



● NEMOTO SENSORTECH DIVISION  
● NANO & CYBERTECH DIVISION



## TECHNICAL INFORMATION SHEET: NEMOTO NT-H2S-3 Electrochemical Hydrogen Sulphide Sensor



Output current: 200 +/- 50 nA/ppm  
Reproducibility: +/- 2%  
Zero in clean air: < +/- 3ppm equivalent  
Output drift in air: < 5%/year

Response time ( $T_{90\%}$ ): < 20 seconds  
Temperature drift (zero): < 1ppm (-20 to +50°C)  
Expected lifetime\*: > 2 years

### Operating conditions:

Operating temperature: -20°C to + 50°C  
Humidity range (constant): 15-90% RH  
Humidity range (intermittent): 0-99% RH  
Pressure: 0.9 – 1.1 atm  
Recommended resistor: 10 ohms  
Bias voltage: Not required  
Recommended Storage temp: 0-20°C  
Storage time: 6 months  
(without compromising lifetime)

### General Description

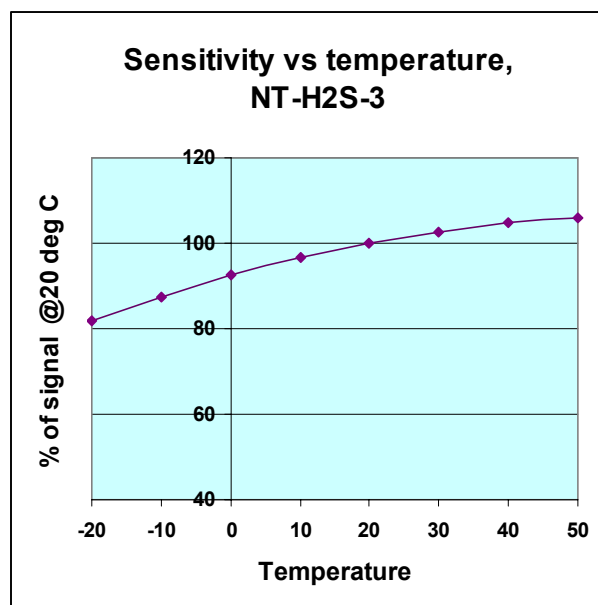
The NT-H2S-2 is a new electrochemical gas sensor with 3 electrodes for the detection of Hydrogen Sulphide ( $H_2S$ ) in a variety of gas detection applications. Exhibiting high performance with long-term stability, this compact (20.4mm dia) sensor is suitable for portable Gas Detection Instruments or Fixed Gas Detection heads.

The NT-H2S-2 is designed to complement the mainstream NT-H2S-1 sensors, for use in more specialised applications, where a higher range of 0-500ppm is required.

Nemoto's porous electrode technology enables accurate gas detection with high sensitivity. The mechanical design of the sensor gives optimum gas diffusion characteristics, and the hermetically sealed enclosure prevents costly electrolyte leakage.

### Specifications NT-H2S-2

Detectable gas: Hydrogen Sulphide  
Detection range: 0 – 500 ppm  
Maximum range (short periods): 2000 ppm



Nemoto has a policy of continuous development and improvement of its products. As such the specification for the device outlined in the data sheet may be changed without notice.

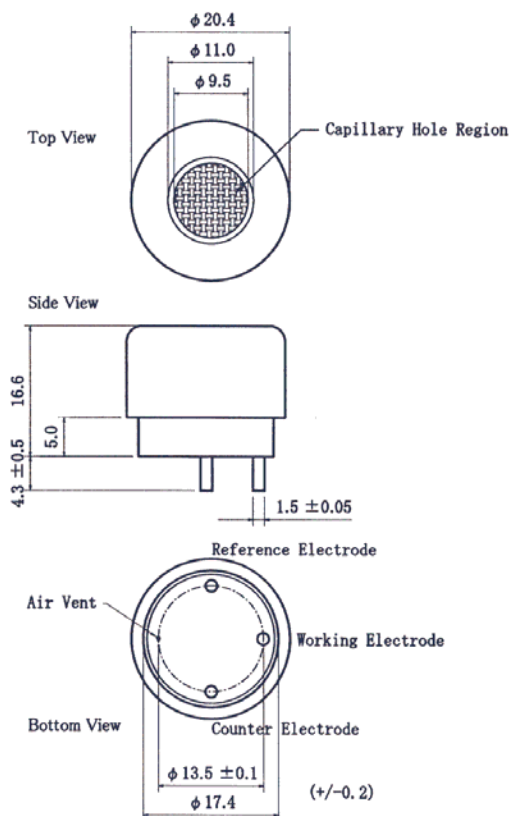
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**Typical Cross-Sensitivities:**

<b>Gas</b>	<b>Test Gas Used (ppm)</b>	<b>H2S Concentration Equivalent (ppm)</b>	<b>% Cross Sensitivity</b>
Hydrogen Sulphide	10	10	100
Carbon monoxide	100	<5	<5%
Carbon dioxide	5000	0	0
Hydrogen	1000	-7 to +15	<1.5%
Sulphur dioxide	30	<7	<25%
Ethylene	100	-0.3 to +2	<2%
Chlorine	10	0	0%
Methane	5000	0	0
Nitric Oxide	10	<-0.3	<-3%
Nitrogen dioxide	10	<-3	<-30%
Ammonia	100	0	0
Ethanol	100	-7 to +3	<-7%

**Dimensions:**



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