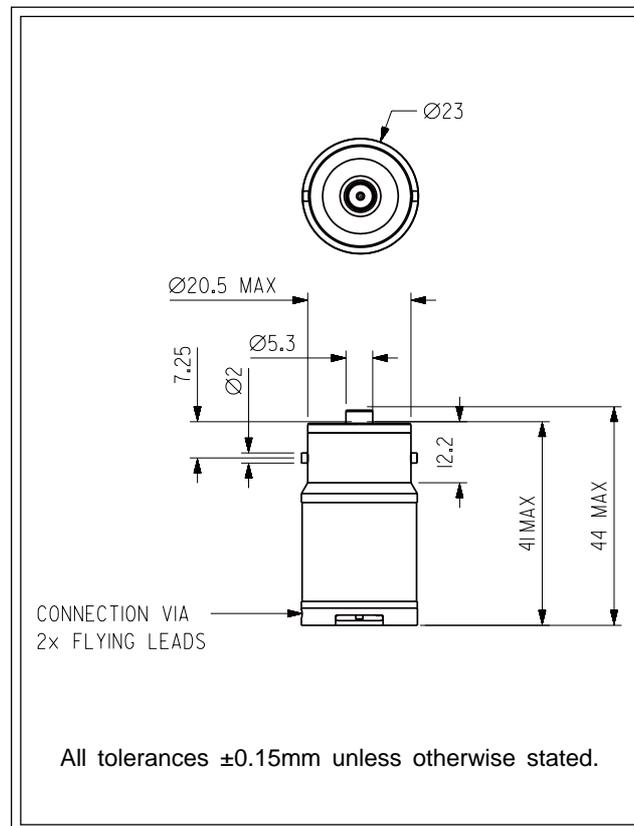




2FO-N Flue Gas CiTiceL®

Performance Characteristics

Nominal Range	0-25% Oxygen
Max Overload	30% Oxygen
Expected Operating Life	Two years in Air
Output Signal	0.41 ± 0.07mA in Air
T₉₅ Response Time	<10 seconds (see note)
Temperature Range	-20°C to +45°C
Temperature Coefficient	0.2% signal/°C
Pressure Range	Atmospheric ± 10%
Pressure Coefficient	<0.02% signal/mBar
Operating Humidity	0 to 99% RH non-condensing
Long Term Output Drift	<5% signal loss/year
Maximum Load Resistor	100Ω
Storage Life	Six months in CTL container
Recommended Storage Temperature	0-20°C
Warranty Period	12 months from date of despatch

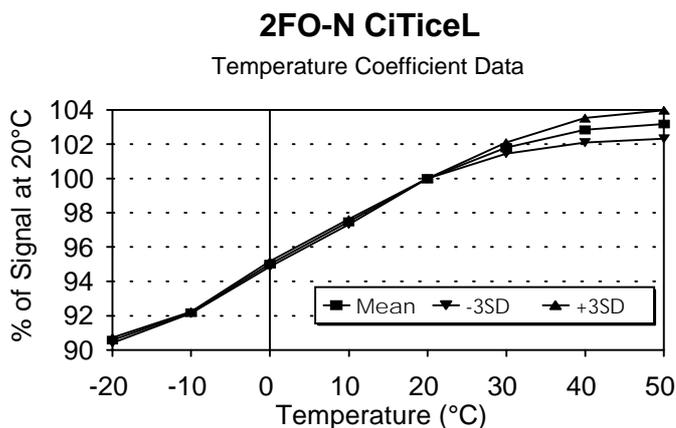


Note: Signal <0.1% O₂ after 3mins in zero oxygen
 N.B. All performance data is based on conditions at 20°C, 50%RH, and 1013mBar

Temperature Behaviour

The output of a 2FO-N CiTiceL varies slightly with gradual changes in temperature. The graph shows the behaviour of a batch of 20 sensors. Output was measured at a range of temperatures and expressed as a percentage of the signal at 20°C.

Statistically, for a sample of this size, the range in values observed will normally fall within a range three times the standard deviation above or below the mean. Assuming this sample is typical, then the temperature behaviour of all 2FO-N CiTiceLs will fall in the band +3SD to -3SD.



Linearity

The output signal of an Oxygen CiTiceL follows the relationship:

$$S = K \log_e 1/(1-C)$$

where:

- S** = Output signal;
- C** = Fractional oxygen concentration;
- K** = a constant for the sensor.

For most applications the deviation from a linear response will be insignificant, and no compensation needed. For example, the graph below shows the output of a sensor calibrated in air (20.9% O₂). In this case the maximum error in the 0-25% range is ≈0.5% at around 10% O₂.

