Panasonic

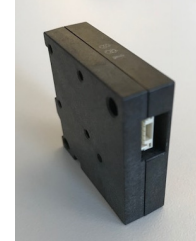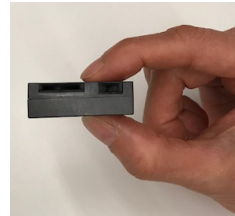## SN-GCJA5 Particulate Matter Laser Sensor

- On board Laser Diode provides Particulate Matter detection for indoor air quality
  (±10%, from low to high concentrations ~ 1,000 μgm3)
- Output mass-density value of PM1.0, Pm2.5 and PM10 (μgm3)
- Minimum detectable particle: 0.3μm
- Very small footprint: 37×37×12mm
- Weight: 13g
- Extended lifetime optimized by S/W control
- Optimized air pathway design to minimize dust accumulation
- High S/N

■ SN-GCJA5

Power supply voltage	5.0V (±10%）
Consumption current	Below 100mA
Minimum detectable particle	0.3μm
Indicatable range	(UART) 0μg/m^3〜2,000μg/m^3 (I^{2}C) 0μg/m^3〜x,xxxμg/m^3
Maximum consistency error	±10% 35μg/m^3＜、＜1,000μg/m^3
Response time	1sec (Time to first reading 8sec)
External interface	I^{2}C & UART
Size	W37×D37×H12mm

■ Typical Sources of Particulate Matter:

- ✓ Dust, fly ash, soot, smoke, aerosols, fumes, mists and condensing vapors
- ✓ Combustion engines (diesel and petrol)
- ✓ Solid-fuel (coal burning, heavy oil and biomass)
- ✓ Cooking / smoking of plant matter, Fireplaces, Furnaces
- ✓ Construction materials
- ✓ Building, demolition, mining, manufacture of cement and smelting
- ✓ Pavement erosion by road traffic /abrasion of brakes and tires.

- ✓ Agriculture (source of ammonium).
- ✓ Nitrogen oxides (emitted by traffic and industrial processes)
- ✓ Sulfur dioxide (from the combustion of sulfur-containing fuels).
- ✓ Power-plant boilers to ship boilers, central steam-heat boilers
- ✓ Waste incineration / local field burning
- ✓ House and forest fires
- ✓ Etc…