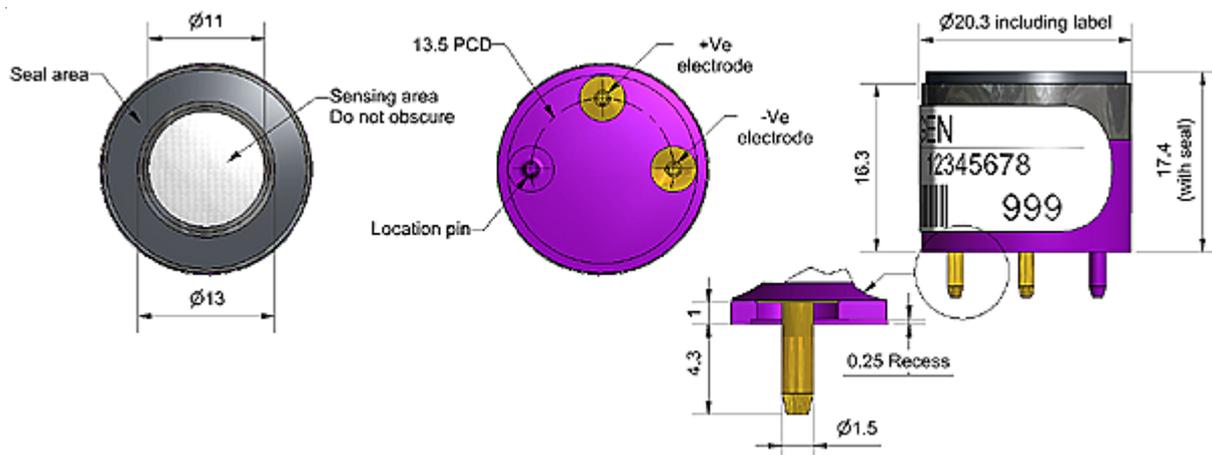


# O2-A2 Oxygen Sensor



Figure 1 O2-A2 Schematic Diagram



All dimensions in millimetres ( $\pm 0.15$ mm)

Top View

Bottom View

Side View

## PERFORMANCE

Output	$\mu\text{A}$ @ 20.9% $\text{O}_2$	80 to 120
Response time	$t_{90}$ (s) from 20.9% to 0% $\text{O}_2$	< 15
Zero current	$\mu\text{A}$ in $\text{N}_2$	< 2.5
Linearity	% $\text{O}_2$ deviation @ 10% $\text{O}_2$	0.6

## LIFETIME

Output drift	% change in output @ 3 months	< 1
Operating life	months until 85% original output of 20.9% $\text{O}_2$	> 24

## ENVIRONMENTAL

Humidity Sensitivity	% $\text{O}_2$ change: 0% to 95% rh @ 40°C	< 0.7
$\text{CO}_2$ sensitivity	% (change $\text{O}_2$ reading) / % $\text{CO}_2$ @ 5% $\text{CO}_2$	0.1
Pressure sensitivity	(% change of output)/(% change of pressure) @ 20kPa	< 0.1

## KEY SPECIFICATIONS

Temperature range	°C	-30 to 55
Pressure range	kPa	80 to 120
Humidity range	% rh non-condensing (0 to 99% rh short term)	5 to 95
Storage period	months @ 3 to 20°C (store in sealed pot, open circuit)	6
Load resistor	$\Omega$ (recommended)	47 to 100
Diameter	mm (including label)	20.0
Height	mm (including foam ring)	17.4
Weight	g	< 16



At the end of the product's life, do not dispose of any electronic sensor, component or instrument in the domestic waste, but contact the instrument manufacturer, Alphasense or its distributor for disposal instructions.

**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.

Technical Specification

# O2-A2 Performance Data

# Technical Specification

**Figure 2 Output Temperature Dependence**

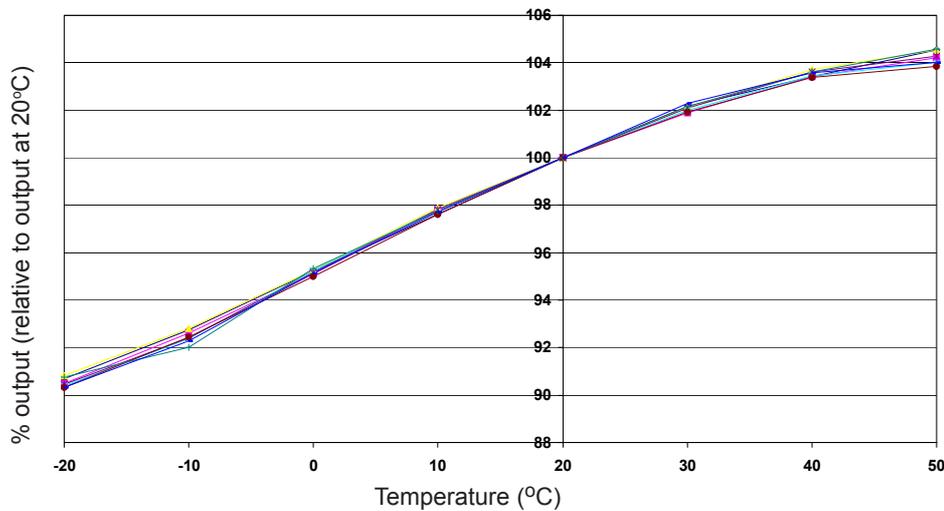
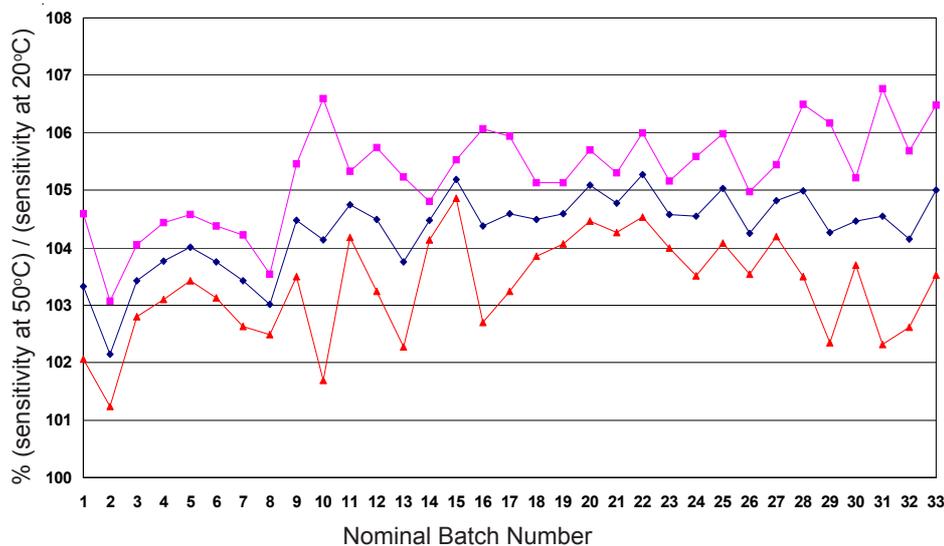


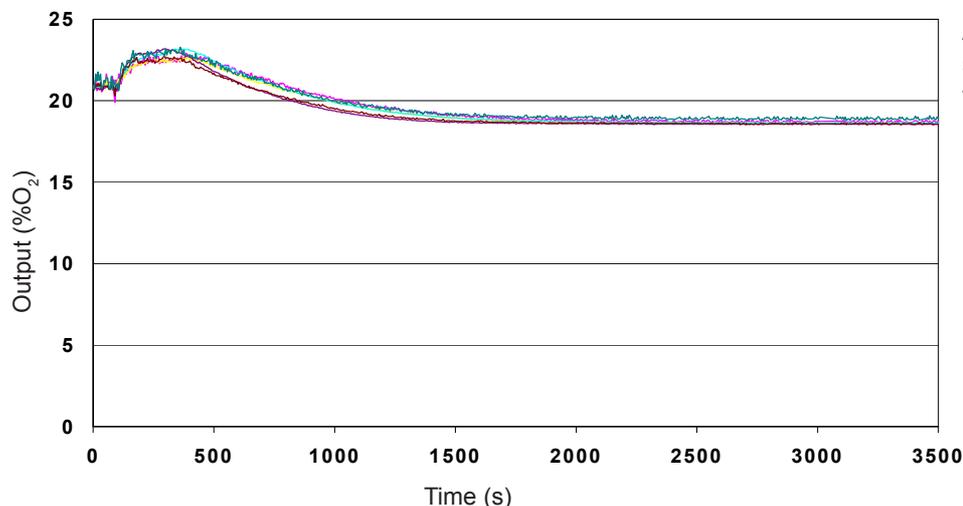
Figure 2 shows the variation in sensitivity caused by changes in temperature.

**Figure 3 Sensitivity at 50°C**



This plot of the mean and  $\pm 95\%$  confidence intervals for 34 batches shows superior repeatability of the sensitivity dependence from batch to batch, giving confidence when setting temperature compensation in your gas detector.

**Figure 4 Thermal Transient Performance**



Alphasense oxygen sensors show good performance throughout their lifetime.