

# PM2.5 / PM1.0 Sensor

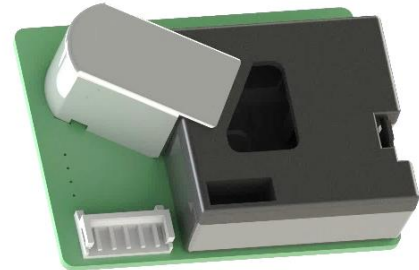
Particulate Matter Sensing Solution

## PSML series

### FEATURES

- ✧ **Minimum Detectable Particle Size - 0.3 $\mu$ m**
- ✧ **PWM Output (Low Pulse Occupancy)**
- ✧ **Enhanced Accuracy (LPO) -  $\pm$ 20%<sup>1)</sup>**
- ✧ **Precise PM2.5/PM1.0 Level Classification**
- ✧ **High Linearity and Uniformity**
- ✧ **Market-proven Reliability and Durability**
- ✧ **Pin-to-Pin Compatibility with Existing Sensors**

<sup>1)</sup> vs. GRIMM11-A / TSI 8530



### PRODUCT SUMMARY

PSML Series is PM2.5/PM1.0 dedicated sensor providing uniform performance and enhanced accuracy which assures precise PM2.5/PM1.0 level classification by detecting over 0.3 $\mu$ m sized ultra-fine particle through **SAMYOUNG S&C's** proprietary optical structure with IrED

### APPLICATION

- Air Solution Products  
(Air Purifier, Air Conditioner and etc.)
- HVAC Control System
- Smart IAQ Device
- Outdoor Particle Sensing Device

### KEYNOTE

PSML Series, in which **SAMYOUNG S&C's** 20years knowledge and technology are concentrated, is a PM2.5/PM1.0 dedicated sensor with a radical improvement for detection capability at ultra-fine particle range – 0.3 $\mu$ m~1.0 $\mu$ m, which enables classifying PM2.5/PM1.0 level more precise than existing sensors.

PSML Series which performs higher accuracy along with improved sensitivity than conventional sensors provides reliable information to users enabling more accurate and sophisticated control in the applications such as air purifiers, air conditioners and air quality measuring devices.

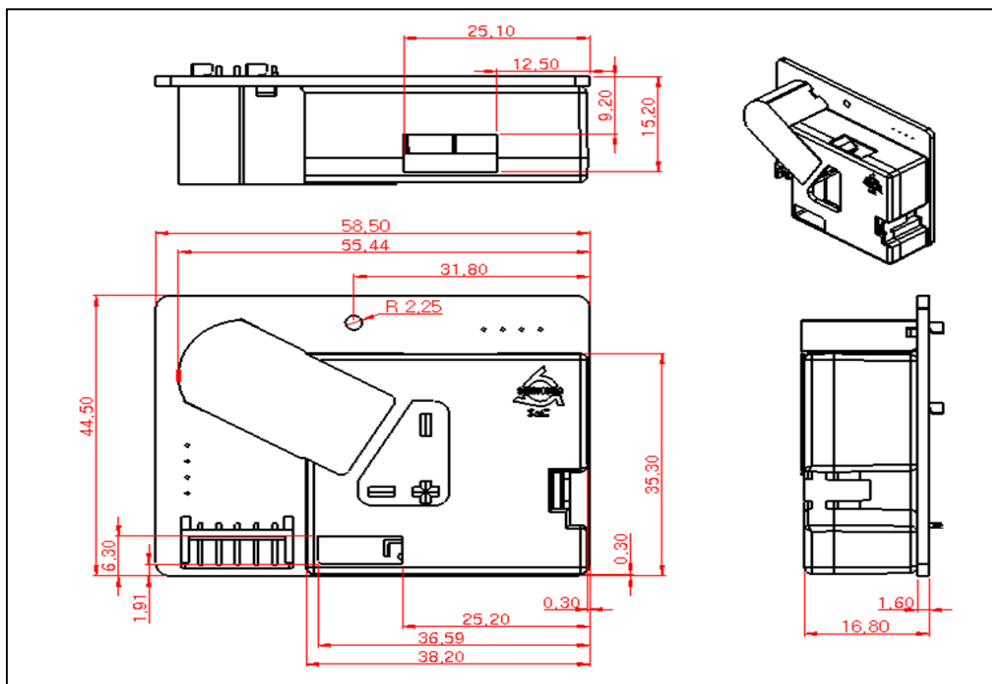
**SAMYOUNG S&C** has developed a system to reliably mass-produce PSML Series of uniform performance by a mass calibration technology which also contributes to efficient production. Moreover, the patented aerodynamic optical structure maximizes the performance of the sensor and improved the quality of the product. In addition, it is designed to be pin-to-pin compatible with existing sensors for user convenience.

## Specifications

Ta=25°C

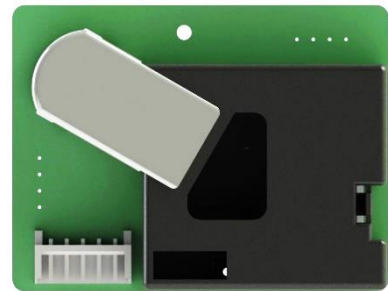
Parameter	Index
Detectable Size	≥0.3μm
Detectable Range	0~500μg/m <sup>3</sup>
Accuracy	≤±20% (LPO)
Response Time	1sec
Time for Initial Stabilization	60sec. after powered on
Supply Voltage	DC5.0V ±10% Ripple 30mV or Less
Current Consumption	Typ. 85mA
Output Signal	LPO (Low Pulse Occupancy)
Operating Temperature	-10~65°C
Operating Humidity	Max. 95%RH (Non-Condensing)
Storage Temperature	-20~80°C
Life Expectancy	Min. 5 years
Dimension	59×45×17mm (W×H×D)
Weight	25g

## Dimension



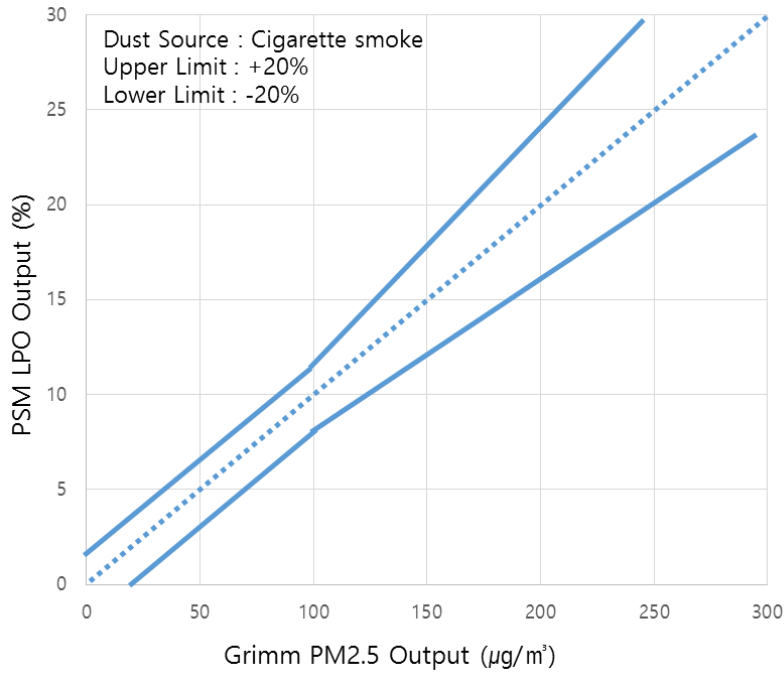
### Pin Map

Pin No.	Typical	LPO
1	GND	
2	N.C	N.C
3	Vcc	
4	PWM/Tx	PM2.5
5	N.C	N.C



⑤④③②①

### Typical Output Characteristic



### Ordering Information

TYPE	PART NUMBER	CONTACT INFO.	
PM2.5	PSML2.5	E-MAIL	<a href="mailto:sales@samyongsnc.com">sales@samyongsnc.com</a>
PM1.0	PSML1.0	PHONE	+ 82 31 780-9900



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This feature sheet should be used only for intended and authorized application of **PSML Series**. Please consult with **SAMYOUNG S&C** for any specific application requirements.

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