NEMOTO SENSORTECH DIVISION
NANO & CYBERTECH DIVISION

TECHNICAL INFORMATION SHEET:
NEMOTO NT-H2S-1 Electrochemical Hydrogen Sulphide Sensor

General Description

The NT-H2S-1 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.

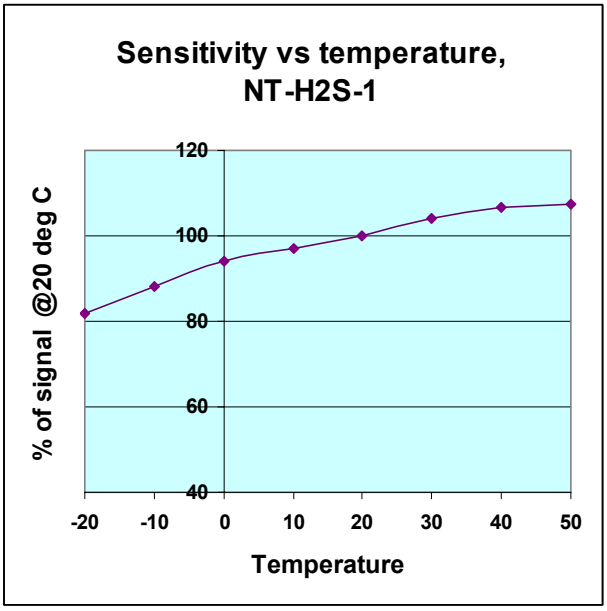
Nemoto's porous electrode technology enables accurate gas detection with high sensitivity. The mechanical design of the sensor gives optimum gas diffusion characteristics, and the hermetically sealed enclosure prevents costly electrolyte leakage.

Specifications NT-H2S-1

Detectable gas:	Hydrogen Sulphide
Detection range:	0 – 100 ppm
Maximum range (short periods)	500 ppm
Output current:	700 +/- 150 nA/ppm
Reproducibility:	+/- 2%
Zero in clean air:	<+/-1ppm equivalent
Output drift in air:	< 5%/year
Response time ($T_{90\%}$):	< 20 seconds
Temperature drift (zero)	<1ppm (-20to +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 (without compromising lifetime)	6 months



Further performance data and information on operating characteristics will be available in the Characterisation Document nt-h2s-1-CD.doc

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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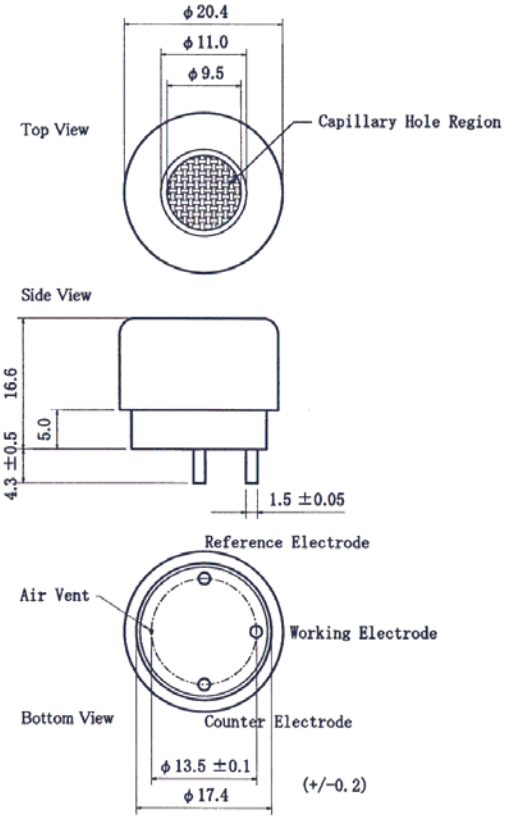
Typical Cross-Sensitivities:

Gas	Test Gas Used (ppm)	H2S Concentration Equivalent (ppm)	% Cross Sensitivity
Hydrogen Sulphide	10	10	100
Carbon monoxide	100	<3	<3%
Carbon dioxide	5000	0	0
Hydrogen	1000	-3 to +5	<0.5%
Sulphur dioxide	30	<6	<20%
Ethylene	100	-1 to +1	<1%
Chlorine	10	0	0%
Methane	5000	0	0
Nitric Oxide	10	<-0.5	<-5%
Nitrogen dioxide	10	<-3	<-30%
Ammonia	100	0	0
Ethanol	100	-4 to +2	<4%

Dimensions:



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