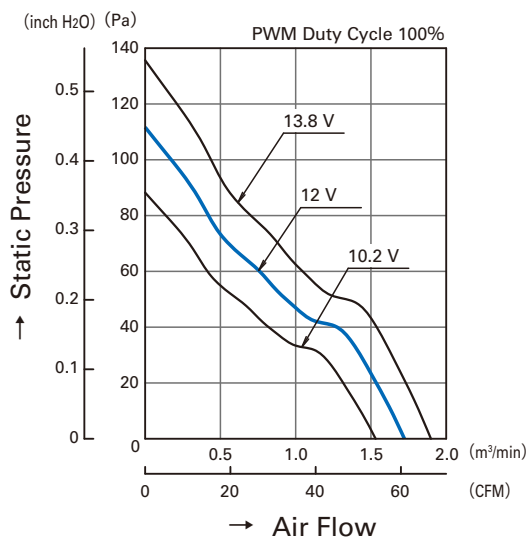
### • Operating Voltage Range



**9GV0812P4K03 (031)**

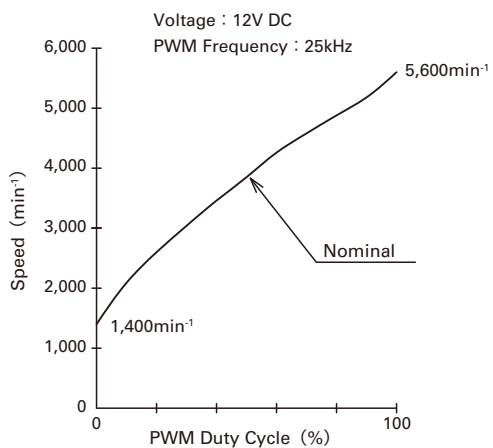


**9GV0812P4J03 (031)**

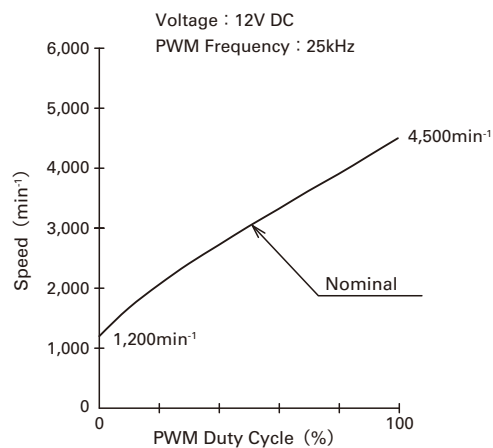


**9GV0812P4J03 (031)**

## PWM Duty - Speed Characteristics Example



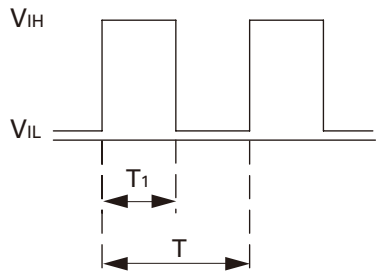
**9GV0812P4K03 (031)**



**9GV0812P4J03 (031)**

**PWM Input Signal Example**

Input Signal Wave Form



$V_{IH}=4.75V$  to  $5.25V$

$V_{IL}=0V$  to  $0.4V$

PWM Duty Cycle (%) =  $\frac{T_1}{T} \times 100$

PWM Frequency 25 (kHz) =  $\frac{1}{T}$

Source Current ( $I_{source}$ ) : 1mA Max. at control voltage 0V

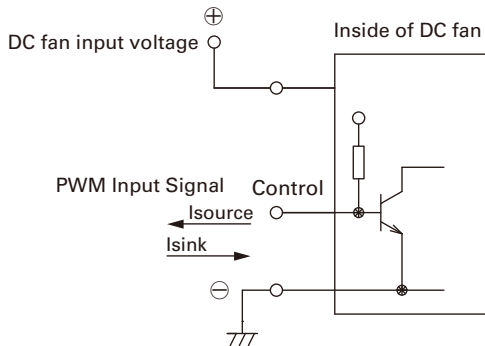
Sink Current ( $I_{sink}$ ) : 1mA Max. at control voltage 5.25V

Control Terminal Voltage : 5.25V Max. (Open Circuit)

When the control lead wire is no connecting, the speed is the same speed as at 100% of PWM cycle.

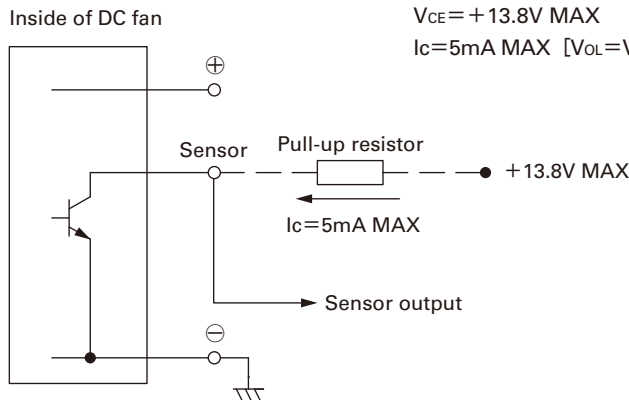
This fan speed should be controlled by PWM input signal of either TTL input or open collector, drain input.

**Connection Schematic**



**Specifications for Pulse Sensors**

Output circuit : Open collector



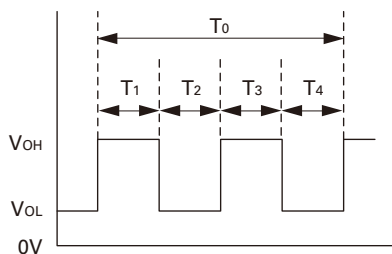
$V_{CE}=+13.8V$  MAX

$I_c=5mA$  MAX [ $V_{OL}=V_{CE(SAT)}=0.6V$  MAX]

Output waveform (Need pull-up resistor)

In case of steady running

(One revolution)

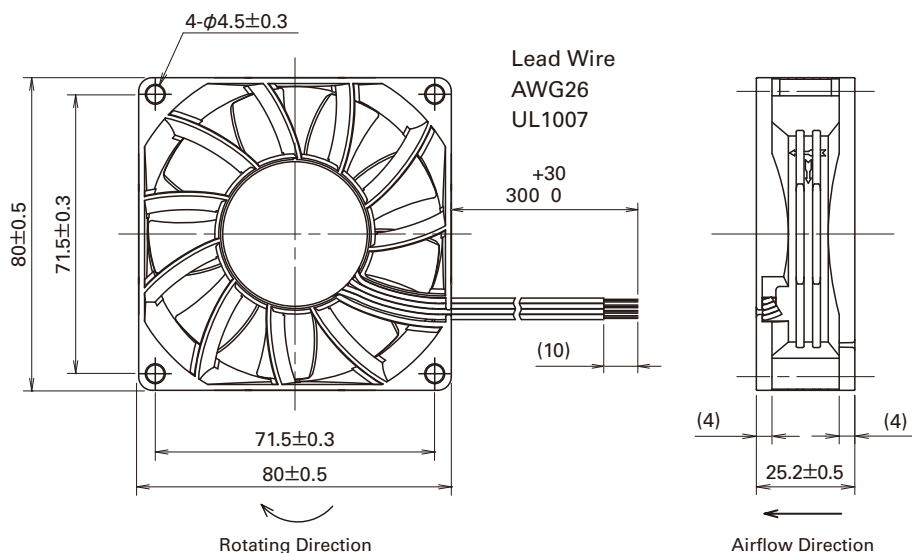


$T_{1\sim 4} \doteq (1/4) T_0$

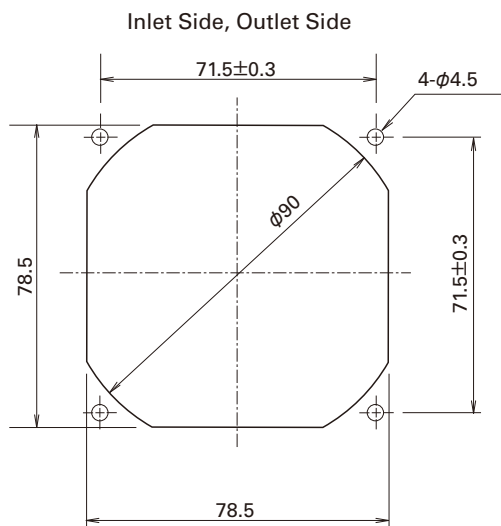
$T_{1\sim 4} \doteq (1/4) T_0=60/4N$  (sec)

$N$ = Fan speed ( $min^{-1}$ )

**Dimensions (unit : mm)**



**Reference dimension of mounting holes and vent opening (unit : mm)**



**Notice**

- The products shown in the catalog are subject to Japanese Export Control Law. Diversion contrary to the law of exporting country is prohibited.
- To protect against electrolytic corrosion that may occur in locations with strong electromagnetic noise, we provide fans that are unaffected by electrolytic corrosion.