



TECHNICAL INFORMATION SHEET

NE4-NH3 Electrochemical Ammonia (NH₃) Gas Sensor

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General Description

The NE4-NH3 is a new electrochemical gas sensor with 3 electrodes for the detection of Ammonia 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:

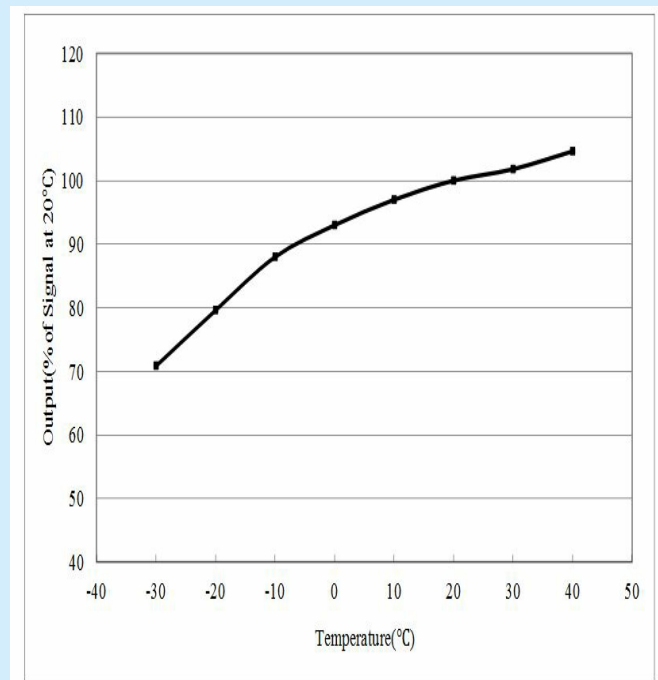
Detectable Gas	Ammonia (NH ₃)
Detection Range	0-100ppm
Maximum overload	200ppm
Output Current	40 +/- 12 nA/ppm
Reproducibility (same day)	+/- 10%
Zero in clean air	< +/- 10 ppm equivalent

Long term drift:

Zero	< +/- 10ppm / Year
Span	< 2% Signal / Month
Response time (T _{90%})	< 90 seconds
Temperature drift (zero)	<15ppm (-30°C to +50°C)
Expected lifetime	2 years
Temperature Range:	-30°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



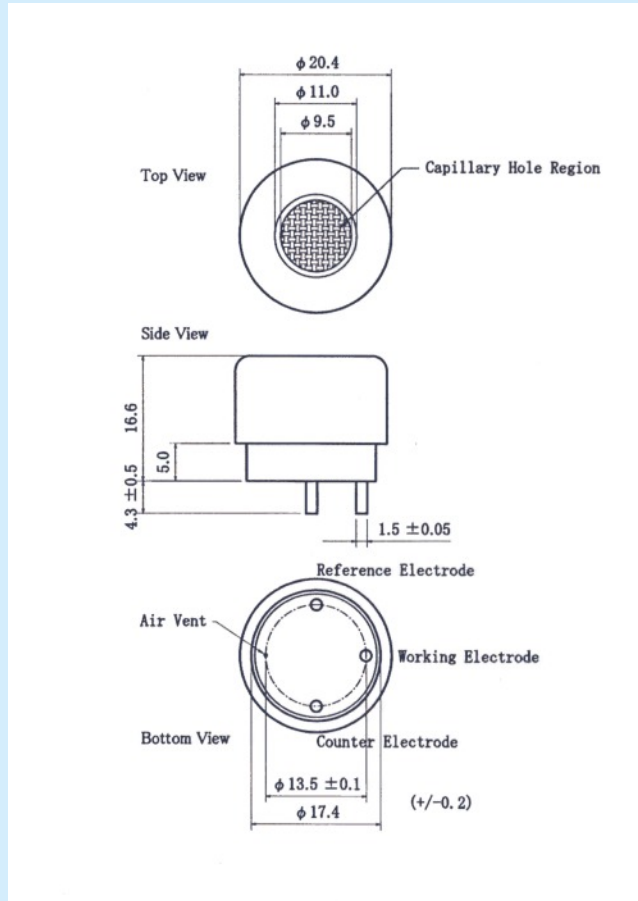
Test data on drift, poisoning, temperature performance, linearity are available on the Characterisation Document.

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

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Dimensions.



Typical Cross-Sensitivities:

Gas	Test Gas Used (ppm in Air)	Test result (ppm equivalent)	% Cross-sensitivity
Ammonia	100	100	100
Hydrogen sulphide	10	<30	<300
Hydrogen	1000	<-10	<-1
Methane	5000	0	0
Carbon dioxide	5000	0	0
Sulphur dioxide	10	<15	<150
Nitric oxide	20	0	0
Nitrogen dioxide	20	<2	<10
Carbon Monoxide	200	0	0
Ethanol	100	0	0
Ethylene	1000	0	0
Chlorine	10	0	0

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