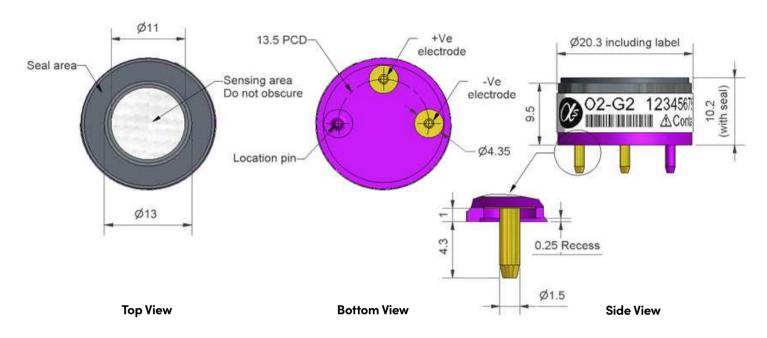
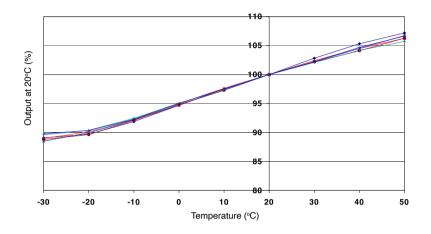
O2-G2 Oxygen Sensor – Miniature size



Dimensions are in millimetres (± 0.15 mm).

Performance	Output Response time Zero current	μ A @ 22°C, 20.9% O_2 t90 (s) from 20.9% to 0% O_2 (47 Ω) μ A @ 99.99% N_2 , 22°C	30 to 42 < 20 < 2.5
Lifetime	Output drift Operating life	% change in output @ 3 months Months until 85% original output in 20.9% O ₂	< 2 > 24
Environmental	Humidity sensitivity Pressure sensitivity CO ₂ sensitivity Output at -20°C Output at +50°C	% O ₂ change: 0% to 95% rh @ 40°C (% change of output)/(% change of pressure) @ 20kPa % (change in output)/% CO ₂ @ 5% CO ₂ % output/output at 20°C in 20.9% O ₂ % output/output at 20°C in 20.9% O ₂	< 0.7 < 0.1 < 0.1 87 to 93 103 to 107
Key Specifications	Temperature range Pressure range Humidity range Storage period Load resistor Weight	°C kPa % rh non-condensing (0 to 99% rh short term) Months @ 3 to 20°C (store in sealed pot) Ω (recommended) g	-30 to 55 80 to 120 5 to 95 6 47 to 100 < 7

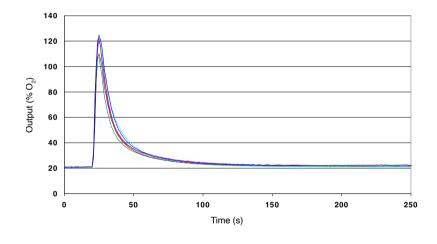
Figure 1 Temperature Dependence in Air



This graph shows the variation in sensitivity caused by changes in temperature.

All capillary oxygen sensors will show some variation in signal output with temperature and the typical response of an O2-G2 is shown.

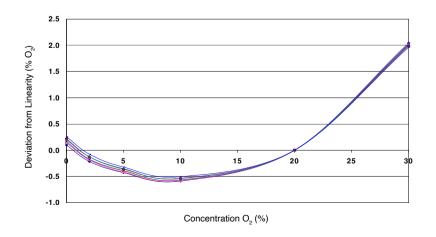
Figure 2 Pressure Step Performance



Step changes in pressure can cause a temporary signal transient. Positive pressure gives an output signal increase whilst negative pressure causes the output signal to decrease.

Typical transient response for an O2-G2 sensor exposed to a 10 kPa pressure pulse is shown.

Figure 3 Linearity



Mass flow oxygen sensors generate a non-linear current with increasing oxygen concentration: current = k * log (1/(1-C)).

When plotted on a linear graph, figure 3 shows that the non-linearity is very repeatable and can be corrected in software to the required accuracy.

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.

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