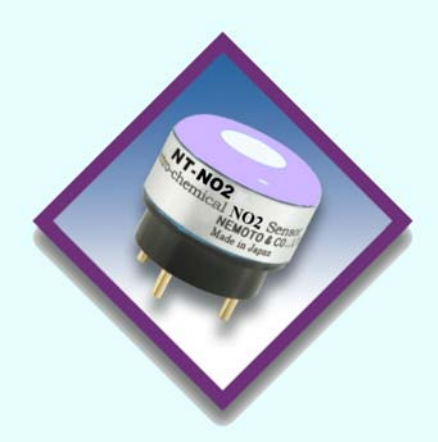
NEMOTO SENSORTECH DIVISION
NANO & CYBERTECH DIVISION

TECHNICAL INFORMATION SHEET:
NEMOTO NT-NO2 Electrochemical Nitrogen Dioxide Sensor



General Description

The NT-NO2 is a new electrochemical gas sensor with 3 electrodes for the detection of Nitrogen Dioxide (NO_2) 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 alike. The NT-NO2 is particularly suitable for use in fixed monitoring systems measuring NO2 levels in underground car parks, where long term reliability and low cost are essential requirements.

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.

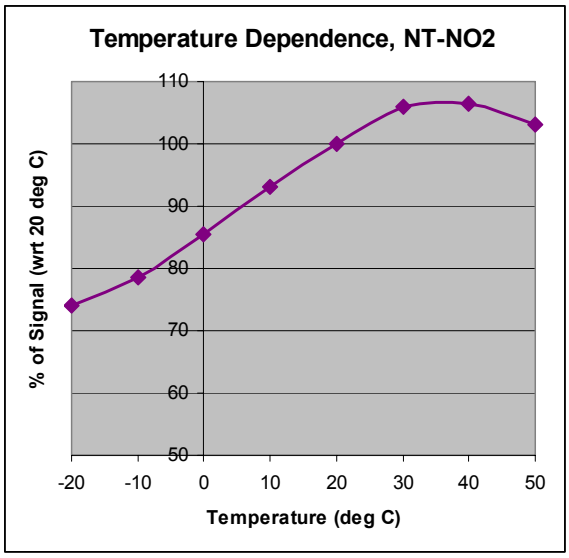
Specifications NT-NO2

Detectable gas:	Nitrogen Dioxide
Detection range:	0 – 20 ppm
Maximum range (short periods)	150 ppm
Output current:	600 +/- 150 nA/ppm
Reproducibility:	+/- 2%
Zero in clean air:	<+/- 0.2ppm equivalent
Output drift in air:	< 2%/month
Response time ($T_{90\%}$):	< 25 seconds
Temperature drift (zero)	<TBA
Expected lifetime*:	2 years

Note: The signal output of the NT-NO2 sensor is of opposite polarity to other sensors such as those for carbon monoxide

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 become available on a Characterisation document in due course.

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.

ds-nt-no2.doc, issue 3, Sept 2006

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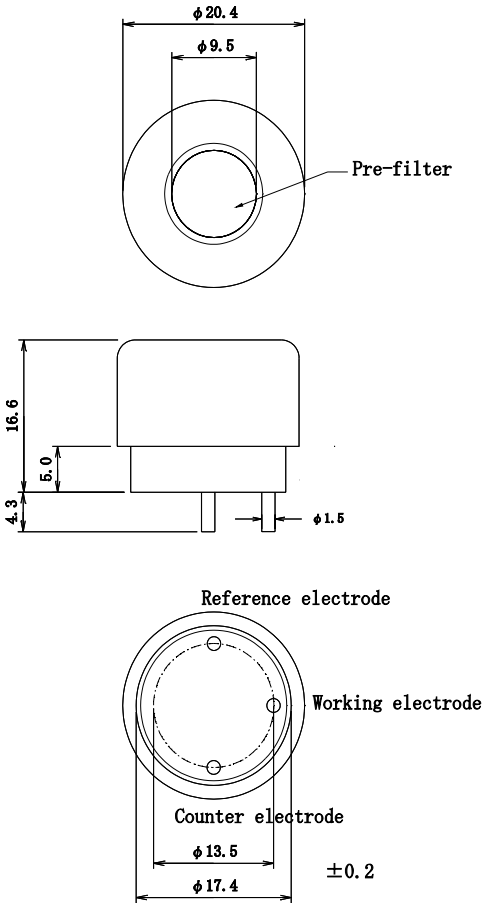
Typical Cross-Sensitivities:

Gas	Test Gas Used (ppm)	NO_2 Concentration Equivalent (ppm)	% Cross Sensitivity
Nitrogen Dioxide	20	20	100
Nitric Oxide (NO)	50	0	0
Carbon Dioxide	5000	0	0
Carbon Monoxide	400	0	0
Sulphur Dioxide	30	-0.6	≈ -2
Hydrogen Sulphide	20	<-25	<125
Hydrogen	1000	0	0
Ethyl Acetate	100	<0.5	<0.5
Ethanol	100	0	0
Chlorine	1	1	100
Ethylene	500	0	0
Toluene	50	<1.5	<3
Ammonia	100	0	0

Dimensions:



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