Product Data Sheet DRAFT

Key Features & Benefits

- Industry leading reliability
- Improved performance variability

Technical Specifications

MEASUREMENT

Operating Principle	3-electrode electrochemical
Measurement Range	0-1000 ppm CO
Maximum Overload	2000 ppm CO
Filter	To remove acid gases and hydrocarbons
Sensitivity*	0.07 ± 0.015 µA/ppm
Response Time (T_{90})*	< 20 Seconds
Baseline Offset (clean air)*	< ±2 ppm equivalent
Zero Shift (-40°C to +50°C)*	<+12 ppm equivalent
Repeatability *	< ±3%
Linearity*	Within ±5%

ELECTRICAL

Recommended Load Resistor	5 Ω
Bias Voltage	Not required

MECHANICAL

Housing Material	Noryl 110
Weight	5 g (nominal)
Orientation	Any

ENVIRONMENTAL

Typical Applications	Portable life safety
Operating Temperature Range:	
Continuous	-20°C to +40°C
Intermittent	-40°C to +55°C
Operating Pressure Range	1 atm ± 10%
Operating Humidity Range:	
Continuous	15% to 90% RH non-condensing

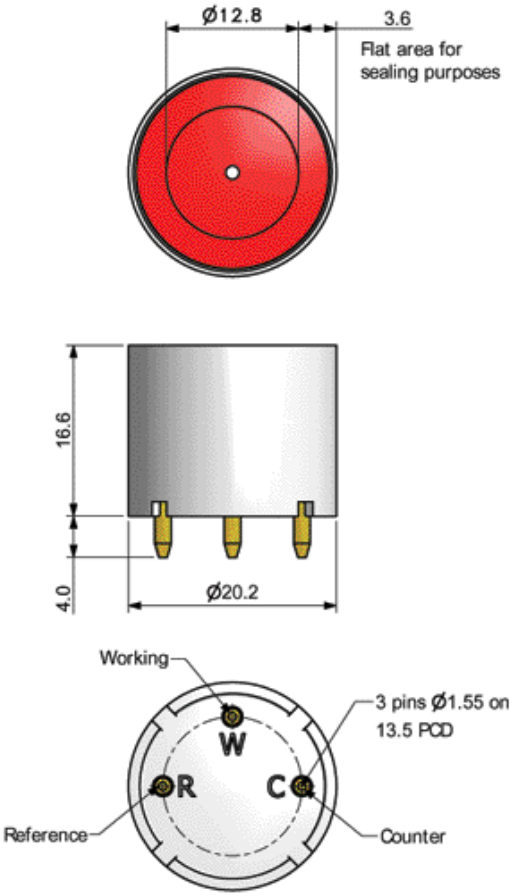
INTRINSIC SAFETY DATA

Maximum at 2000 ppm	0.2 mA
Maximum o/c Voltage	1.3 V
Maximum s/c Current	<1.0 A

LIFETIME

Long Term Output Drift*	< 5% per annum
Recommended Storage Temp	10°C to +30°C
Expected Operating Life	2 years in air
Storage Life	6 months in original packaging
Standard Warranty	18 months from date of despatch

Product Dimensions



All dimensions in mm
All tolerances ±0.15mm
unless otherwise stated

IMPORTANT NOTE: All performance data is based on conditions at 20°C, 50%RH and 1 atm, using City Technology recommended circuitry.

Sensor performance is temperature dependant. For sensor performance at temperatures other than 20°C, please contact City Technology.

*** Specifications are valid at 20°C, 50% RH and 1013 mBar, using City Technology recommended circuitry. Performance characteristics outline the performance of sensors supplied within the first 3 months. Output signal can drift below the lower limit over time.**

Poisoning

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 Table

Whilst CiTiceLs are designed to be highly specific to the gas they are intended to measure, they will still respond to some degree to various other gases. The table below is not exclusive and other gases not included in the table may still cause a sensor to react.

IMPORTANT NOTE : The cross sensitivity data shown below does not form part of the product specification and is supplied for guidance only. Values quoted are based on tests conducted on a small number of sensors and any batch may show significant variation. For the most accurate measurements, an instrument should be calibrated using the gas under investigation.

Gas	Concentration Used (ppm)	Reading (ppm CO)
Carbon Monoxide	50	50
Hydrogen Sulfide	20	<5
Sulphur Dioxide	20	<5
Nitrogen Dioxide	20	-5 ≤ X$ ≤ 0
Nitric Oxide	50	<25
Chlorine	0.5	0
Hydrogen	200	~25
Ethylene	100	100
Carbon Dioxide	5000	0
Ammonia	50	0
Methanol	200	0

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.