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## Laser Particle Counting Sensor module for DGEM

DL-OPC5000  
DATASHEET

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### Highlights

- Laser scattering sensor module
- Add-on module for DGEM monitoring system
- Six output particle count channels
- Strong antistatic ability
- Individually calibrated against TSI AeroTrak Particle Counter Model 9306

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### Description

The laser particle counting sensor module is based on laser scattering technology, which can accurately detect and calculate the number of suspended particles with different particle sizes in the air. Scattered light is converted into electrical signal (pulse) via photoelectric transformer. Thus, real-time measured data is obtained through measuring quantity and strength of scattered light.

The sensor can simultaneously output quantity of particles in six channels.

### Features

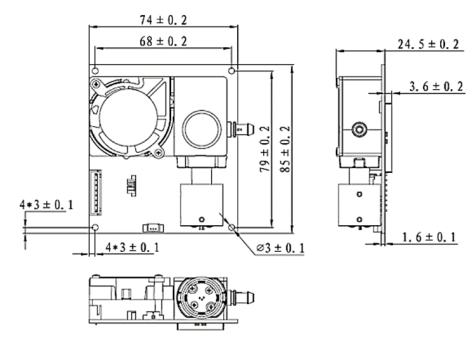
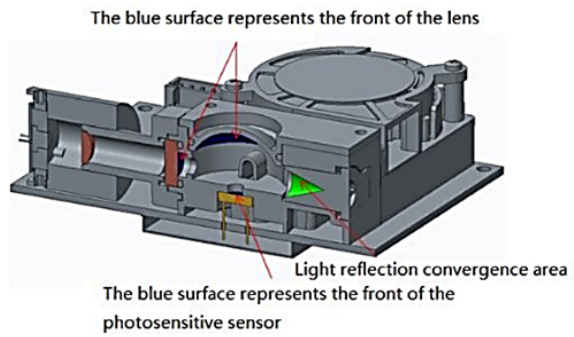
- 6-channel simultaneous particle number output
- Constant current sampling structure, ensure the stable sampling flow
- Better laser diode and strong fan with better performance
- Wide working temperature range
- With voltage regulator design and EMC compatibility
- Intelligent false alarm functions

### Applications

- Assess compliance with ISO 14644-1 2015 'Cleanroom standard'
- Building sites
- Clean Rooms
- Data centres
- Pharmaceuticals Industry
- Precision Machinery Industry
- Microbiological Industry
- Indoor air quality monitoring systems for homes, schools, and offices, HVAC
- Smart cities and IoT and urban air monitoring
- Environmental monitoring

## Sensor specification summary

Performance	
Range	0~10,000,000 pcs/L (1 pcs/L = 28.3 pcs/cf)
Output channels	>0.3µm, >0.5µm, >1.0µm, >2.5µm, >5.0µm, >10µm
Counting efficiency	≥ 50% @ 0.3 µm and 100% @ >0.5 µm
Resolution	1 pcs/L
Response Time	≤ 8s
Power supply	DC 5V±0.1 V
Working current	<250 mA
Temperature Range	-30 to 70 °C
Pressure range	90 to 110 kPa
Humidity Range	0 to 95 % RH
Dimensions	W85 × H74 × D24.9 mm
Operating life	≥5 years(continuous working)

Technical drawing. Units in mm	Internal profile
	

In general DevLabs work with low-medium cost sensors. Our strength is to provide monitoring solutions where analyser grade equipment is not an applicable option because of the cost, number of monitoring stations needed, the size factor or specific configuration has to be developed.

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