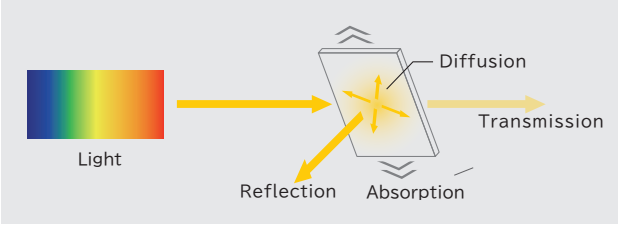
Panasonic

PM2.5 is...

PM2.5 is a general term for fine particulate matter of 2.5 μm or less that is suspended in the air.
It cannot be seen with the naked eye.
Some concerns have been raised about its influence to the human body, including its propensity to penetrate deep into the respiratory tract.

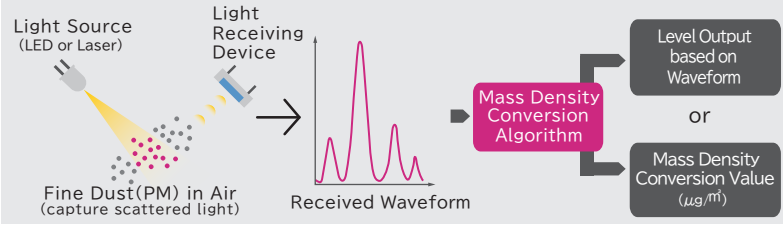
PM2.5 Sensor, detects particle matter 2.5, which is invisible to the eye.

Basic Property of Light



Light is reflected(diffused) or absorbed, and/or transmitted as described above when light is applied to substances. “Optical Sensor” is to measure and analyze the data which is received the light from objects.

What is PM Sensor?



PM Sensor is a kind of optical sensor. Photodetector in PM sensor detects fine dust(particle matters) in air by capturing scattered light from objects.
The sensor contributes to “Visualize Air Quality.”

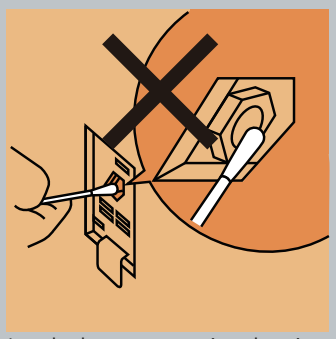
■Product Lineup

		SN-GCHA1	SN-GCJA6	SN-GCJA5
Appearance				
Type		LED	LED	Laser
Detectable Objects & Accuracy	PM1.0	–	–	Measurable
	PM2.5	35~300μg/m³ : ±20%	35~100μg/m³ : ±15μg/m³ 100~600μg/m³ : ±15%	35~1,000μg/m³ : ±10%
	PM10	–	–	±10%
	Pollen	x	x	x
Concentration range		1~300μg/m³	1~600μg/m³	1~1000μg/m³
Minimum detectable particle size		0.5μm	0.3μm	0.3μm
Life duration		7 years	7 years	5 years (keep accuracy)
Dimension		52 x 45 x 22mm	30 x 30 x 28mm	37 x 37 x 12mm
Operating temperature		0°C~45°C	-10°C~60°C	-10°C~60°C
Output format		I2C	UART, I2C	UART, I2C
Output		PM2.5 mass density (μg/m³) Number of dust counts (pieces)	PM2.5 mass density (μg/m³) Number of counts by particle size (3 ranges) (pieces)	PM1.0/PM2.5/PM10 mass density (μg/m³) Number of counts by particle size (6 ranges) (pieces) Sensor status information
Packaging shield		Metallic shield equipped	Shielding function	Shielding function
Update interval / Averaging process		5sec. / 150sec.	2sec. / 10sec. 30sec. 60sec. 180sec.	1sec. / 20sec.
Power source		5V (Data output : 3.3V)	5V (Data output : 3.3V)	5V (Data output: 3.3V)
DC fan motor		– (heater resistance system)	– (heater resistance system)	Equipped

2023.7

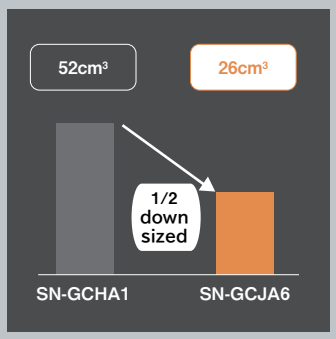
Support Your Good Performance　LED - type Sensor　SN-GCJA6

Maintanance Free



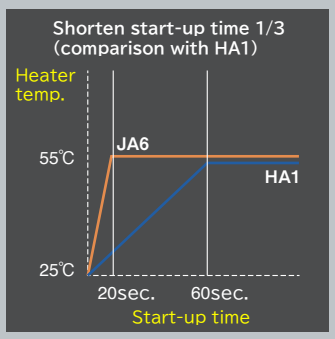
Lends does not require cleaning by unique inside structure even during long-time use.

Downsizing



Downsizing realized with unique mechanical design.

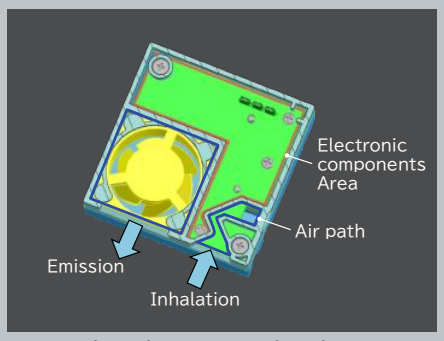
Quick Start Up



Stable data can be output by shortening the time to stabilize heater temperature.

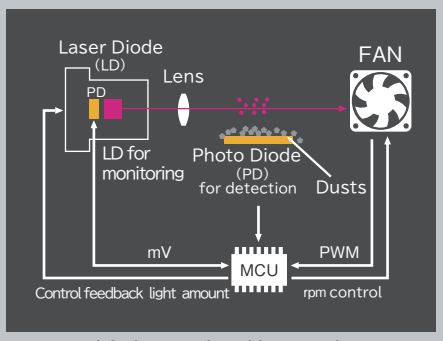
Keep High Precision　Laser - type Sensor　SN-GCJA5

Fouling Resistant



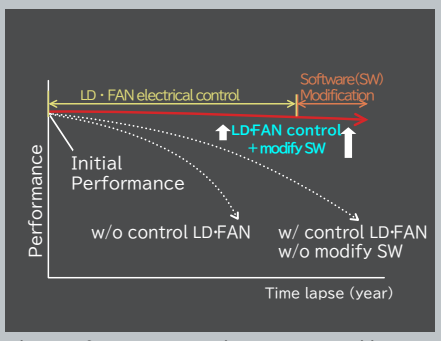
Special inside structure that the air containing fine particles dose not pass upper of PCB, can control performance deterioration.

Long Life



Long life has realized by avoiding unnecessary operation of key parts (Laser, FAN···etc.).

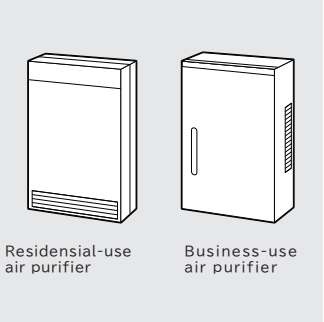
Keep Performance



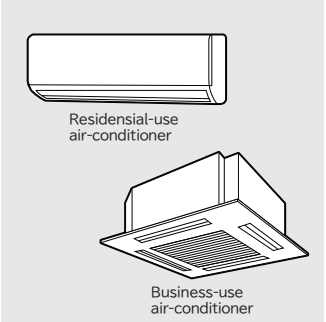
The performance can be maintained by unique correction technology to the parts those are degraded in accordance with the passage of time.

■Applications

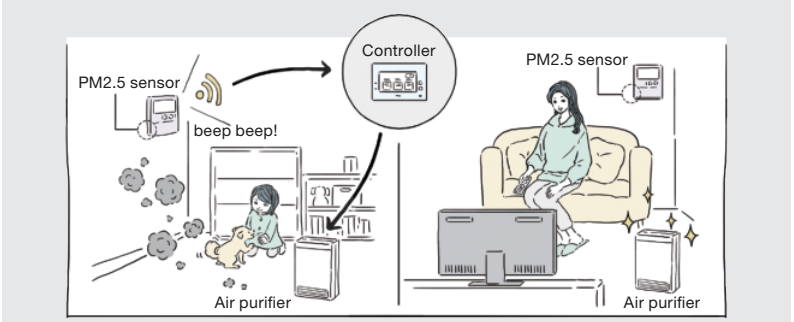
"Visualization" of air cleaning functionality of the air purifier.



"Visualization" of air cleaning functionality of the air conditioner.



Air environment monitoring in the HEMS (home energy management system) field.



For product inquiries

Contact form for global customers :

https://industrial.panasonic.com/cuif/ww/contact-us?field_contact_group=1317&field_contact_lineup=3447

Product site :

https://panasonic.co.jp/ew/pldv/en/f-products/pm2.5/

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