

## ***Technical Information***

Electrochemical Formaldehyde Sensor ***NE-HCHO***

***~ Industrial Use ~***

### ***(1) Design Features***

**Stability**

**High Reliability**

**Linearity**

**Low Power Consumption for Battery Operation**

### ***(2) Specifications***

[Sensitivity Characteristics]

Detection Gas	Formaldehyde
Detection Range	0 ~ 50 ppm
Maximum Overload	100 ppm
Output Signal	$80 \pm 20$ nA/ppm
Repeatability	$\pm 2$ %
Typical Baseline Range (pure air)	$< \pm 1$ ppm
Typical Response Time ( $t_{90}$ )	$< 120$ sec. (HCHO : 1 ppm)
Baseline Shift (- 20 ~ 50°C)	$< 3$ ppm
Expected Life Time	Over 2 years

[Operating Conditions]

Operating Temperature	- 20 ~ 50°C
Operating Humidity	15 ~ 90 % RH
Operating Pressure Range	1atm $\pm$ 10 %
Recommended Load Resistor	10 $\Omega$
Bias Voltage	Not required
Position Sensitivity	None
Recommended Storage Temp.	0 ~ 20°C
Storage Life	Less than 6 months

[Physical Characteristics]

Case Material	PPO
Cap Color	Black
Weight	5 g (approx.)

[Appearance and Dimensions]

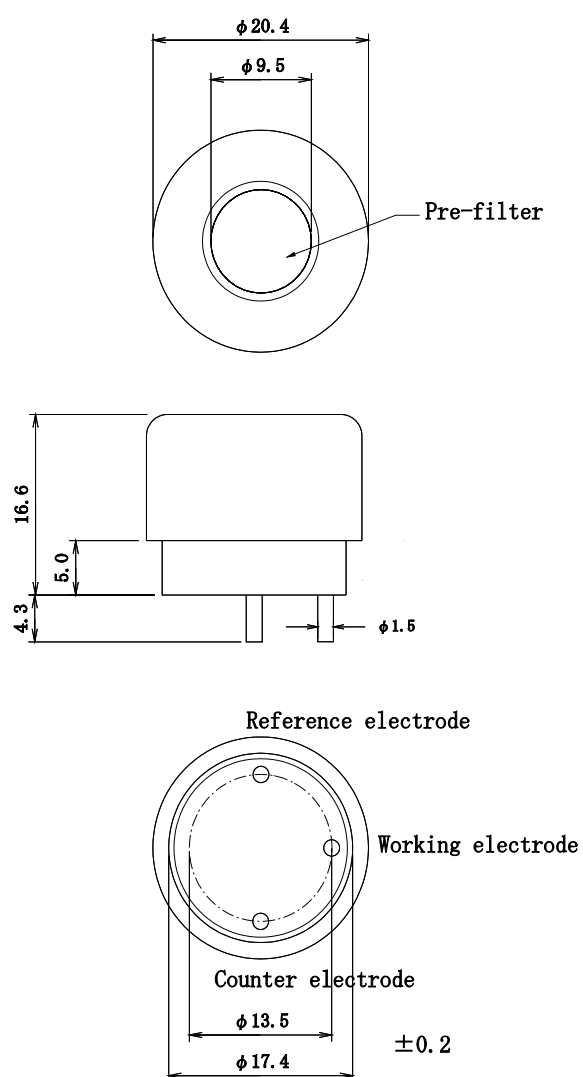


Fig.1 : Appearance and Dimensions of NE-HCHO

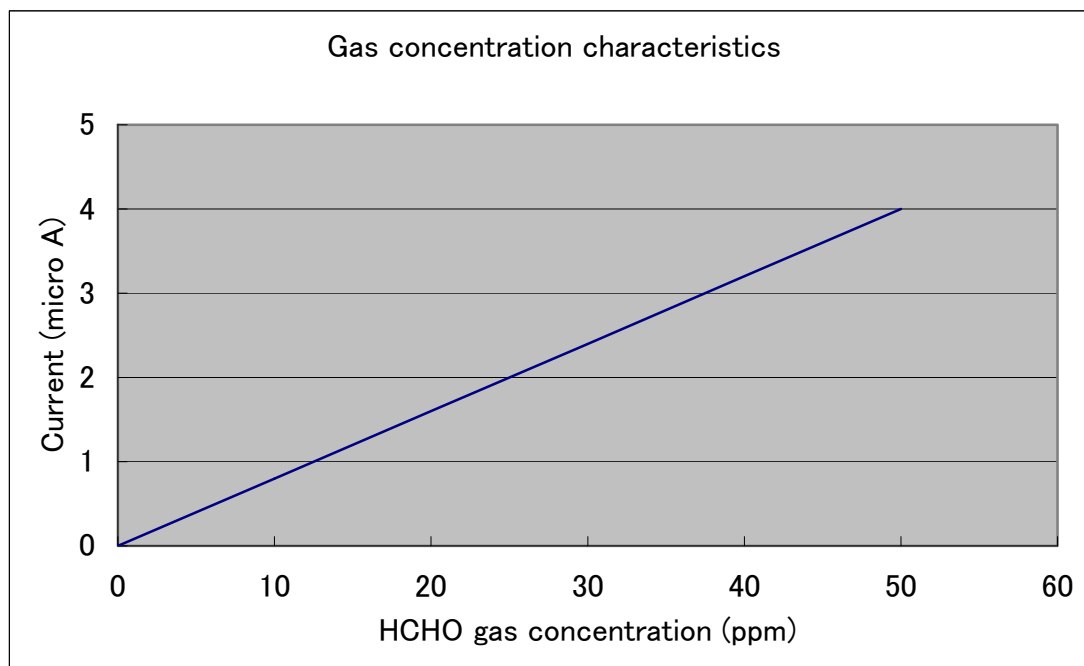
### (3) Characteristics

#### (3-1) Cross Sensitivity

Table 1 : Cross Sensitivity of NE-HCHO

Gas	Concentration (ppm)	Typical Formaldehyde Concentration (ppm) Equivalent
Formaldehyde	10	10
Hydrogen Sulfide	10	62
Carbon-monoxide	100	<12
Carbon-dioxide	5,000	0
Hydrogen	100	<12
Sulfur-dioxide	30	<22
Ethylene	1,000	<7
Chlorine	10	<2
Methane	5,000	0
Nitric Oxide	10	-1 to 5
Nitrogen Dioxide	10	-8
Ammonia	100	0
Ethanol	100	<1*

Exposure time : \* 30 minutes



[Notes]

- Use only within specified conditions.
- Sensor characteristics must be measured in clean air.
- Electrode pins must be correctly connected.  
Wrong connection does not allow correct functions.
- Do not apply voltage directly to electrode pins.
- Do not bend pins.
- Do not put excess vibration or shocks.
- If sensor housing is damaged or scratched, do not use.
- Do not blow organic solvents, paints, chemical agents, oils, or high concentration gases directly onto sensors.
- Do not solder to pins of sensor directly.  
Use exclusive sockets.
- Do not use contact grease when sensor connected to the sockets.
- Do not disassemble or change any parts.
- If sensor is used under irregular atmosphere, contact us.

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