



## 2CF CiTiceL<sup>®</sup>

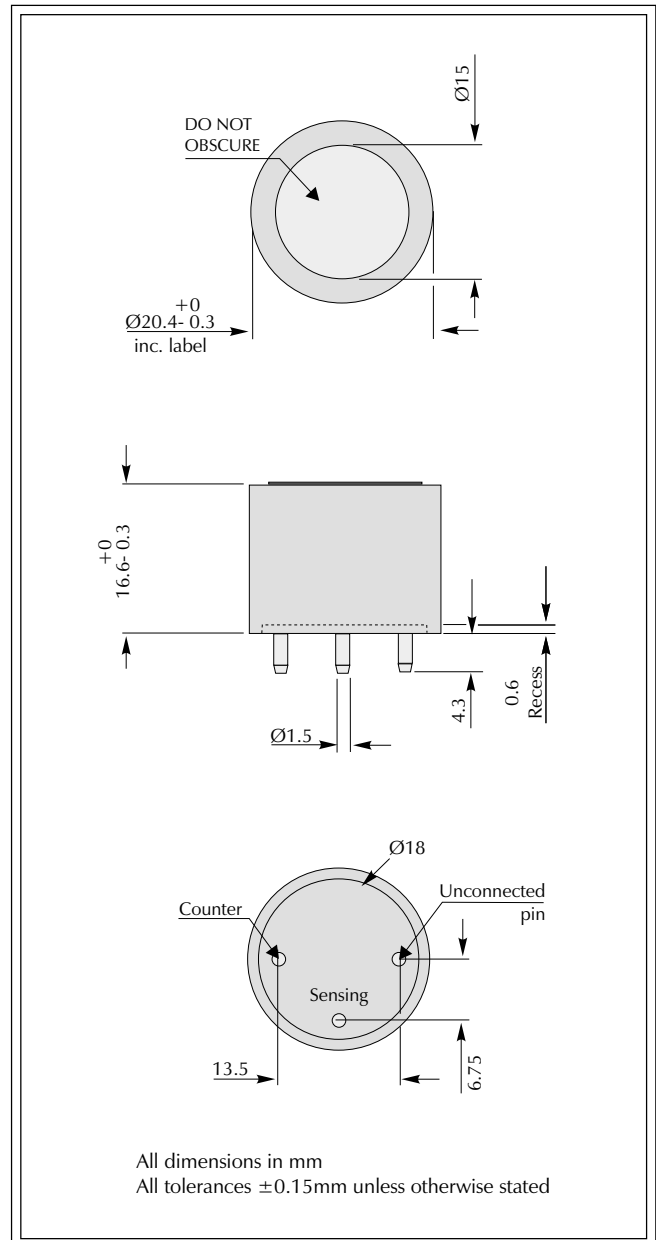
### Performance Characteristics

<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



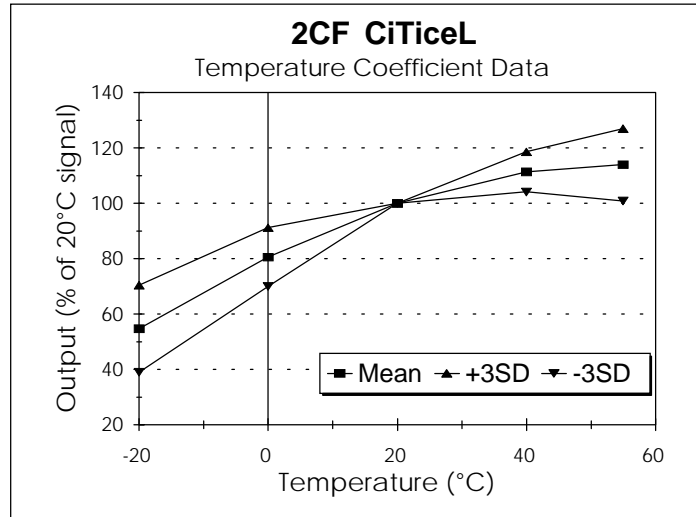
**IMPORTANT NOTE:** Connection should be made via PCB sockets only. Soldering to the pins will seriously damage your sensor.



## Temperature Dependence

The output of a CiTiceL can vary with temperature. The graph here shows the variation in output with temperature for 2CF 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 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 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</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.\*\*

Every effort has been made to ensure the accuracy of this document at the time of printing. In accordance with the company's policy of continued product improvement City Technology Limited reserves the right to make product changes without notice. No liability is accepted for any consequential losses, injury or damage resulting from the use of this document or from any omissions or errors herein. The data is given for guidance only. It does not constitute a specification or an offer for sale. The products are always subject to a programme of improvement and testing which may result in some changes in the characteristics quoted. As the products may be used by the client in circumstances beyond the knowledge and control of City Technology Limited, we cannot give any warranty as to the relevance of these particulars to an application. It is the clients' responsibility to carry out the necessary tests to determine the usefulness of the products and to ensure their safety of operation in a particular application.

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