TECHNICAL INFORMATION SHEET
NAP-520 Electrochemical Hydrogen Sulphide Gas Sensor

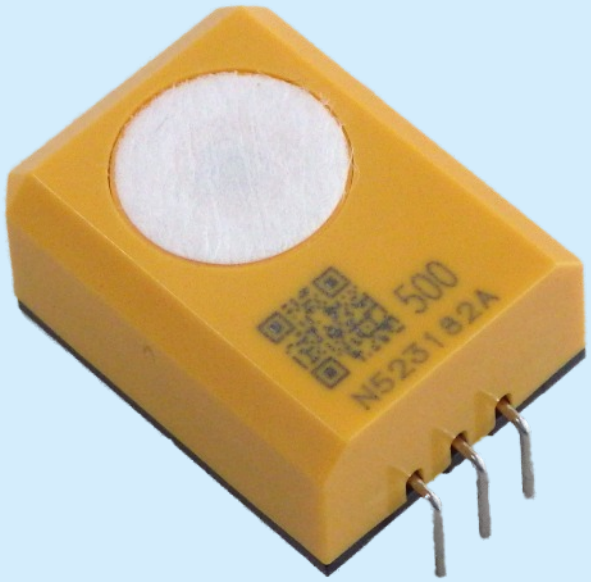
Nemoto Sensor Engineering Co., Ltd.
4-10-9, Takaido-higashi, Suginami-ku, Tokyo, JAPAN

General Description

The NAP-520 is an 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, the small size of the NAP-520 makes it particularly suitable for portable instruments such as disposable “badge” type gas detectors.

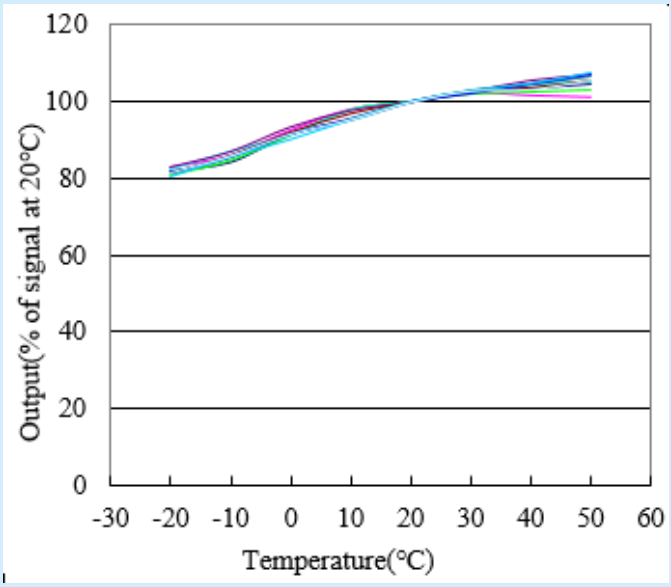
Nemoto's porous electrode technology enables accurate gas detection with high sensitivity. The mechanical design of the sensor gives optimum gas diffusion characteristics, and the hermetically sealed enclosure prevents costly electrolyte leakage.



Specifications:

Detectable Gas	Hydrogen Sulphide (H_2S)
Detection Range	0-100ppm
Maximum overload	500ppm
Output Current	120 +/- 20 nA/ppm
Reproducibility (same day)	+/- 2%
Zero in clean air	<+/- 1 ppm equivalent)
Long term drift:	
Zero	< +/- 1ppm / year
Span	<10% signal/ year
Response time ($T_{90\%}$)	< 30 seconds
Temperature drift (zero)	<2ppm (-20°C to +50°C)
Expected lifetime	> 2 years
Temperature Range:	-20°C to +50°C
Humidity range (constant)	15-90% RH
Humidity range intermittent)	0-99% RH
Pressure	0.9 - 1.1 atm
Recommended load resistor	10 Ω
Storage time	6 months
(Without compromising lifetime)	

Temperature response



Test data on drift, poisoning, temperature performance, linearity are available on the Characterisation Document.

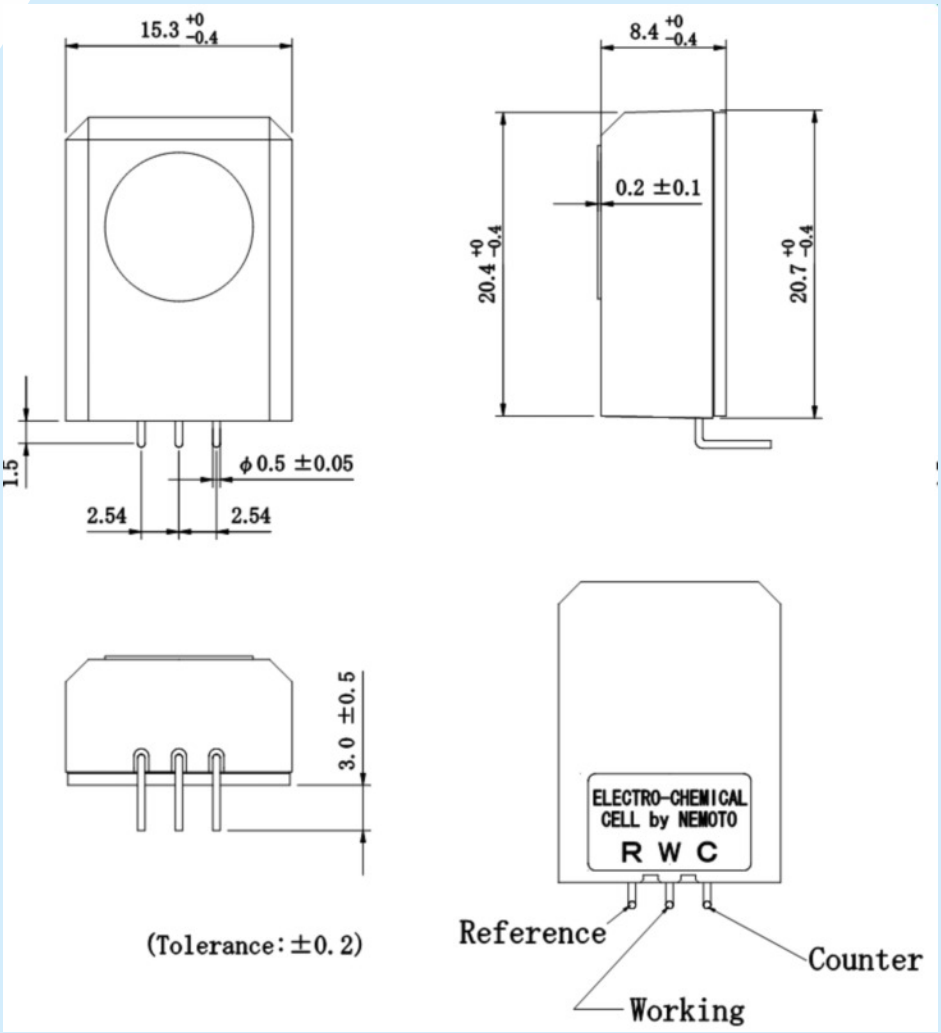
Nemoto has a policy of continuous development and improvement of its products. As such the specification for the device outlined in the data sheet may be changed without notice

NAP-520.ppp, issue 1, Feb 2018

Contact Information:	Website	email	Telephone
Europe & Africa Area	www.nemoto.eu	eusensor@nemoto.co.jp	+44 (0)1799 543968
Asia Area	www.nemoto.co.jp	sensor2@nemoto.co.jp	+81 3 3333 2760
Americas Area	www.nemoto.eu	nasensor@nemoto.co.jp	+1 604 761 7363

NEMOTO

Dimensions:



Typical Cross-Sensitivities:

Gas	% Cross-sensitivity
Hydrogen Sulphide	100
Carbon Monoxide	< 3
Hydrogen	< 1
Methane	0
Carbon Dioxide	0
Sulphur Dioxide	< 20
Nitric Oxide	< 20
Nitrogen Dioxide	0 to -20
Ammonia	0
Ethylene	0
Chlorine	0

Test data on drift, temperature performance, linearity etc are available on the Characterisation Document / Manual for the device.

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

NAP-520.ppp, issue 1, Feb 2018

Contact Information:	Website	email	Telephone
Europe & Africa Area	www.nemoto.eu	eusensor@nemoto.co.jp	+44 (0)1799 543968
Asia Area	www.nemoto.co.jp	sensor2@nemoto.co.jp	+81 3 3333 2760
Americas Area	www.nemoto.eu	nasensor@nemoto.co.jp	+1 604 761 7363