

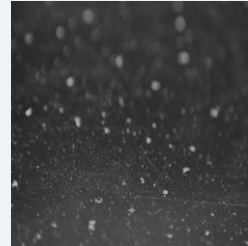
SN-GCQB | Panasonic Air Quality sensor: All-in-1



Very Compact
Laser Type
Air Quality Sensor

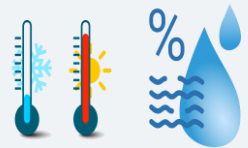
- ❖ MP Feb 2024
- ❖ Samples available
- ❖ Origin: Japan

Particulate Matter Detection



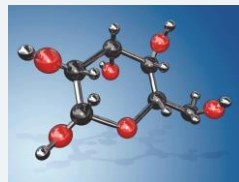
- ❑ PM1.0 | PM2.5 | PM10
- ❑ High precision optical sensor
- ❑ Unique optical design ⇒ Small particle detection
- ❑ Auto calibration ⇒ Long term detection accuracy

Temperature and Humidity



- ❑ A special resin is used for the outer shell
- ❑ Protected against electromagnetic waves
- ❑ Improvement of long term drift performance, measurement stability & response time

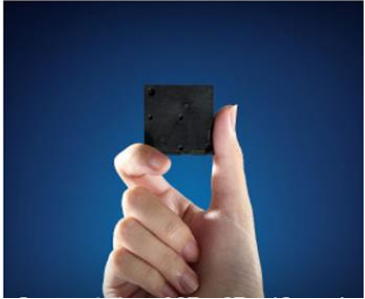
TVOC + eCO2



- ❑ TVOC = Total Volatile Organic Compounds
- ❑ Estimated Carbon dioxide concentration calculated by VOCs
- ❑ IAQ level according to UBA standards (German Environment Agency)

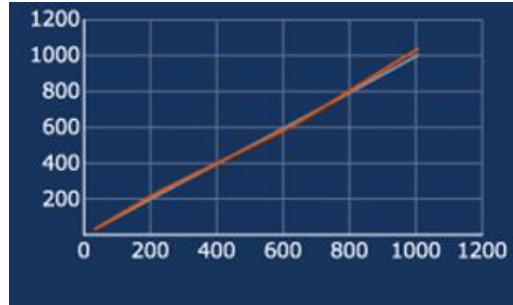
Panasonic Air Quality sensor: Main features

Compact size



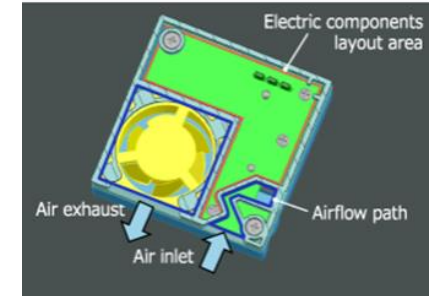
37 x 37 x 12 mm

Low to high concentration measurement



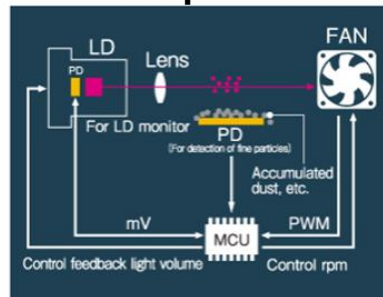
High accuracy managed by using a concentration analysis algorithm

Optimized air pathway structure



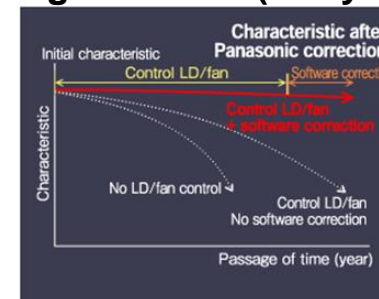
Minimizes dust accumulation & protects electronic components

Continuous components monitoring



Stabilizes the performance combined with a software-based correction

Longer lifetime (>10 years)



Performance deterioration is corrected by auto-calibration

Panasonic Air Quality sensor: Technical data

Item	Spec.	Comments	
Input voltage	DC 5 V±10%		
Current consumption	<100 mA		
PM	Minimum detection particle size	0.3 µm	
	Concentration output range	0 ~ 2,000 µg/m ³ (UART) 0 µg/m ³ ~ no upper limit (I2C)	
	Concentration accuracy	±10 % ±5 µg/m ³	35 ~ 1000 µg/m ³ 0 ~ 35 µg/m ³
	Resolution	1 µg/m ³ : UART, 0.001 µg/m ³ : I2C	
TVOC	IAQ level output	Level 1 ~ 5	TVOC range of UBA compliant IAQ Level Level 1: 0.0 ~ 0.3 mg/m ³ Level 2: 0.3 ~ 1.0 mg/m ³ Level 3: 1.0 ~ 3.0 mg/m ³ Level 4: 3.0 ~ 10.0 mg/m ³ Level 5: 10.0 mg/m ³ or higher Reference: • TVOC output range 0.015 ~ 10 mg/m ³ Atmospheric ethanol • Actual value: ±10% • 120 minutes or more after power-on
	Accuracy	±1	
eCO ₂	Output range	400 ~ 5,000 ppm	Estimated from TVOC
	Accuracy	±20 % ±25 %	2,000 ~ 5,000 ppm 400 ~ 2,000 ppm
Humidity	Output range	0 ~ 95 %RH	
	Accuracy	±3 %RH	10 ~ 90 %RH
Temp.	Output range	-10 ~ 60 °C	
	Accuracy	±0.4 °C	
Lifetime	>10years	Design life	
I/F	I2C (3.3 V) or UART (3.3 V, 9600bps)		



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