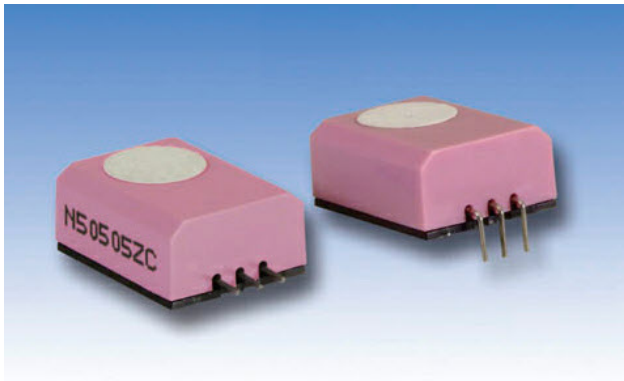




NEMOTO SENSOR ENGINEERING CO., LTD

TECHNICAL INFORMATION SHEET: NEMOTO NAP-550 Electrochemical Nitrogen Dioxide Sensor



General Description

The NAP-550 is a new electrochemical gas sensor with 3 electrodes for the detection of Nitrogen Dioxide (NO₂) in a variety of gas detection applications. Exhibiting high performance with long-term stability, this compact sensor is suitable for portable or disposable Gas Detection Instruments or Fixed Gas Detection heads alike. The NAP-550 is a version of the popular NT-NO₂, designed to be mechanically compatible with the NAP-505 CO sensor.

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 NAP-550

Detectable gas:	Nitrogen Dioxide
Detection range:	0 – 30 ppm
Maximum range (short periods)	100 ppm
Output current:	150nA +/- 30 nA/ppm

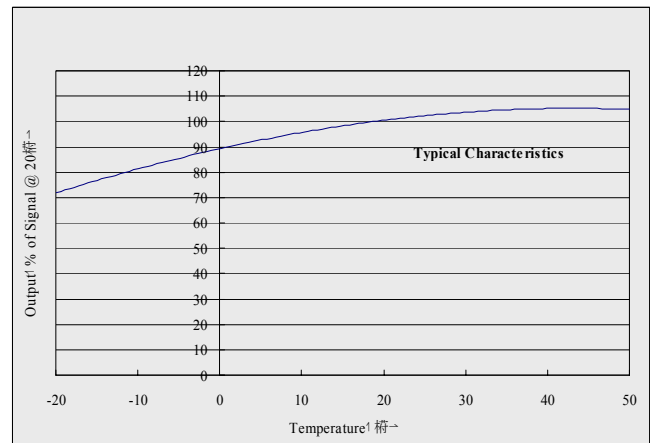
Nemoto has a policy of continuous development and improvement of its products. As such the specification for the device outlined in the data sheet may be changed without notice.

Reproducibility:	+/- 2%
Zero in clean air:	< +/- 0.5ppm equivalent
Output drift in air:	< 4%/month
Response time (T _{90%}):	< 25 seconds
Temperature drift (zero)	<TBA
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

Typical Temperature Dependence:



Further performance data and information on operating characteristics will become available on a Characterisation document in due course.

NAP-550 Datasheet, August 2010

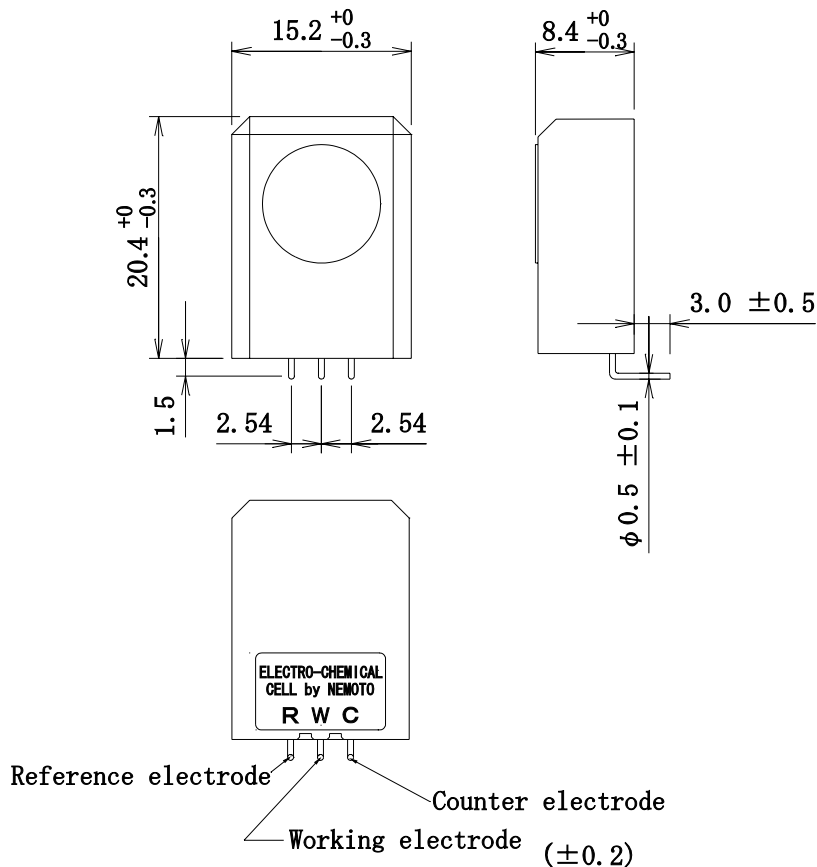
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Typical Cross-Sensitivities:

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	<-0.1	0
Hydrogen Sulphide	20	<-12	<-60
Hydrogen	1000	0	0
Ethyl Acetate	100	<0.3	<0.3
Ethanol	100	0	0
Chlorine	1	1	100
Ethylene	500	0	0
Toluene	50	<1	<2
Ammonia	100	0	0

Dimensions:



NAP-550 Datasheet, August 2010

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