

Product Information

SM-LS-03A is a laser particle sensor that detects the dust particle concentration in air by using optical sensing method.

The photo-sensor detects the scattered LASER light by dust particles in air. The photo-sensor counts the number of particles and measures the size of particle.

MCU calculates the concentration of particle and size. This particle sensor can measure PM1.0, PM2.5, and PM10.



Electrical Characteristic

characteristic	Rating
Optical source	Laser diode, 650nm
Optical receiver	Photo diode
Detectable particle size	0.3 μ m ~ 20 μ m
Detectable range	0~1000 μ g/m ³
Accuracy	<100 μ g/m ³ \pm 10 μ g/m ³ \geq 100 μ g/m ³ \pm 10%
Resolution	1 μ g/m ³
Supply voltage	DC 5 \pm 10%, Ripple <100mV at 60HZ
Current Consumption	< 120 mA
Signal Out put	UART Hi : > 3V, Lo : <0.7V,
Operating Temp. Range	-10~45 $^{\circ}$ C
Operating Humi. Range	95%RH or less (without dew condensation)
Storage temperature	-30~60 $^{\circ}$ C
Storage humidity	<95%RH
Dimensions	49(W)x 12(T)x 35(D) mm
weight	24g
Compliance	Lead free and ROHS directive compliant

Application Ideas

- ✓ Air Purifier
- ✓ Air Quality Monitor
- ✓ Air Conditioner
- ✓ Ventilator
- ✓ Smoke type Fire alarm applicator
by different sensor adjustments
(customer option)

Product Inquiry

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Connector Pin Configuration

Connector : SM08B-GHS-TB

1. Input (5V DC/120mA)
2. Common (GND)
4. Serial port receiving Pin (RXD : TTL level 3.3V)
5. Serial port Sending Pin (TXD : TTL level 3.3V)
6. Reset Module reset (TTL level 3.3V)