



# TECHNICAL INFORMATION SHEET

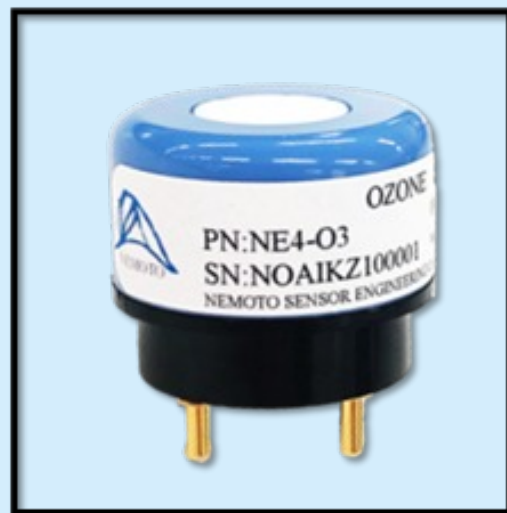
## NE4-O3 Electrochemical Ozone (O<sub>3</sub>) Gas Sensor

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

### General Description

The NE4-O3 is a new electrochemical gas sensor with 3 electrodes for the detection of Ozone gas (O<sub>3</sub>) in a variety of gas detection and environmental monitoring 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.

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:

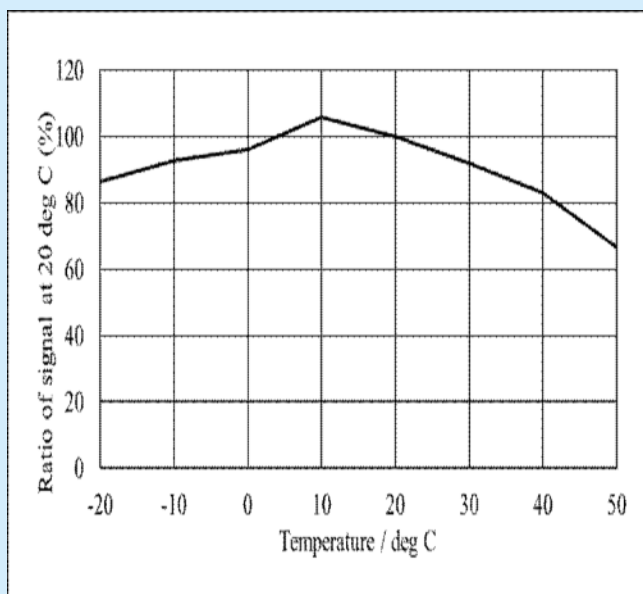
Detectable Gas	Ozone (O <sub>3</sub> )
Detection Range	0-20 ppm
Maximum overload	50 ppm
Output Current	600 +/- 200 nA/ppm
Reproducibility (same day)	+/- 2%
Zero in clean air	0 +/- 0.03ppm
Lowest Detectable Limit	0.03ppm (30 ppb)

#### **Long term drift:**

Zero	< +/- 200nA / Year
Span	< 2% Signal / Month
Response time (T <sub>90%</sub> )	< 60 seconds
Temperature drift (zero)	< 500nA (-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)	

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

### Temperature Response



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

ne4-O3.ppp, issue 1, February 2021

#### **Contact Information:**

Europe & Africa Area  
Asia Area  
Americas Area

#### **Website**

[www.nemoto.eu](http://www.nemoto.eu)  
[www.nemoto.co.jp](http://www.nemoto.co.jp)  
[www.nemoto.eu](http://www.nemoto.eu)

#### **email**

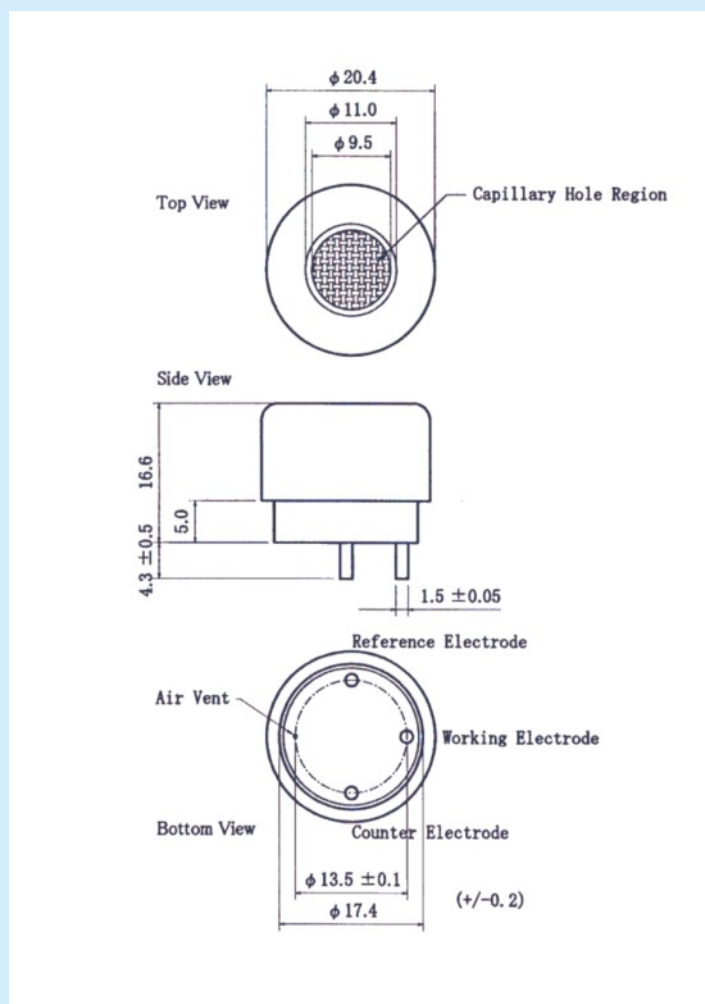
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#### **Telephone**

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## Dimensions:



## Typical Cross-Sensitivities:

Gas	% Cross-sensitivity
Ozone	100
Carbon Monoxide	0
Hydrogen	0
Methane	0
Carbon Dioxide	0
Sulphur Dioxide	-0.001 to +1
Nitric Oxide	< 30
Chlorine	<70
Nitrogen Dioxide	<120
Ammonia	0
Ethanol	0
Ethylene	0
Hydrogen Sulphide	-15 to +1

**Note: The output signal of the NE4-O3 sensor is of negative polarity compared to (for example) CO and H<sub>2</sub>S sensors.**

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