

## Product Information

SM-LS-01C 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 $\mu$ m ~ 20 $\mu$ m
Detectable range	0~1000 $\mu$ g/m <sup>3</sup>
Accuracy	<100 $\mu$ g/m <sup>3</sup> $\pm$ 10 $\mu$ g/m <sup>3</sup> $\geq$ 100 $\mu$ g/m <sup>3</sup> $\pm$ 10%
Resolution	1 $\mu$ g/m <sup>3</sup>
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 : Molex 53398-0871

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)