

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



# 9CF CiTiceL<sup>®</sup>

Two-electrode miniature CO sensor

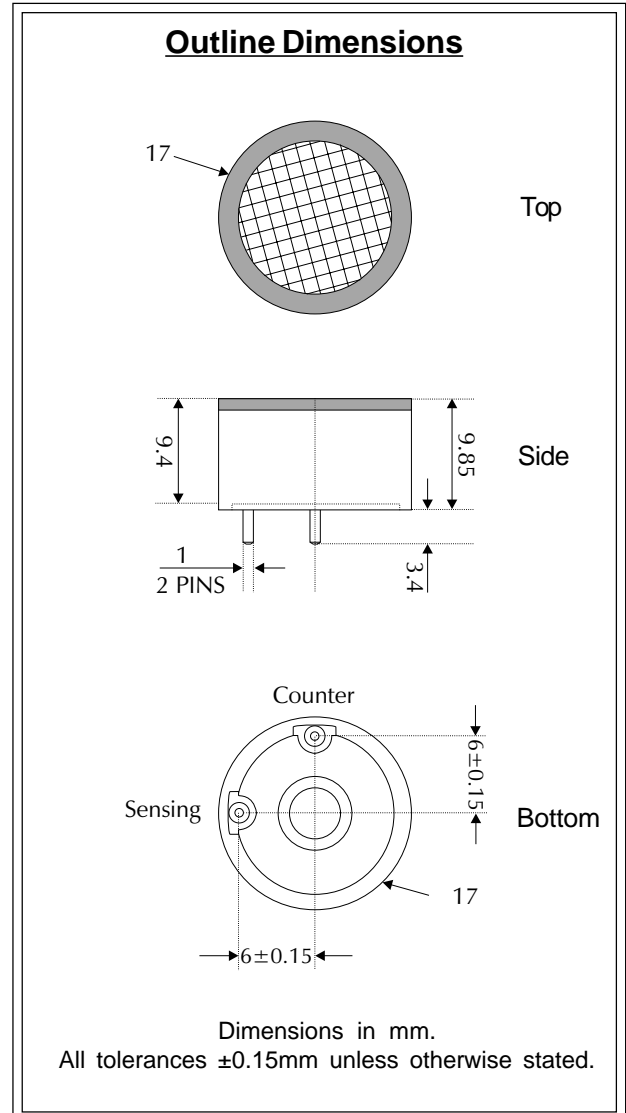
### Performance Characteristics

<b>Nominal Range</b>	0-50ppm
<b>Maximum Overload</b>	200ppm
<b>Expected Operating Life</b>	Three months in air
<b>Output Signal</b>	50±15nA/ppm
<b>Resolution</b>	±2ppm
<b>Temperature Range</b>	-5°C to +40°C
<b>Pressure Range</b>	Atmospheric±10%
<b>Pressure Coefficient</b>	≤0.02%signal/mBar
<b>T<sub>90</sub> Response Time</b>	≤45 seconds
<b>Relative Humidity Range</b>	20% to 90% non-condensing
<b>Typical Baseline Range (pure air)</b>	-2 to +6ppm equivalent
<b>Maximum Zero Shift (+20°C to +40°C)</b>	9ppm equivalent
<b>Long Term Output Drift</b>	<20% signal loss/3 months
<b>Recommended Load Resistor</b>	10Ω
<b>Bias Voltage</b>	Not required
<b>Repeatability</b>	10% 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 3g
<b>Position Sensitivity</b>	None
<b>Storage Life</b>	One month in CTL container
<b>Recommended Storage Temperature</b>	0-20°C
<b>Warranty Period</b>	4 months from date of despatch (This amounts to a variation of condition 6 of our standard terms and conditions of sale which otherwise apply)



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



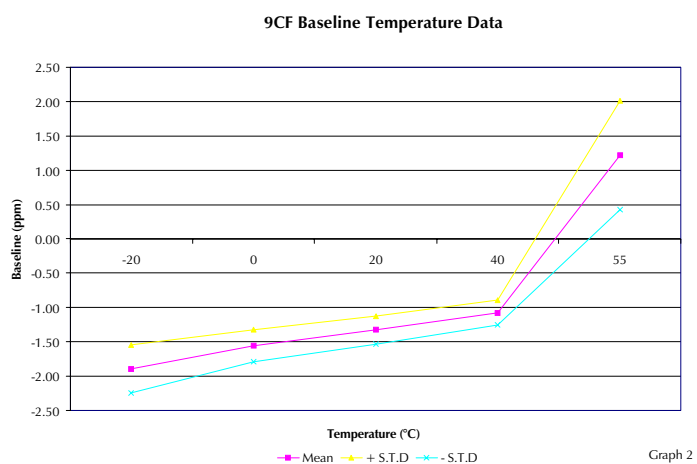
## Temperature Dependence

Both the span signal and the baseline (zero gas current) are affected by temperature.

### 9CF Baseline

The baseline signal follows an exponential relationship with temperature change. As a general guide, the baseline approximately doubles for every 10°C increase in temperature.

The graph here shows how the baseline varies with temperature for 9CF CiTiceLs based on a sample of sensors.

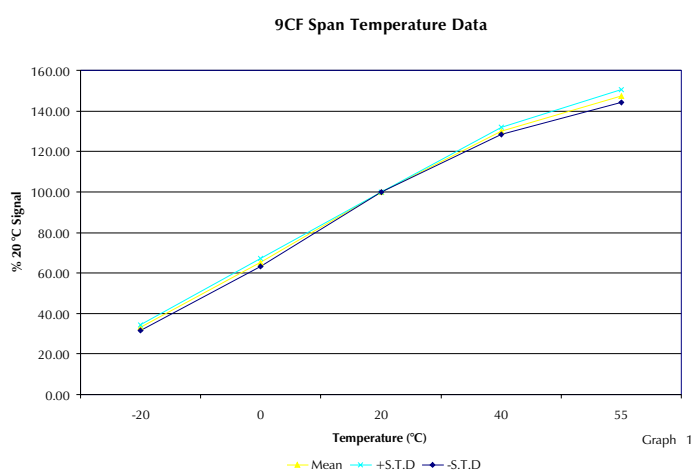


### 9CF Span

The output from a CiTiceL will vary only slightly with temperature.

The graph here shows the variation in output with temperature for 9CF CiTiceLs based on a sample of sensors.

The results are shown in the graph expressed as a percentage of the signal at 20°C.



## Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. 9CF 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).

<b>Gas</b>	<b>Conc.</b>	<b>9CF</b>
<b>Hydrogen sulphide:</b>	100ppm	<2ppm
<b>Sulphur dioxide:</b>	10ppm	<2ppm
**For details of other possible cross-interfering gases contact City		

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