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Particle Sensor
Model PPD42NS

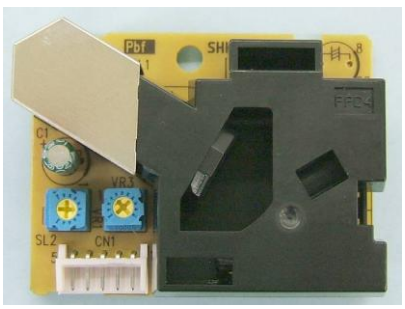
This sensor is to create Digital (Lo Pulse) output to Particulate Matters(PM). Lo Pulse Occupancy time (LPO time) is in proportion to PM concentration. The output from "P1" is for PM whose size is around 1 micro meter or larger. "P1" Output characteristics is shown in the attached drawing Fig2.,when tested in standard condition stipulated below.

Specification

Model	PPD42NS
Detectable particle size	approx. 1μm (minimum.)
Detectable range of concentration	0~28,000 pcs/liter (0~8,000pcs/0.01 CF=283ml)
Supply Voltage	DC5V +/- 10% (CN1:Pin1=GND, Pin3=+5V) Ripple Voltage within 30mV
Operating Temperature Range	0~45°C
Operating Humidity Range	95%rh or less (without dew condensation)
Power consumption	90mA
Storage temperature	-30~60°C
Time for stabilization	1 minute after power turned on
Dimensions	59(W) × 45(H) × 22(D) [mm]
Weight	24g(approx.)
Output Method	Negative Logic, Digital output, Hi : over 4.0V(Rev.2) Lo : under 0.7V (As Input impedance : 200kΩ) OP-Amp output, Pull-up resistor : 10kΩ

Configuration and connector pin assignment

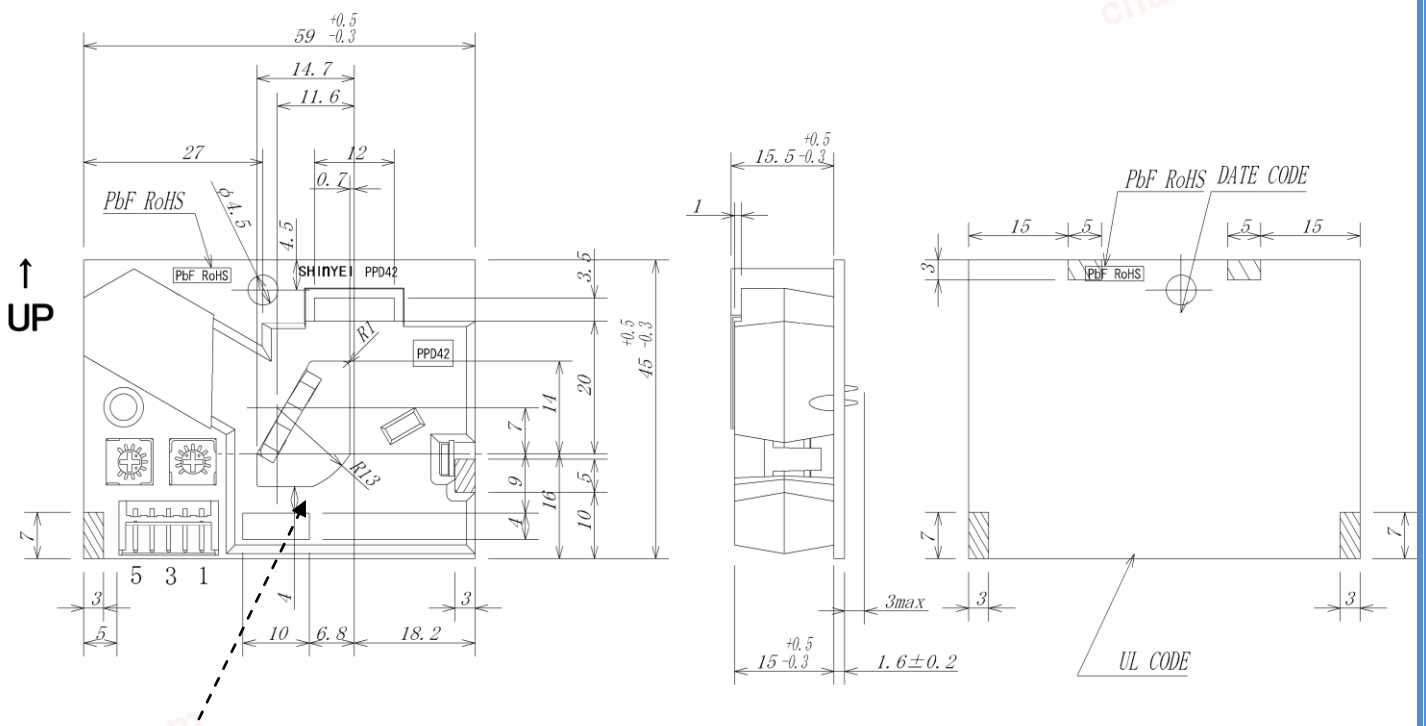
The configuration and connector pin allocation are shown in the attached drawing Fig1.



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Fig. 1



Rib (inside of housing)

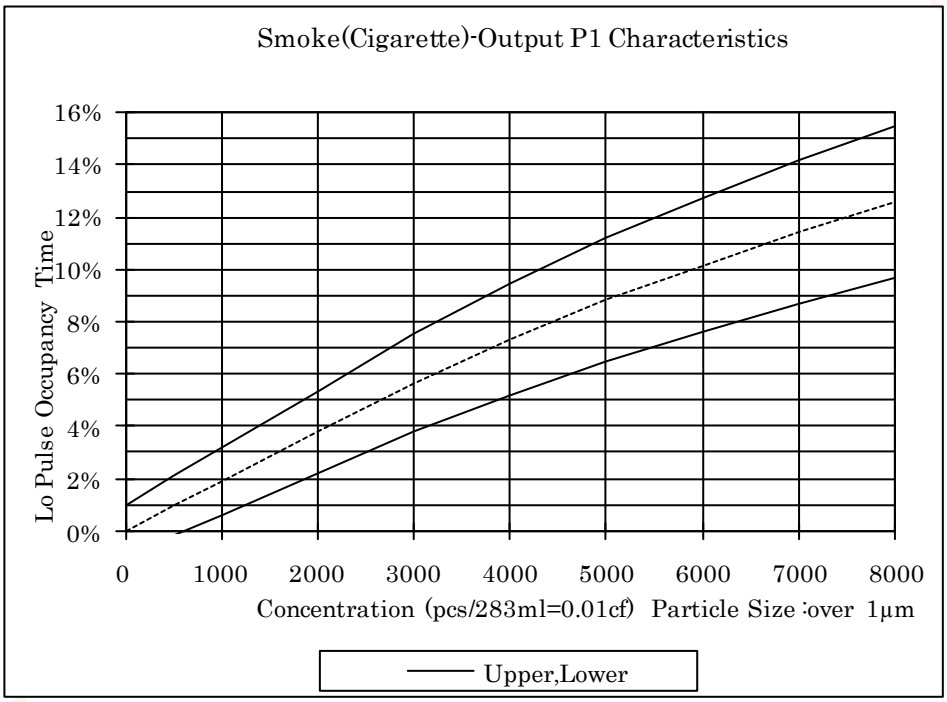
An additional rib structured to inside of housing to hide RH1 lead wire from view. Following components replaced with equivalent ones; OP-Amp,Volume and Al Electrolytic Cap.

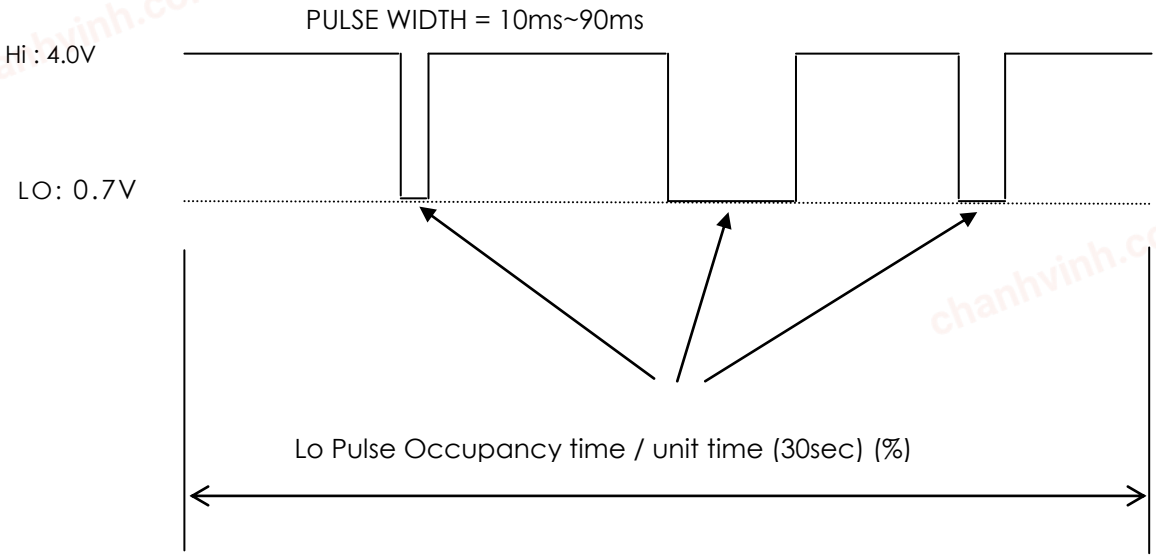
Connector

CN : S5B-EH(JST)
1 : COMMON(GND)
2 : OUTPUT(P2)
3 : INPUT(5VDC 90mA)
4 : OUTPUT(P1)
5 : INPUT(T1)･･･FOR THRESHOLD FOR [P2]

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Fig. 2





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