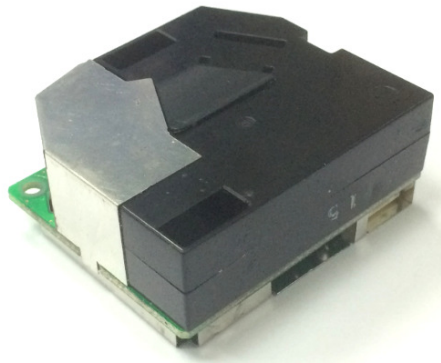


Panasonic PM 2.5 Sensor



Holy Stone Enterprise Co., Ltd.

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Growing concern on health effects of air pollution

Air Quality Index	PM 2.5 ($\mu\text{g}/\text{m}^3$)	Levels of Health Concern
0 ~ 50	0.0 ~ 15.4	Good
51 ~ 100	15.5 ~ 40.4	Moderate
101 ~ 150	40.5 ~ 65.4	Unhealthy for Sensitive Group
151 ~ 200	65.5 ~ 150.4	Unhealthy
201 ~ 300	150.5 ~ 250.4	Very Unhealthy

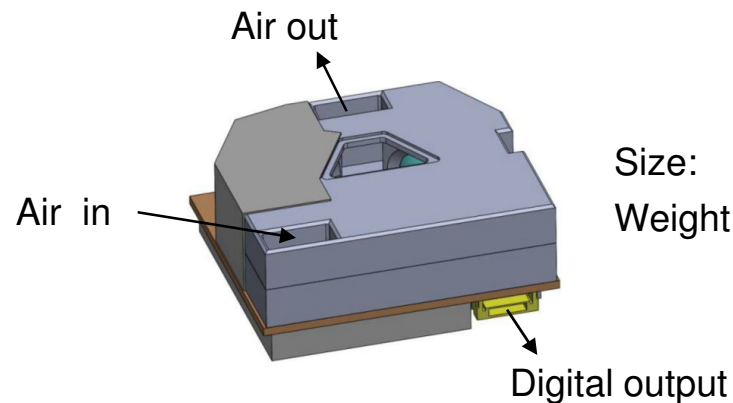
Source: United States Environmental Protection Agency (EPA)



Panasonic has developed the world's first digital output PM 2.5 sensor for low cost, high accuracy air quality monitoring

■ Specifications

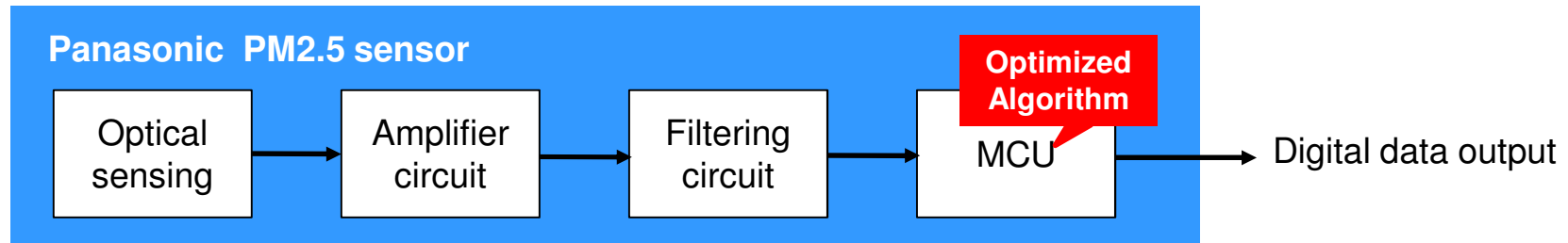
Category	Characteristics
Power supply voltage	5.0 V (+/- 10%)
Consumption current	Below 100mA
Min detectable particle	0.5 μm
Min detectable density	10 $\mu\text{g}/\text{m}^3$
Max detectable density	300 $\mu\text{g}/\text{m}^3$
Operating temperature	0 ~ 45 °C
Output Interface	I ² C



Size: 52 x 45 x 22 mm

Weight: Approx. 27g

■ Block Diagram



- **High Accuracy, Compact**

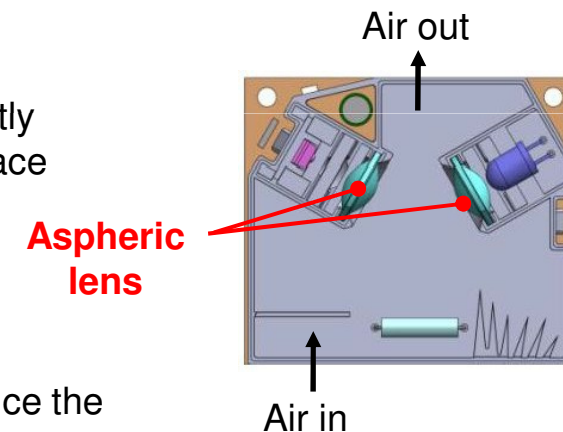
Specially designed aspheric lens in optical sensing significantly increase the detection accuracy and reduce the detection space

- **Low Cost**

Amplifier circuit, filtering circuit and MCU are included to reduce the cost of additional circuits and cost for circuit adjustment

- **Digital Output**

Optimized algorithm inside MCU analyzes the signal from optical sensing and automatically converts it to digital mass-density data ($\mu\text{g}/\text{m}^3$)



■ Applications

Home Appliance



Air purifier , Air refresh system

Indoor air quality monitoring



Portable air quality monitoring



Remote air quality monitoring



For more information, please contact

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