



## 7ST/F CiTiceL<sup>®</sup>

### Performance Characteristics

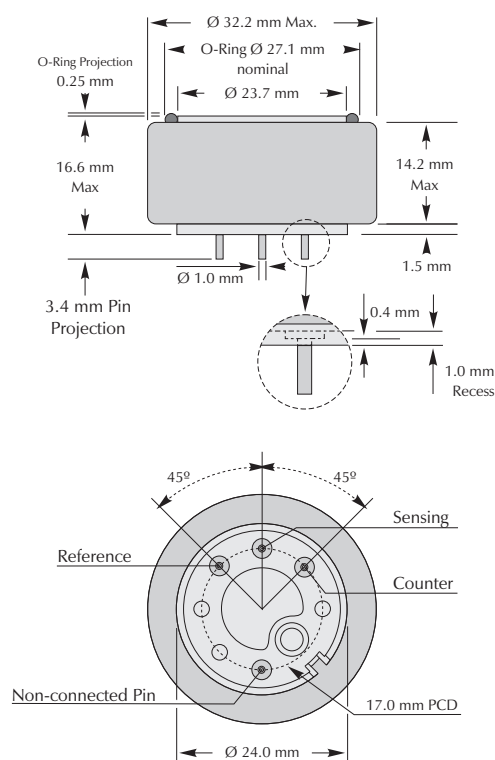
<b>Nominal Range</b>	0-100 ppm
<b>Maximum Overload</b>	500 ppm
<b>Inboard Filter</b>	To remove H <sub>2</sub> S
<b>Expected Operating Life</b>	Two years in air
<b>Output Signal</b>	0.37 ± 0.07 µA/ppm
<b>Resolution</b>	0.5 ppm
<b>Temperature Range</b>	-20°C to +50°C
<b>Pressure Range</b>	Atmospheric ± 10%
<b>Pressure Coefficient</b>	0.015 % signal/mBar
<b>T<sub>90</sub> Response Time</b>	≤20 seconds
<b>Relative Humidity Range</b>	15 to 90% non-condensing
<b>Typical Baseline Range (pure air)</b>	-0.25 to +0.5 ppm equiv.
<b>Maximum Zero Shift (+20°C to +40°C)</b>	1 ppm equivalent
<b>Long Term Output Drift</b>	<2% signal loss/month
<b>Recommended Load Resistor</b>	10 Ω
<b>Bias Voltage</b>	Not required
<b>Repeatability</b>	1% of signal
<b>Output Linearity</b>	Linear

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

### Physical Characteristics

<b>Weight</b>	17 g
<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 month from date of despatch

### Outline Dimensions

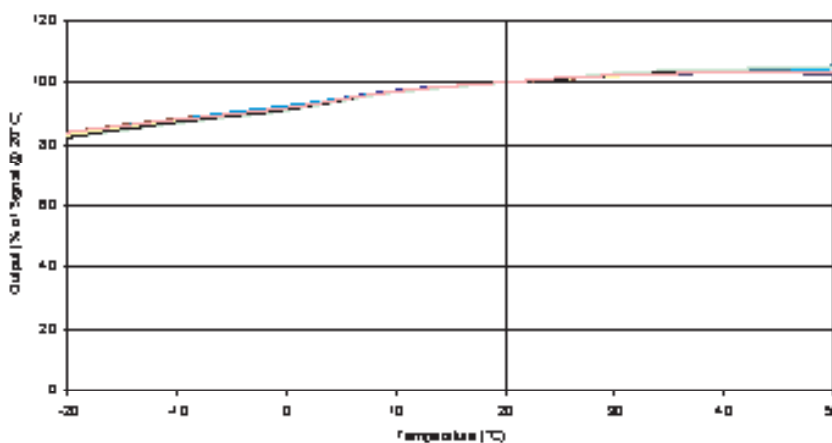


All tolerances ±0.15 mm unless otherwise stated.  
Do not solder to pin connections

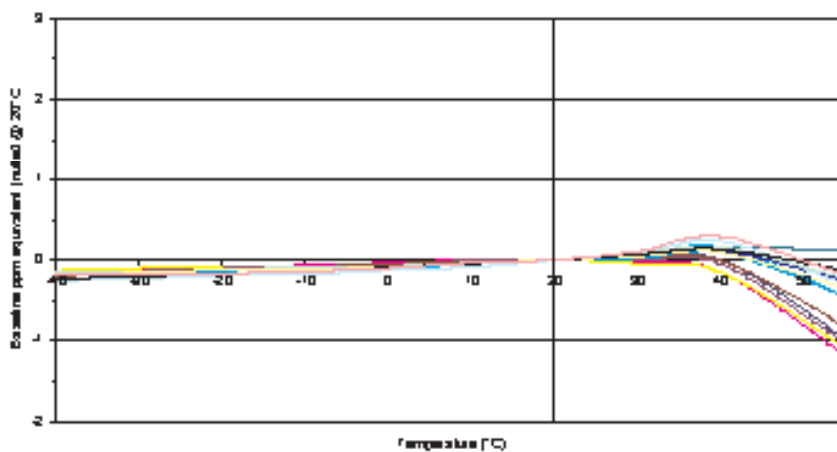
**IMPORTANT NOTE:** Connection should be made via PCB sockets only. Soldering to the pins will render your warranty void.



7 ST/F Sulphur dioxide - Output vs Temperature



7 ST/F Sulphur dioxide CiTiceL - Baseline vs Temperature





### Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. 7ST/F 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.	7ST/F	Gas	Conc.	7ST/F
<b>Carbon monoxide:</b>	300ppm	<5ppm	<b>Hydrogen:</b>	100ppm	0ppm
<b>Hydrogen sulphide:</b>	15ppm	0ppm	<b>Hydrogen cyanide:</b>	10ppm	<5ppm
<b>Nitric oxide:</b>	35ppm	-7<x\$<0ppm	<b>Hydrogen chloride:</b>	5ppm	0ppm
<b>Nitrogen dioxide:</b>	5ppm	~5ppm	<b>Ethylene:</b>	100ppm	0ppm
<b>Chlorine:</b>	5ppm	-1.5<x\$<0ppm	**For details of other possible cross-interfering gases contact City Technology.**		

#### **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.