

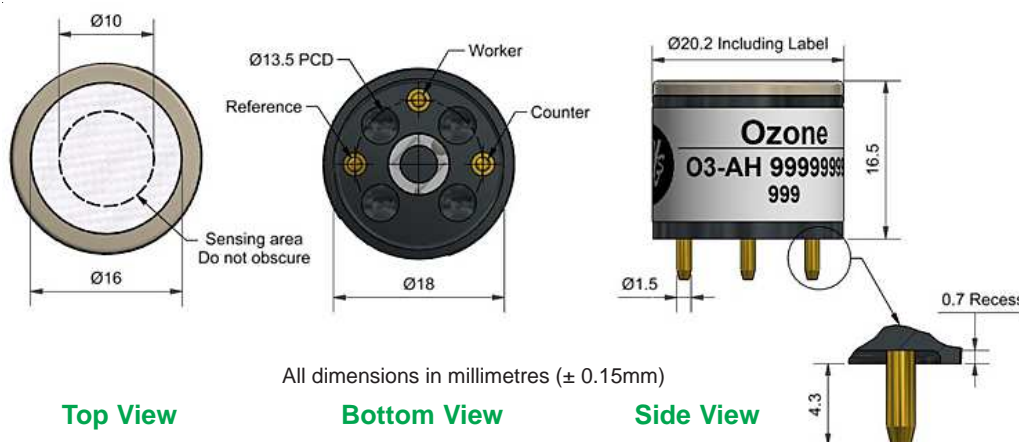


# O3-AH Ozone Gas Sensor High Sensitivity



Patented

Figure 1 O3-AH Schematic Diagram



All dimensions in millimetres ( $\pm 0.15\text{mm}$ )

Top View

Bottom View

Side View

## PERFORMANCE

Sensitivity	nA/ppm at 1ppm O <sub>3</sub>	-200 to -700
Response time	t <sub>90</sub> (s) from zero to 1ppm O <sub>3</sub>	< 80
Zero current	nA in zero air at 20°C	-70 to +70
Range	ppm O <sub>3</sub> limit of performance warranty	20
Linearity	ppm error at full scale, linear at zero and 20ppm O <sub>3</sub>	< $\pm 0.5$
Overshoot limit	maximum ppm for stable response to gas pulse	50

## LIFETIME

Zero drift	ppb equivalent change/year in lab air	0 to 20
Sensitivity drift	% change/year in lab air, monthly test	< -20 to -40
Operating life	months until 50% original signal (24 month warranted)	> 24

## ENVIRONMENTAL

Sensitivity @ -20°C	(% output @ -20°C/output @ 20°C) @ 2ppm O <sub>3</sub>	60 to 80
Sensitivity @ 40°C	(% output @ 40°C/output @ 20°C) @ 2ppm O <sub>3</sub>	80 to 105
Zero @ -20°C	nA	0 to 25
Zero @ 40°C	nA	20 to 90

## CROSS SENSITIVITY

H <sub>2</sub> S	sensitivity % measured gas @ 5ppm	H <sub>2</sub> S	< -80
NO	sensitivity % measured gas @ 5ppm	NO	< 5
Cl <sub>2</sub>	sensitivity % measured gas @ 5ppm	Cl <sub>2</sub>	< 100
SO <sub>2</sub>	sensitivity % measured gas @ 5ppm	SO <sub>2</sub>	< -3
CO	sensitivity % measured gas @ 5ppm	CO	< -3
C <sub>2</sub> H <sub>4</sub>	sensitivity % measured gas @ 100ppm	C <sub>2</sub> H <sub>4</sub>	< 0.1
NH <sub>3</sub>	sensitivity % measured gas @ 20ppm	NH <sub>3</sub>	< 0.1
H <sub>2</sub>	sensitivity % measured gas @ 100ppm	H <sub>2</sub>	< 0.1
CO <sub>2</sub>	sensitivity % measured gas @ 5% Vol	CO <sub>2</sub>	< 0.1
Halothane	sensitivity % measured gas @ 100ppm	Halothane	< 0.1

## KEY SPECIFICATIONS

Temperature range	°C	-30 to 40
Pressure range	kPa	80 to 120
Humidity range	% rh continuous	15 to 85
Storage period	months @ 3 to 20°C (stored in sealed pot)	6
Load resistor	$\Omega$ (recommended)	33 to 100
Weight	g	< 6

**NOTE:** all sensors are tested at ambient environmental conditions, with 47 ohm load resistor, unless otherwise stated. As applications of use are outside our control, the information provided is given without legal responsibility. Customers should test under their own conditions, to ensure that the sensors are suitable for their own requirements.



## O3-AH Ozone Gas Sensor High Sensitivity

# Technical Specification

For further information on the performance of this sensor, on other sensors in the range or any other subject, please contact Alphasense Ltd. For Application Notes visit "[www.alphasense.com](http://www.alphasense.com)".

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