Carbon Monoxide CiTiceL® Specification

2CF-SP CiTiceL®

## Performance Characteristics

Nominal Range	0-500ppm
Maximum Overload	1000ppm
Expected Operating Life	Two years in air
Output Signal	50±20nA/ppm
Inboard Filter	To remove SO_2 and H_2S
Resolution	1ppm
Temperature Range	-20°C to +50°C
Pressure Range	Atmospheric ± 10%
T_{90} Response Time	≤17 seconds
Relative Humidity Range	15 to 90% non-condensing
Typical Baseline Range (pure air)	-1 to +3ppm equivalent
Maximum Zero Shift (+20°C to +40°C)	9ppm equivalent
Long Term Output Drift	<10% signal loss/year
Recommended Load Resistor	10 Ω
Bias Voltage	Not required
Repeatability	<3% of signal
Output Linearity	Linear

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

Physical Characteristics

Weight	Approx 5g
Position Sensitivity	None
Storage Life	Six months in CTL container
Recommended Storage Temperature	0-20°C
Warranty Period	12 months from date of despatch

All dimensions in mm
All tolerances ±0.15mm unless otherwise stated
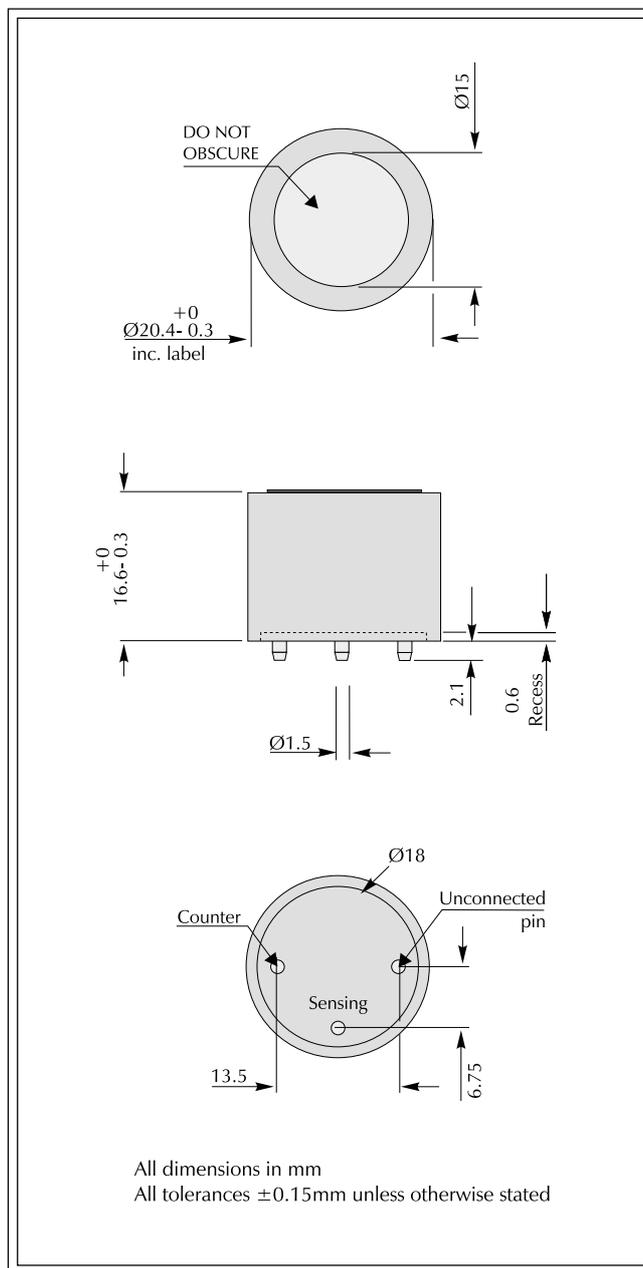
IMPORTANT NOTE: Connection should be made via PCB sockets only. Soldering to the pins will seriously damage your sensor.

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Temperature Dependence

The output of a CiTiceL can vary with temperature. The graph here shows the variation in output with temperature for 2CF-SP CiTiceLs based on a sample of about 16 sensors. The results are shown in the graph as a mean for the batch, and expressed as a percentage of the signal at 20°C.

From a statistical viewpoint, for a sample of this size, the range in values observed for all sensors of this type will fall within a range three times the standard deviation above or below the mean. Assuming therefore this sample is typical, then the temperature behaviour of all 2CF-SP CiTiceLs will fall in the band +3SD to -3SD.

2CF-SP CiTiceL
Temperature Coefficient Data
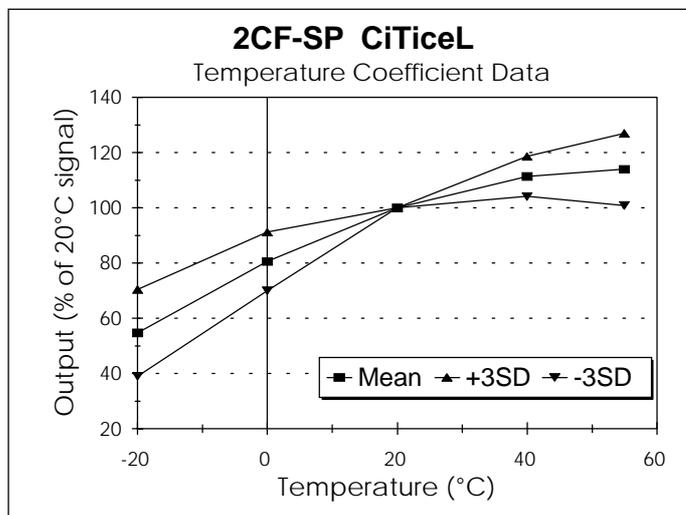
Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. 2CF-SP CiTiceLs have been tested with a number of commonly cross-interfering gases and the results are given below. The table shows the typical response to be expected from a sensor when exposed to a given test gas concentration (relevant to safety, e.g. TLV levels).

Gas	**Conc**	**2CF-SP**
Hydrogen Sulphide	15ppm	-0.5ppm < x$ < +0.5ppm
Sulphur Dioxide	5ppm	0ppm
Nitrogen Dioxide	5ppm	<0.5ppm
Hydrogen	100ppm	-5ppm < x$ < +5ppm
Nitric Oxide	35ppm	12ppm
Ethylene	100ppm	60ppm
		For details of other possible cross-interfering gases contact City Technology.

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