Easy Gas Sensor
ES1-HCHO-5 Formaldehyde

Part Number:
01-ES1-HCHO-5-01

Features

- Extreme linear response up to high concentration
- Fast response
- Low noise
- No electrolyte leakage
- Low cost at large volumes
- Individually calibrated including test report

Typical applications

- TLV monitoring
- Indoor Air Aquality

Technical Specification

Performance

Sensitivity	35 ± 20 nA / ppm
Zero current	± 2 nA
Response time	
$-T_{50}$	< 20 s
$-T_{90}$	< 120
Range	5ppm
Repeatability	1 % Lower
Detectable Limit (LDL)	≤0.05 ppm
Resolution (16Bit ADC)	0.01 ppm
Maximum overload	100ppm
Linear range	5 ppm

Environment

Temperature Range	-20 to 50 °C
Humidity Range (non condensing)	10 to 95 % R.H
Pressure Range	800 to 1200 hPa

Operation

Operating principle	amperometric, 3-electrode
Bias voltage	0 mV
Recommended load resistor	100 Ω
Warm up time	< 20s

Lifetime

Long Term Sensitivity Drift	< 1%/month
Zero Drift in clean air	< 0.2 ppm
Storage conditions	0-20 °C
Storage life	6 month
Expected Life Time	> 3 years
Warranty	12 month

Housing

Housing material	PPO
Weight	< 0.7 g

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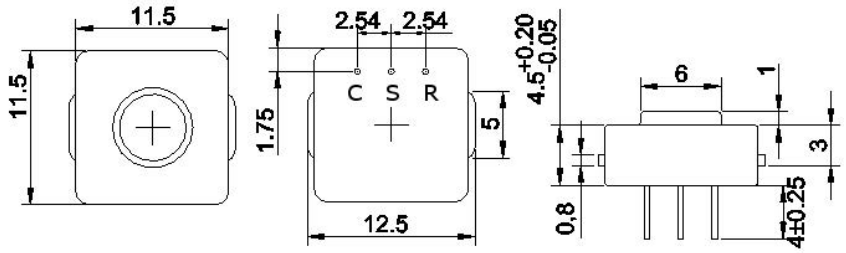
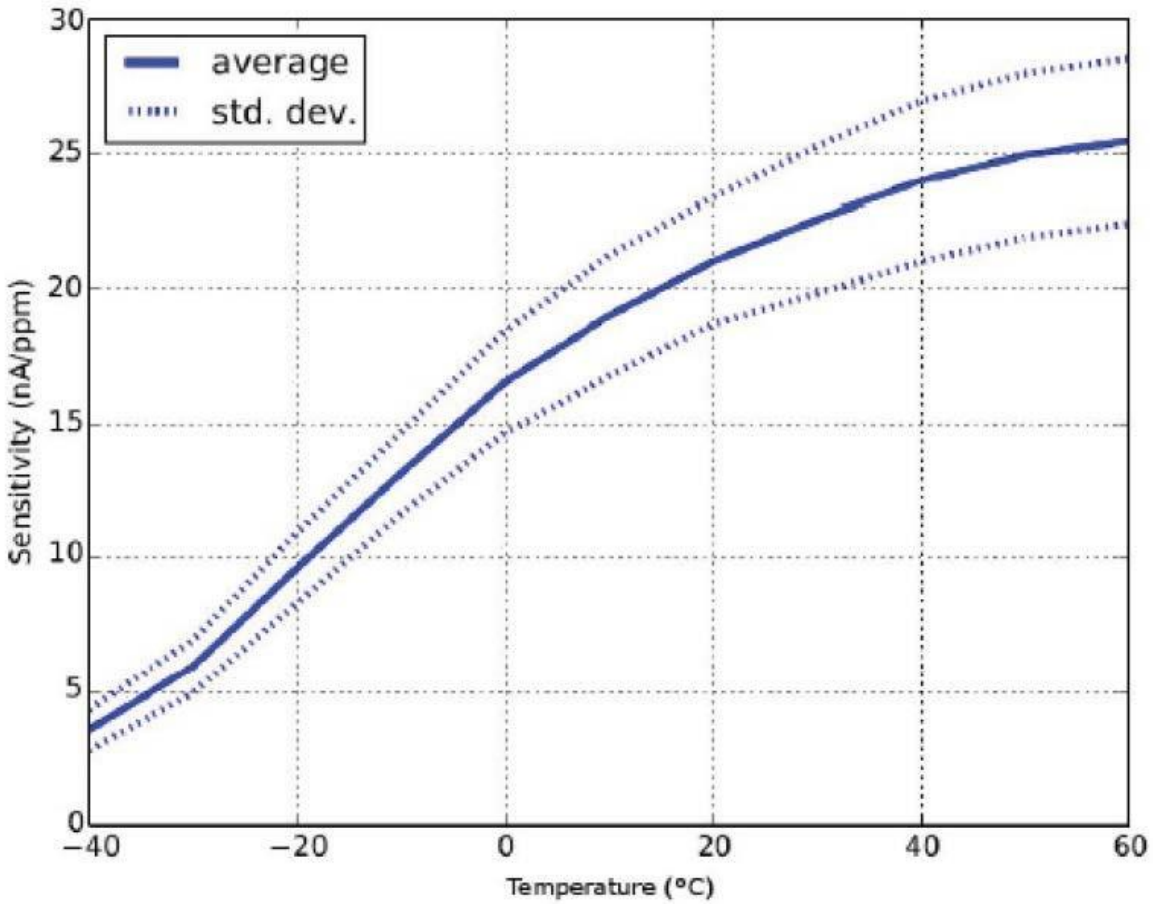
Dimensions



All dimensions in mm

Temperature curve



Cross sensitivity

Gas		Test Gas Concentration	Reading in ppm
Carbon Dioxide	CO2	5000ppm	0ppm
Ammonia	NH3	100ppm	0ppm
Carbon Monoxide	CO	100ppm	6ppm
Methane	CH4	10000ppm	0ppm
Toluene	C7H8	50ppm	0ppm
Benzene	C6H6	50ppm	0ppm
Ethanol	C2H6O	100ppm	0ppm
Ethylene	C2H4	100ppm	0ppm
Hydrogen	H2	100ppm	<3ppm
Hydrogen	H2	20000ppm	<50ppm
Hydrogen Cyanide	HCN	20ppm	<1ppm
Sulphur Dioxide	SO2	10ppm	<1ppm
Nitrogen Dioxide	NO2	10ppm	0ppm
Chlorine	Cl2	20ppm	0ppm
Hydrogen Chloride	HCl	5ppm	0ppm
HCHO sensor no reaction for all of these material: Shampoo, Washing Powder, Washing liquid, Washing Spirit, 84 Toilet Liquid, Iodine.			
When you are eating in the room, the HCHO sensor no reaction for this food smelling.			
HCHO sensor reaction in mouth smelling;			
HCHO sensor reaction with Orange smelling, this smelling is high HCN gas, please see above the cross data.			

Test Conditions: T=20℃, P=1013hPa, Flow Rate=300ml/min
We will continue improve this data and will test more gas.
If you have any question please contact with us