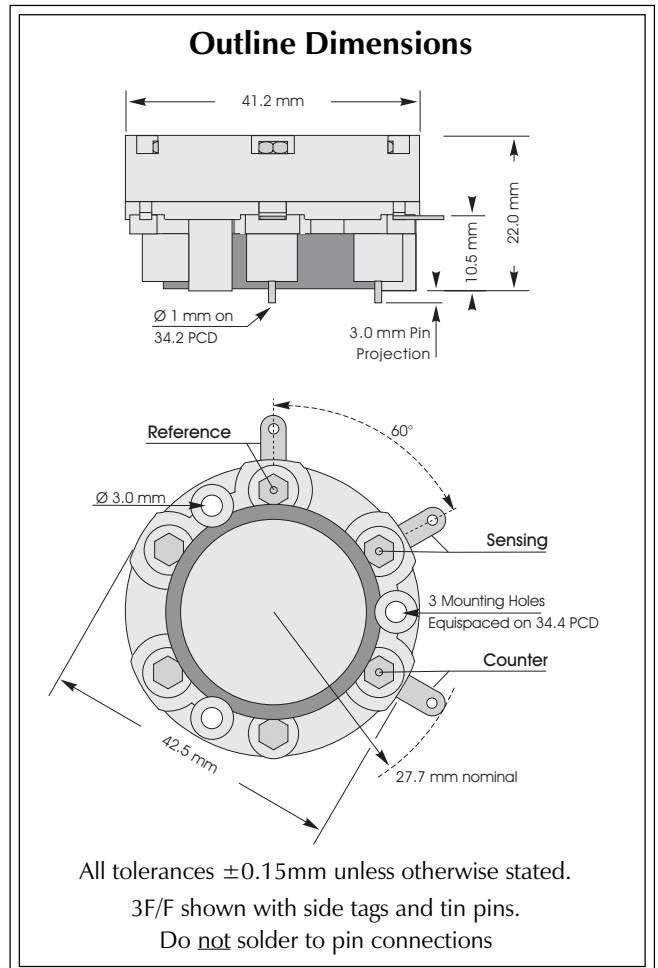




## 3F/D CiTiceL

### Performance Characteristics

<b>Nominal Range</b>	0-4000ppm
<b>Maximum Overload</b>	20 000ppm
<b>Inboard Filter</b>	'Double size' filter to remove acid gases from flue stream
<b>Expected Operating Life</b>	Three years in air
<b>Output Signal</b>	0.030 ± 0.006 µA/ppm
<b>Resolution</b>	1ppm
<b>Temperature Range</b>	-20°C to +50°C
<b>Pressure Range</b>	Atmospheric ± 10%
<b>Pressure Coefficient</b>	0.007 ± 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



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

### Physical Characteristics

<b>Weight</b>	29g
<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 desparh

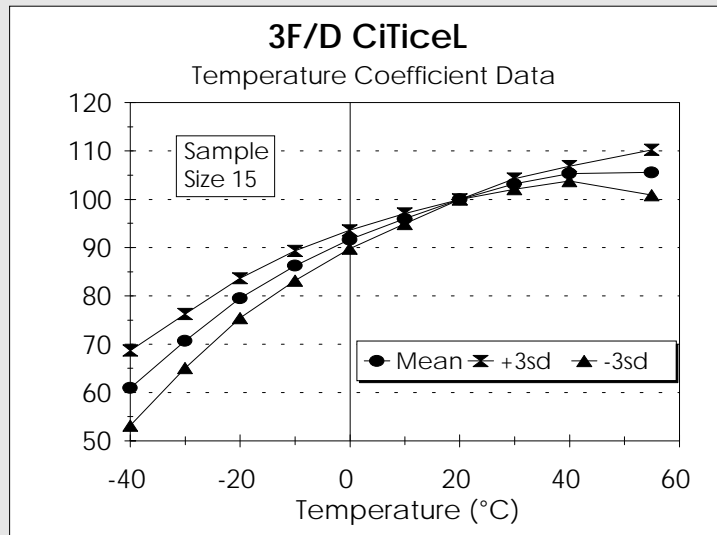
Doc. Ref.: 3FD.p65  
Issue 3.2 Aug 12, 1999



## Temperature Dependence

The output of a CiTiceL can vary with temperature. The graph here shows the variation in output with temperature for 3F/D 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 this sample is typical of the 3F/D, then the temperature behaviour of all 3F/D 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/D 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:	n/d
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

n/d: No data, under investigation

## Ordering Information

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

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.