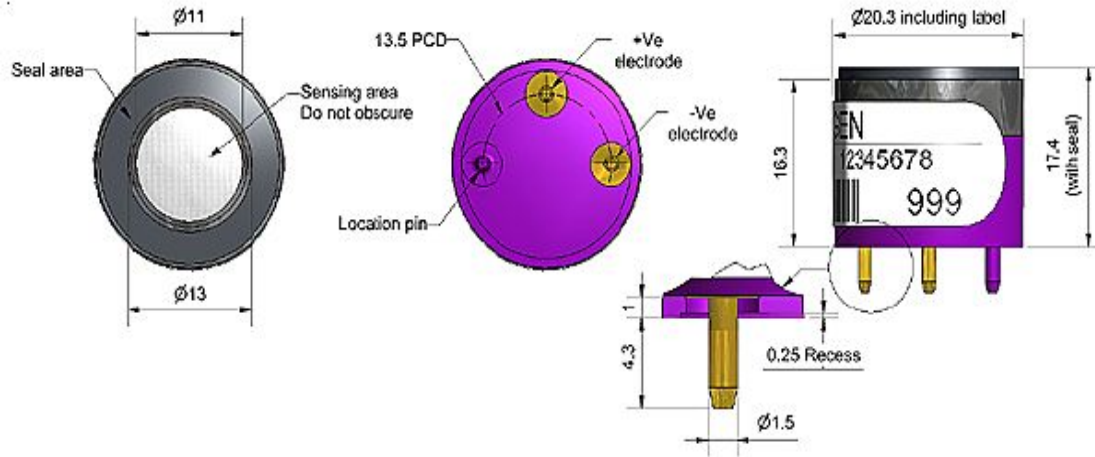


## O2-M2 Oxygen Sensor

Figure 1 Schematic Diagram of O2-M2



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

vertical view

upward view

lateral view

### function

output	Output( $\mu\text{A}$ ) <sub>in 20.9%O<sub>2</sub></sub>	80~120
reaction time	From 20.9% to 0%O <sub>2</sub> t <sub>90</sub> time (s)	< 15
zero current	Output ( $\mu\text{A}$ ) in N <sub>2</sub>	< 2.5
degree of linearity	10%O <sub>2</sub> deviation percentage of oxygen	0.6

### life span

Output drift	Change percentage over 3 months	< 1
working life	Output down to 20.9% Number of months <sub>o</sub> original output 85%	> 24

### environment

Humidity sensitivity	Percentage of oxygen variation: 0-95% RH, 40°C	< 0.7
CO <sub>2</sub> sensitivity	5% CO <sub>2</sub> , percentage change in oxygen reading/CO <sub>2</sub> concentration 20kPa, percentage change in output/pressure change percentage	0.1
Pressure sensitivity		< 0.1

### key parameter

temperature range	°C	-30~55
pressure limit	kPa	80~120
Humidity range	Continuous relative humidity percentage (0-99% RH in the short term)	5~95
Storage period	Number of months of preservation at 3~20°C (must be preserved in a sealed tank, open circuit)	6
load resistance	$\Omega$ ( recommend )	47~100
diameter	mm (including labels)	20.0
altitude	mm (including foam gasket)	17.4
weight	g	< 16

Figure 2. Temperature Characteristics of the Sensor Output

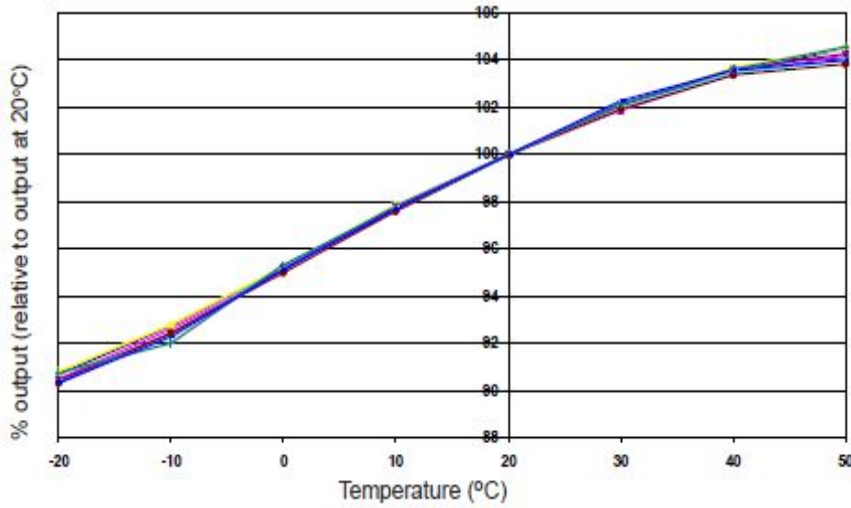


Figure 2 shows the change in sensor sensitivity caused by temperature changes.

Figure 3 Sensitivity at 50°C

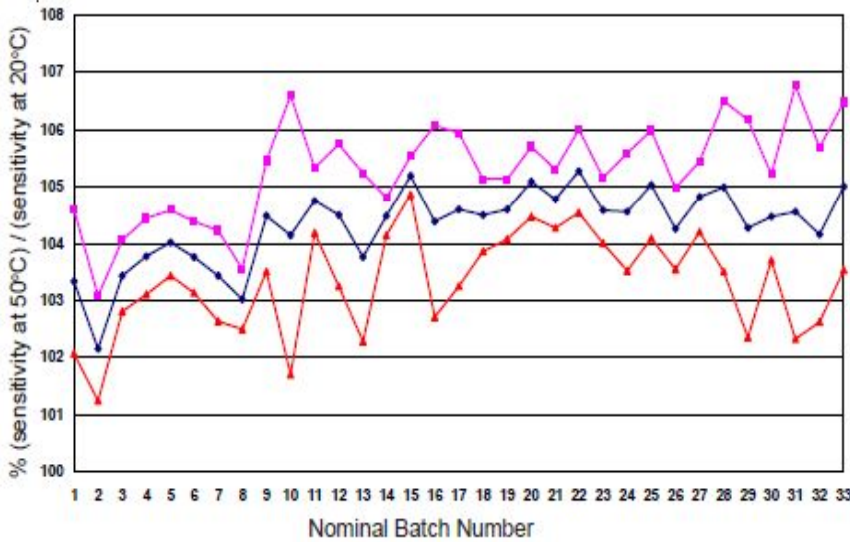
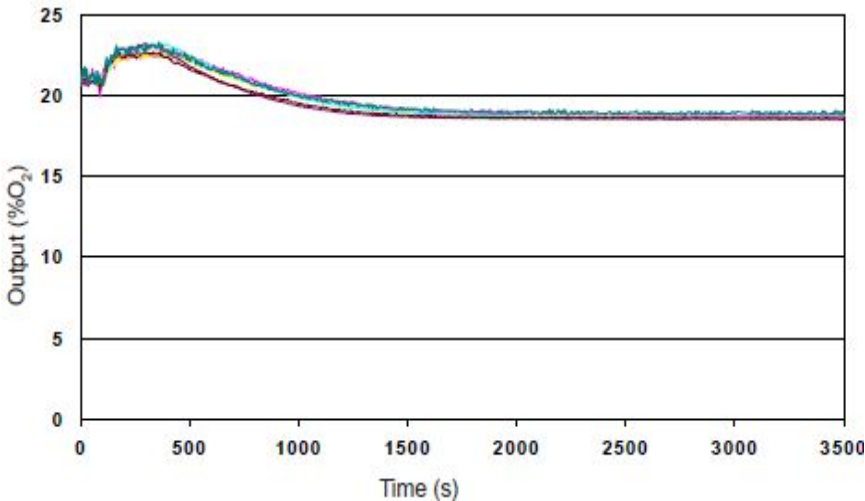


Figure 3 shows the average sensitivity value and  $\pm 95\%$  confidence interval of 34 batches of sensors, which shows the superior repeatability of sensitivity characteristics of each batch of sensors, which allows users to safely set temperature compensation in gas detectors.

FIG. 4 Thermal Transient Performance



The Alphasense oxygen gas sensor demonstrates superior product performance throughout its life cycle.

## 深圳市杰晟兴电子有限公司 JM Components Limited