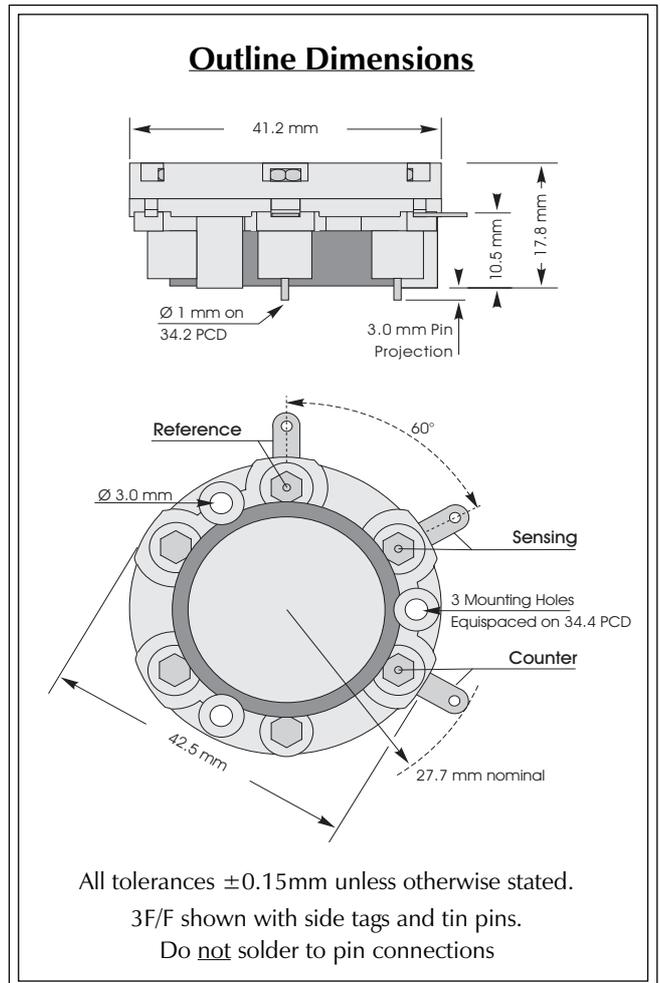


Carbon monoxide CiTiceL<sup>®</sup> Specification

## 3F/F CiTiceL

**Performance Characteristics**

<b>Nominal Range</b>	0-4000ppm
<b>Maximum Overload</b>	20 000ppm
<b>Inboard Filter</b>	To remove acid gases from flue stream.
<b>Expected Operating Life</b>	Three years in air
<b>Output Signal</b>	$0.030 \pm 0.006 \mu\text{A/ppm}$
<b>Resolution</b>	1ppm
<b>Temperature Range</b>	-20°C to +50°C
<b>Pressure Range</b>	Atmospheric $\pm 10\%$
<b>Pressure Coefficient</b>	$0.007 \pm 0.003 \%$ signal/mBar
<b>T<sub>90</sub> Response Time</b>	<30 seconds
<b>Relative Humidity Range</b>	15 to 90% non-condensing
<b>Typical Baseline Range (pure air)</b>	-3 to +10ppm equivalent
<b>Maximum Zero Shift (+20°C to +40°C)</b>	20ppm equivalent
<b>Long Term Output Drift</b>	<2% signal loss/month
<b>Recommended Load Resistor</b>	10Ω
<b>Bias Voltage</b>	Not required
<b>Repeatability</b>	1% of signal
<b>Output Linearity</b>	Linear

**Outline Dimensions**

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

**Physical Characteristics**

<b>Weight</b>	22g
<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

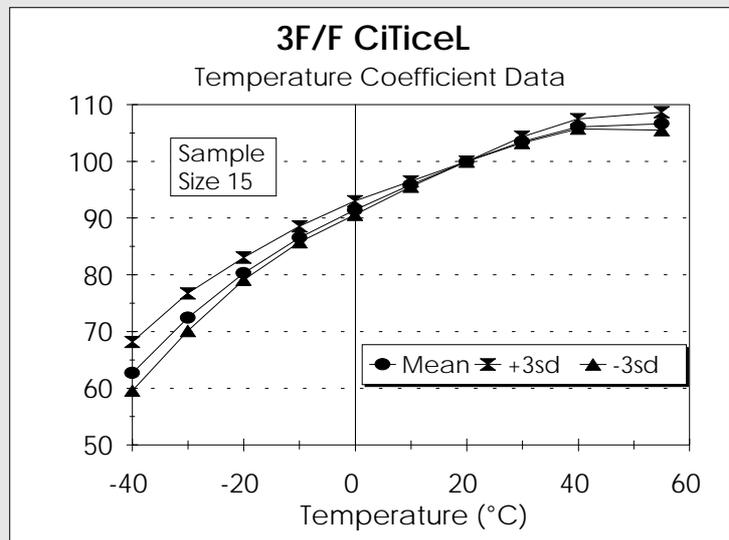
Doc. Ref.: 3FF.p65  
Issue 3.2 Aug 12, 1999



## Temperature Dependence

The output of a CiTiceL can vary with temperature. The graph here shows the variation in output with temperature for 3F/F CiTiceLs based on a sample of about 15 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 3F/F 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. The table below shows the typical response of 3F/F sensors to a number of common cross-interfering gases. The figures are expressed as a percentage of the primary sensitivity (i.e. carbon monoxide = 100%).

Gas	Response	Gas	Response
Hydrogen sulphide:	0	Hydrogen:	<60 <sup>1</sup>
Sulphur dioxide:	0	Hydrogen chloride:	0
Nitric oxide:	0	Ethylene:	<10
Nitrogen dioxide:	0		

\*\* For details of other possible cross-interfering gases contact City Technology.\*\*

<sup>1</sup>For applications where a hydrogen compensated output is required the A3E/D CiTiceL should be used

## Ordering Information

The 3F/F Carbon Monoxide CiTiceL is available with side tags, gold-plated PCB pins, or both PCB pins and side tags. To ensure the appropriate option is supplied care must be taken to provide the correct code when ordering.

**Type 3F/F:-** With side tag and PCB pin connections - **3F/F**  
 With side tag connection - **3F/F(S)**  
 With gold-plated PCB pin connection - **3F/F(G)**

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