

Product Data Sheet

Key Features and Benefits

- Long Life
- Improved field reliability
- Superior environmental performance
- Enhanced response time in extreme conditions

Technical Specifications

MEASUREMENT

Technology	Electrochemical
Measurement Range	0-25% vol. O ₂
Maximum Overload	30% vol. O ₂
Output Signal	80 - 130 μA in Air
T90 Response Time	<15 Seconds
T97 Response Time	<35 Seconds
Zero Current (Offset) (after 3 minutes N ₂)	<0.3% vol. O ₂
Warm-Up Time	Refer to Characterisation Note
Linearity	S = K log _e 1/ (1-C)

ELECTRICAL

Bias Voltage	-600 ± 10 mV
Power Rating at 20.9%O₂	0.5 mW

MECHANICAL

Casing Material	ABS / NORYL
Weight	14 ± 0.2 g
Orientation Sensitivity	<0.2%vol. O ₂ equivalent

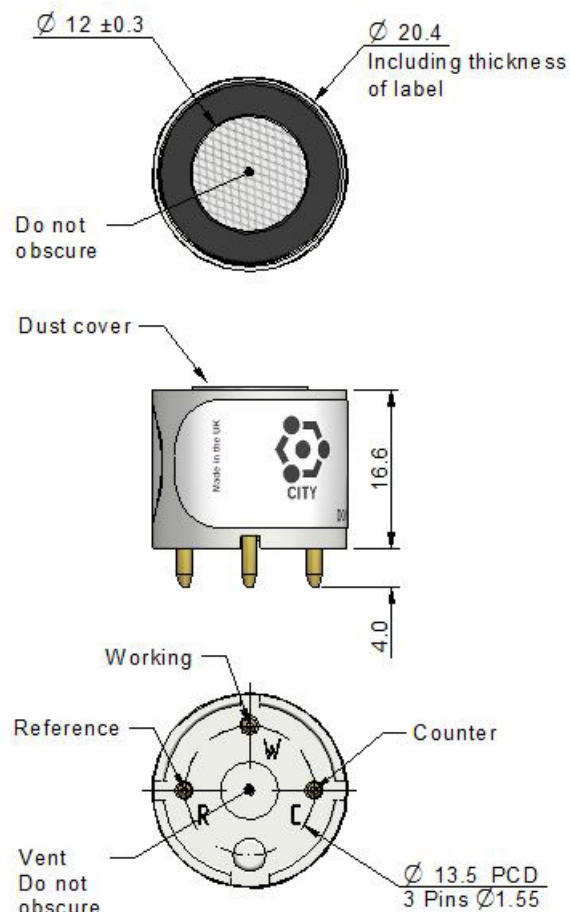
ENVIRONMENTAL

Operating Temperature Range	-40°C to 60°C
Recommended Storage Temp	0°C to 20°C in original packaging
Thermal Transient (Temp. plunge +22°C to -20°C)	<23.5% vol. O ₂
Operating Humidity Range	15%rH to 90%rH non-condensing
Operating Pressure Range	Atmospheric ± 20%
Pressure Coefficient	<0.02% signal/mbar
Pressure Transient (60 cm H ₂ O step change)	<150% signal change

LIFETIME

Long Term Output Drift	<5% signal loss over operating life
Expected Operating Life	7 years in air

Product Dimensions



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

IMPORTANT NOTES

Instrumentation incorporating 50xLL must be vented

Vent Cross Sectional Area = $3.608 \times 10^{-2} \times V$

Where V = Internal 'free' Instrument volume (ml)

(based on Gore L32224 membrane material used by City Technology)

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Typical Applications

General purpose, portable or fixed life safety and emissions.

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 will attack the plastic.

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.