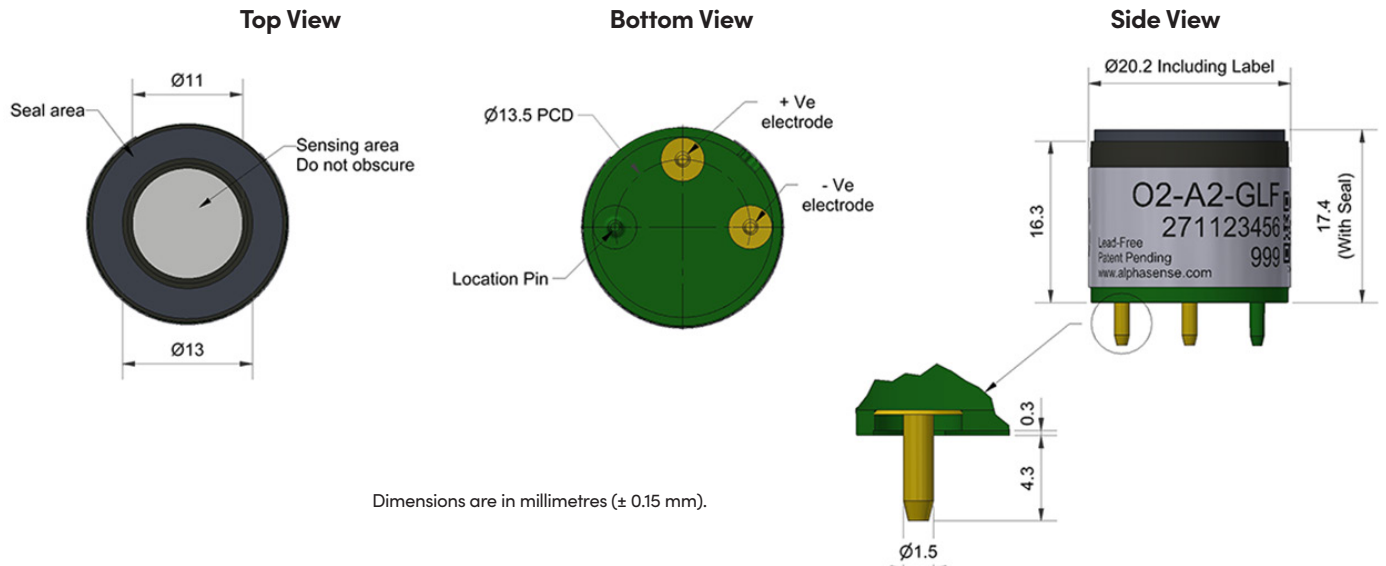


# O2-A2-GLF Galvanic Lead-Free Oxygen Sensor

The O2-A2-GLF Lead-Free Oxygen Sensor is a RoHS compliant patent pending drop-in replacement for the O2-A2 sensor as well as other manufacturers 2-pin galvanic oxygen sensors.

The O2-A2-GLF is ideal for portable, wearable and fixed safety instruments. It has comparable performance characteristics to the O2-A2 sensor and will operate on the same electronic circuit (no bias required). It features our market-leading leak-free design offering uncompromised reliability and accuracy for your instruments.



## Sensor Data

<b>Performance</b>	Output*	µA @ 20.9% O <sub>2</sub>	80 to 120
	Response time*	t <sub>90</sub> (s) from 20.9% to 0% O <sub>2</sub>	< 13
		<b>Typical mean response time</b>	8
	Zero current*	µA in N <sub>2</sub>	< 2.5
	Range	% O <sub>2</sub> limit of performance warranty	0-30
<b>Lifetime</b>	Output drift	% change in output @ 3 months	< 1
	Operating life	Months until 85% original output of 20.9% O <sub>2</sub>	> 24
<b>Environmental</b>	CO <sub>2</sub> sensitivity	% change in output / %CO <sub>2</sub> @ 5% CO <sub>2</sub>	0.3
<b>Key Specifications</b>	Temperature range	°C	-20 to 50
	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 (stored in sealed container)	6
	Load resistor	Ω (recommended)	47 to 100
	Diameter	mm (including label)	20.3
	Height	mm (including foam ring)	17.4
	Weight	g	< 15

\* Performance specifications are valid for three months after the delivery date and correspond to sensors tested at 20°C, 50% RH and 1 atm. Output signal can drift below the lower limit over time.

**Figure 1: Typical Response Curve**

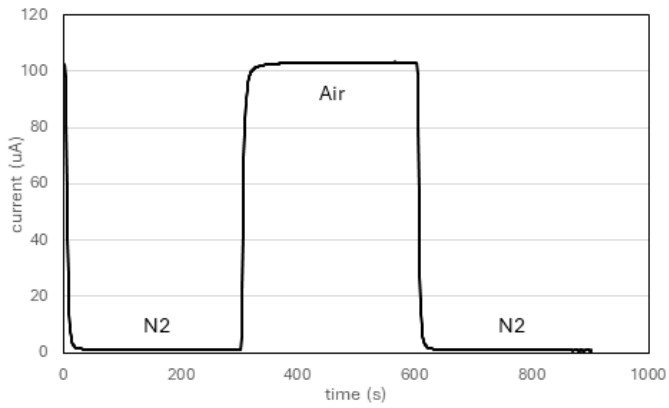


Figure 1 displays the fast response of the O2-A2-GLF Oxygen Sensor when exposed to air and alternately with N<sub>2</sub>.

**Figure 2: Typical Temperature Calibration Curve**

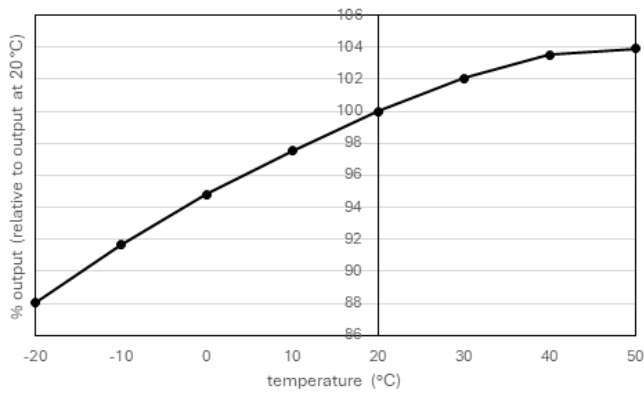
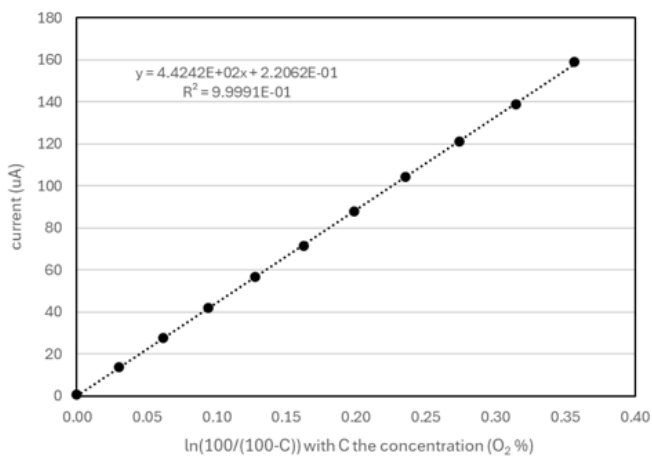


Figure 2 shows the initial temperature calibration valid for three months. Temperature coefficients may need adjustment during the sensor lifetime.

**Figure 3: Typical Linearity Curve**



The signal is linear for concentrations up to 30% O<sub>2</sub> as shown in Figure 3. Best fit is obtained using the function  $I = K \cdot \ln(100/(100-C))$ .