Panasonic

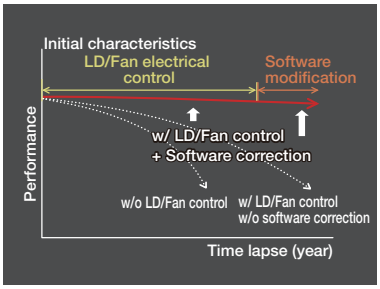
High accuracy detection & quantification of PM2.5

High accurate detection

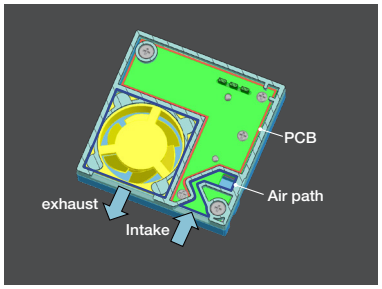
Small size

Maintenance free

IAQ Sensor for PM2.5 detection



Maintains long-term, high accuracy PM2.5 detection performance with a unique algorithm.



Maintenance-free by controlling stains.

What is PM2.5?

PM2.5 is a general term for particulate matter with a diameter of 2.5 micrometers or less that floats in the atmosphere.
It is impossible to see with the naked eye and can easily penetrate deep into the respiratory system,
raising concerns about its potential health impacts on the human body.

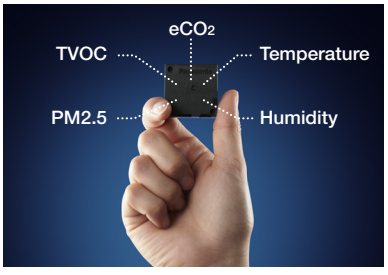
Multiple air quality detection

PM2.5, TVOC, eCO_2, Temperature and Humidity detection

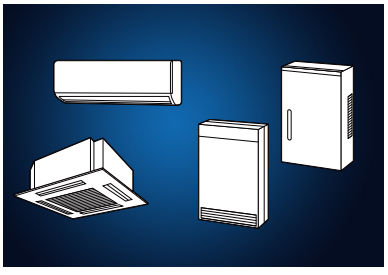
Small size

Maintenance free

IAQ Sensor for multiple detection NEW



TVOC, eCO2, Temperature and Humidity detection with small size.



Contributing to the miniaturization of the equipment to be installed.

What is TVOC?

TVOC stands for Total Volatile Organic Compounds, which is a general term for VOCs.
VOCs are organic compounds that have high volatility and become gaseous in the atmosphere.

What is eCO_2?

eCO_2 stands for the equivalent concentration of carbon dioxide estimated from TVOC.
(It does not measure carbon dioxide itself.)

Features

TVOC (Total Volatile Organic Compounds) eCO₂ (estimated concentration of CO₂)

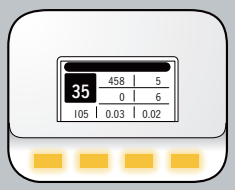
Detects volatile organic compounds and measures indoor air quality. Calculate CO_2 concentration from VOC emitted from the human body. Output the level values apply to IAQ standards on Federal Environment Agency of Germany (UBA).

Temperature and Humidity

Improvement of measurement stability and response is achieved by establishment protective layer on the sensor element of temperature and humidity detection.

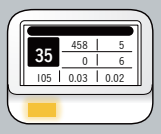
Useful for simple communication and easy integration layout

In case of using a sensor for individual detection



Each of individual sensors needs to be installed, and a lot of space is required

In case of using a sensor for multiple detection



Space-saving simple communication with one sensor

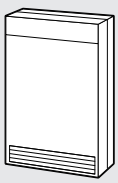
Line-up

Items		Air Quality Sensor		Remarks
		For PM2.5 detection	For multiple detection	
Model No.		SN-GCJA5	SN-GCQB1	
Appearance				
Input Voltage		DC 5 V±10%	DC 5 V±10%	
Current consumption		<100 mA	<100 mA	
PM	Detectable size	>0.3 μm	>0.3 μm	
	Measurement Range	0 ~ 2000 μg/m³ (UART) 0μg/m³ ~ (I²C)	0 ~ 2000 μg/m³ (UART) 0μg/m³ ~ (I²C)	No upper limit
	Accuracy	±10 % ±5 μg/m³	±10 % ±5μg/m³	35~1000 μg/m³ 0~35 μg/m³
TVOC*2	IAQ value*1	–	Level 1 ~ 5	TVOC range0.015 ~ 10 mg/m³
	Accuracy	–	±1	Actual value:±10%
eCO2*2	Output range	–	400 ~ 5000 ppm	Estimated value from TVOC
	Accuracy*3	–	(±20 %) (±25 %)	2000~5000 ppm 400~2000 ppm
Temp.	Output range	–	-10 ~ 60 °C	
	Accuracy*3	–	(±0.4 °C)	
Humidity	Output range	–	0 ~ 95 %RH	
	Accuracy*3	–	(±3 %RH)	10 %RH ~ 90 %RH
Lifetime*4		<5 years	<10 years	No cleaning required
Dimension		37×37×12 (mm)	37×37×12 (mm)	
I/F		I²C(3.3 V) or UART(3.3 V, 9600bps)	I²C(3.3 V) or UART(3.3 V, 9600bps)	

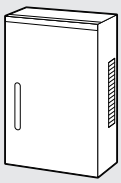
*1 IAQ standards by Federal Environment Agency of Germany(UBA).
[Precautions for Use]
If activated in an environment exceeding IAQ Level 1, a temporary offset may occur in the readings.
The offset will be cleared once clean air at IAQ Level 1 is detected.
*2 IAQ values and eCO_2 characteristics after pre-powering for 48 hours in clean air.
*3 The accuracy of eCO_2, temperature, and humidity is for reference only.
*4 Designed life under normal operating condition(continuous operation) under room temp. at 25°C, humidity 60% or less.

Application examples

For the visualization of the air purification function of an air purifier.



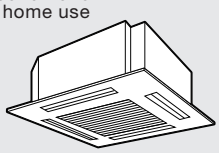
Air purifier for home use



Air purifier for business use

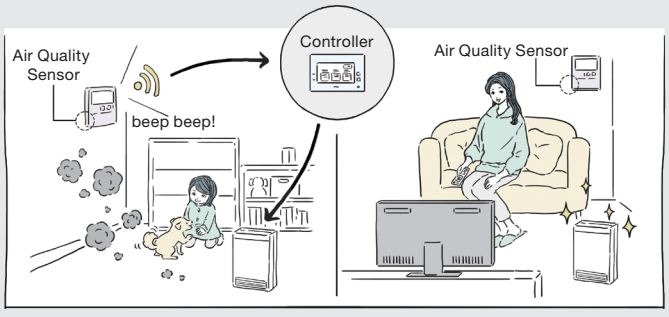
For the visualization of the air purification function of an air conditioner.

Air conditioner for home use



Air conditioner for business use

For air quality 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/