

## Carbon Monoxide CiTiceL<sup>®</sup> Specification



# 2CF-SP CiTiceL<sup>®</sup>

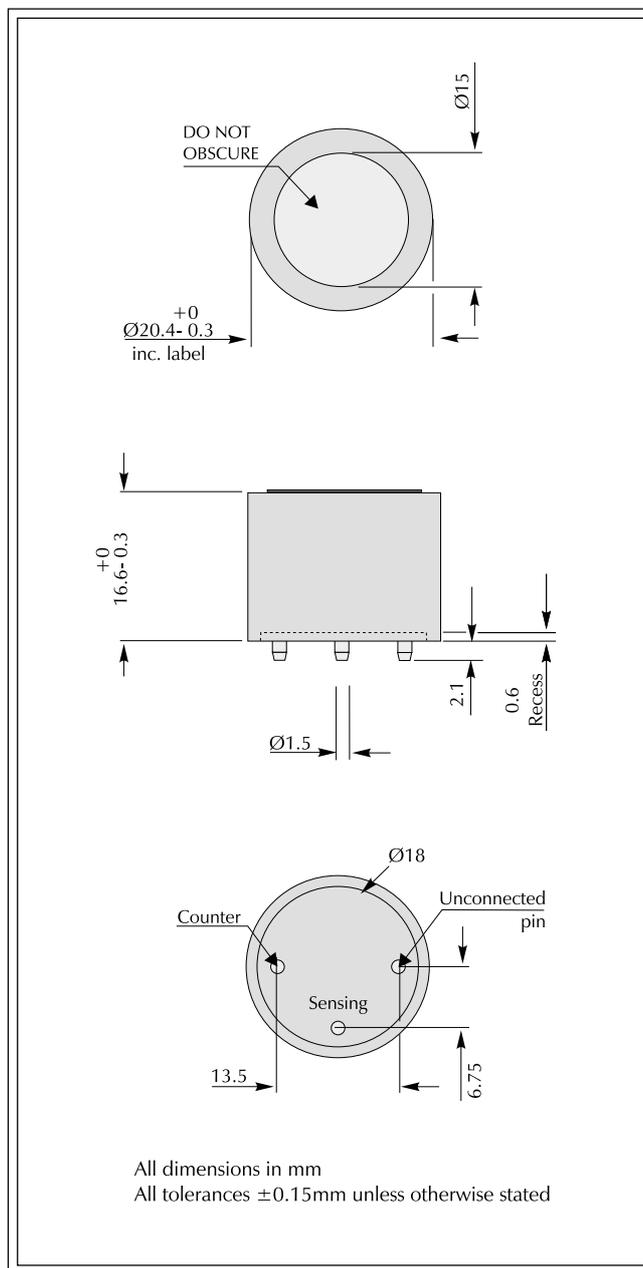
### Performance Characteristics

<b>Nominal Range</b>	0-500ppm
<b>Maximum Overload</b>	1000ppm
<b>Expected Operating Life</b>	Two years in air
<b>Output Signal</b>	50±20nA/ppm
<b>Inboard Filter</b>	To remove SO <sub>2</sub> and H <sub>2</sub> S
<b>Resolution</b>	1ppm
<b>Temperature Range</b>	-20°C to +50°C
<b>Pressure Range</b>	Atmospheric ± 10%
<b>T<sub>90</sub> Response Time</b>	≤17 seconds
<b>Relative Humidity Range</b>	15 to 90% non-condensing
<b>Typical Baseline Range (pure air)</b>	-1 to +3ppm equivalent
<b>Maximum Zero Shift (+20°C to +40°C)</b>	9ppm equivalent
<b>Long Term Output Drift</b>	<10% signal loss/year
<b>Recommended Load Resistor</b>	10 Ω
<b>Bias Voltage</b>	Not required
<b>Repeatability</b>	<3% of signal
<b>Output Linearity</b>	Linear

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

### Physical Characteristics

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



**IMPORTANT NOTE:** Connection should be made via PCB sockets only. Soldering to the pins will seriously damage your sensor.

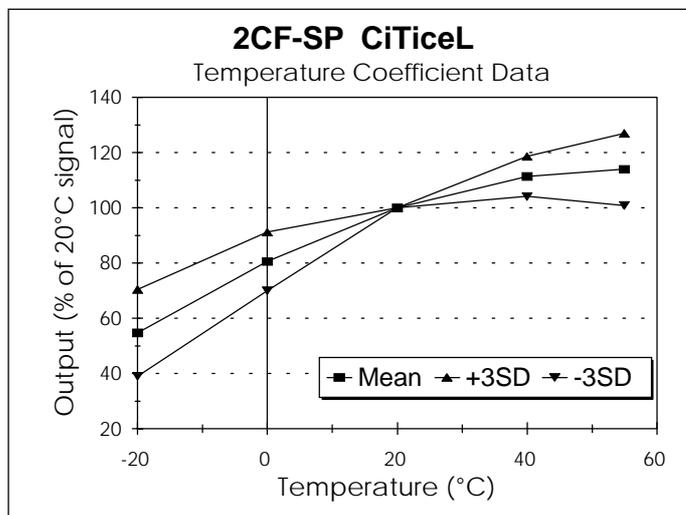
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### Temperature Dependence

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.



### 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).

<u>Gas</u>	<u>Conc</u>	<u>2CF-SP</u>
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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Performance characteristics on this data sheet outline the performance of newly supplied sensors. Output signal can drift below the lower limit over time.