

Key Features and Benefits:

- False alarm immunity
- Enhanced response time in extreme applications
- Reliably meets stated life
- Superior environmental performance

Technical Specifications

MEASUREMENT

Technology	Electrochemical
Measurement Range	1-25% vol. O ₂
Maximum Overload	30% vol. O ₂
Output Signal	0.10 ± 0.02 mA in Air
Response Time (T90)	<15 Seconds
Zero Current (Offset)	<0.6% vol. O ₂
Linearity	Can be considered linear in many cases. See Operating Principles (OP-02) for further details.

ELECTRICAL

Recommended Load Resistor | 100 Ω

MECHANICAL

Casing Material	ABS
Weight	<16 g
Orientation Sensitivity	<0.2% vol. O ₂ equivalent

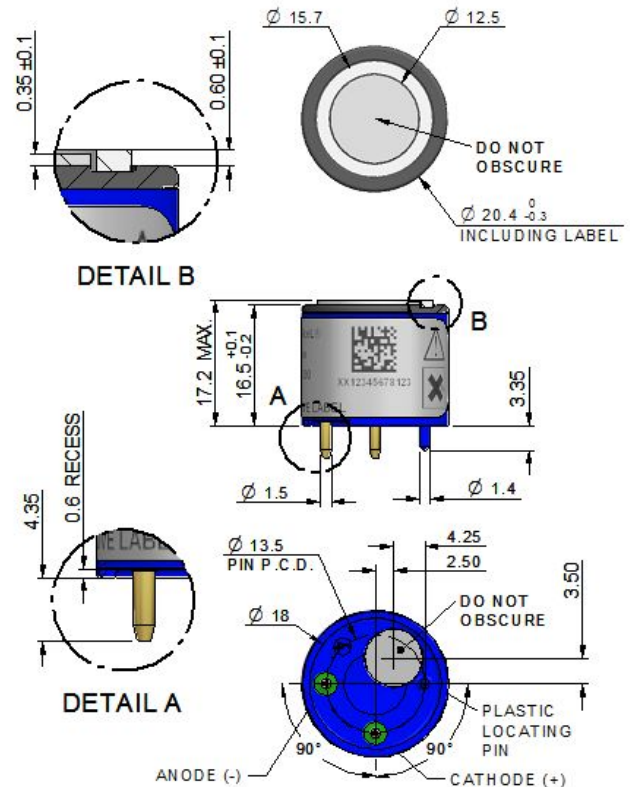
ENVIRONMENTAL

Operating Temperature Range	-20°C to +50°C (up to 3 months continuous across RH range)
Recommended Storage Temp	0°C to 20°C
Thermal Transient (Temp. plunge +22°C to -20°C)	<23.5% vol. O ₂
Operating Pressure Range	Atmospheric ± 20%
Pressure Coefficient	<0.02% signal/mbar
Pressure Transient (60 cm H ₂ O step change)	<200% signal change
Relative Humidity Range Continuous	(at 0°C to 20°C) 5 to 95%RH non-condensing
Short Term	0 to 99%RH non-condensing

LIFETIME

Long Term Output Drift	<2% signal/month Typically <5% over operating life
Expected Operating Life	Minimum 24 months in air
Storage Life	6 months in original packaging
Warranty Period	24 months from date of despatch

Product Dimensions



IMPORTANT NOTES

Obstruction of the vent hole will compromise performance, and must be avoided. Do not remove label.

Adequate free volume should be provided below the sensor to ensure full performance.

All tolerances ±0.15 mm unless otherwise stated. DO NOT solder to pins.

All performance data is based on conditions at 20°C, 50% RH and 1013 mbar.

Typical Applications

General purpose, portable or fixed life safety.

Poisons

CiTiceLs are designed for operation in a wide range of environments and harsh conditions. However it is important that exposure to high concentrations of solvent vapours is avoided, both during storage, fitting into instruments, and operation. When using sensors with printed circuit boards (PCBs), degreasing agents should be used before the sensor is fitted. Do not glue directly on or near the CiTiceL as the solvent may cause crazing of the plastic.

Cross Sensitivity Data

Toxic gases at TLV levels will have no cross-sensitivity effect on Oxygen CiTiceLs. At very high levels (i.e. percent levels), highly oxidising gases (e.g. ozone, chlorine) will interfere to the extent of their oxygen equivalent, but most other commonly occurring gases will have no effect.

Acid Gases

IMPORTANT NOTE: Acid gases such as CO₂ and SO₂ will be absorbed by the electrolyte and tend to increase the flux of oxygen to the electrode. This gives an enhanced oxygen signal of approximately 0.3% of signal per 1% CO₂. Oxygen CiTiceLs are not suitable for continuous operation in concentrations of CO₂ above 25%.

SAFETY NOTE

This sensor is designed to be used in safety critical applications. To ensure that the sensor and/or instrument in which it is used, are operating properly, it is a requirement that the function of the device is confirmed by exposure to target gas (bump check) before each use of the sensor and/or instrument. Failure to carry out such tests may jeopardize the safety of people and property.

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Performance characteristics on this data sheet outline the performance of newly supplied sensors. Output signal can drift below the lower limit over time.