

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



## A7E/F CiTiceL<sup>®</sup>

N.B. For emissions monitoring applications use the A3E/F CiTiceL

### Performance Characteristics

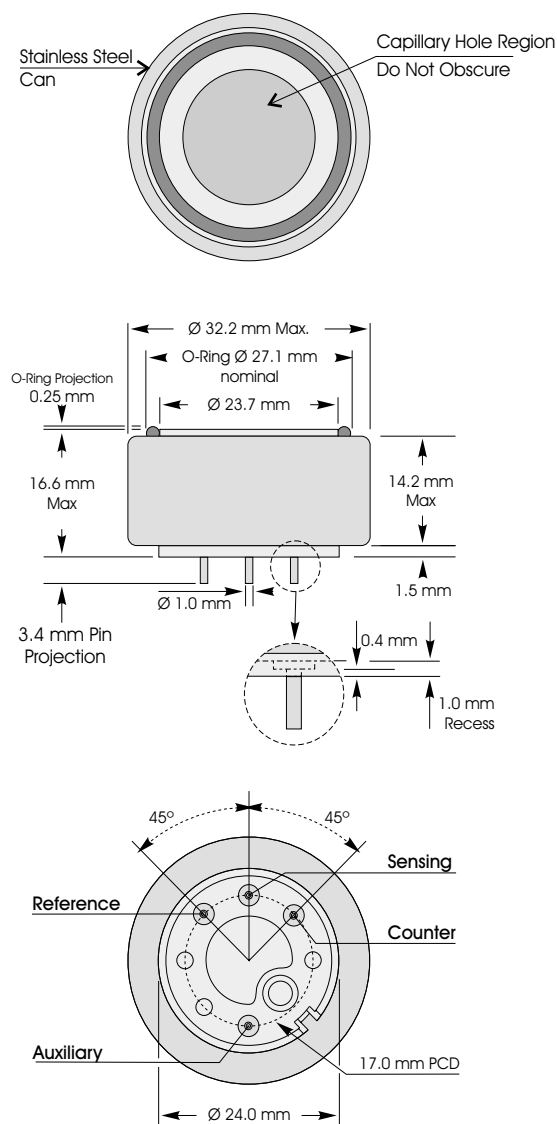
<b>Nominal Range</b>	0-1000ppm
<b>Maximum Overload</b>	2000ppm
<b>Inboard Filter</b>	To remove H <sub>2</sub> S
<b>Auxiliary Electrode</b>	To compensate for H <sub>2</sub> cross-interference
<b>Expected Operating Life</b>	Three years in air
<b>Output Signal</b>	0.1 ± 0.02 µA/ppm
<b>Resolution</b>	0.5ppm
<b>Temperature Range</b>	-20°C to +50°C
<b>Pressure Range</b>	Atmospheric ± 10%
<b>Pressure Coefficient</b>	0.02% signal/mBar
<b>T<sub>90</sub> Response Time</b>	≤35 seconds
<b>Relative Humidity Range</b>	15 to 90% non-condensing
<b>Typical Baseline Range (pure air)</b>	-2 to +15ppm equivalent
<b>Maximum Zero Shift (+20°C to +40°C)</b>	No data
<b>Long Term Output Drift</b>	<5% signal loss/year
<b>Recommended Load Resistor</b>	10 Ω
<b>Bias Voltage</b>	0 or +250mV
<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>	25g
<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

### Outline Dimensions



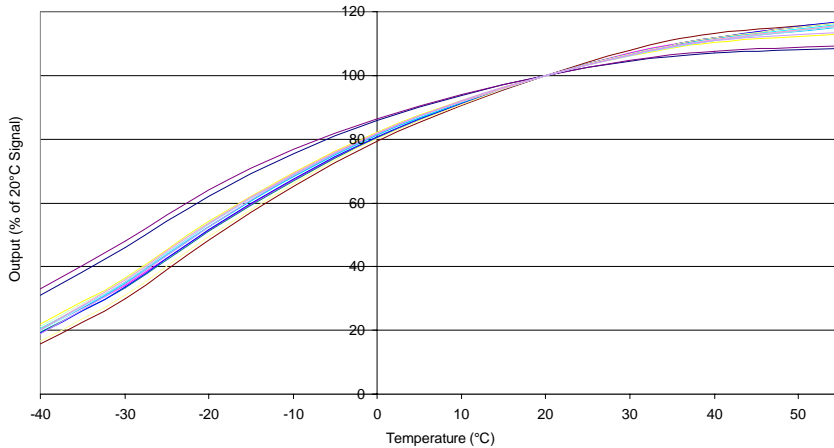
All tolerances ±0.15mm unless otherwise stated.

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

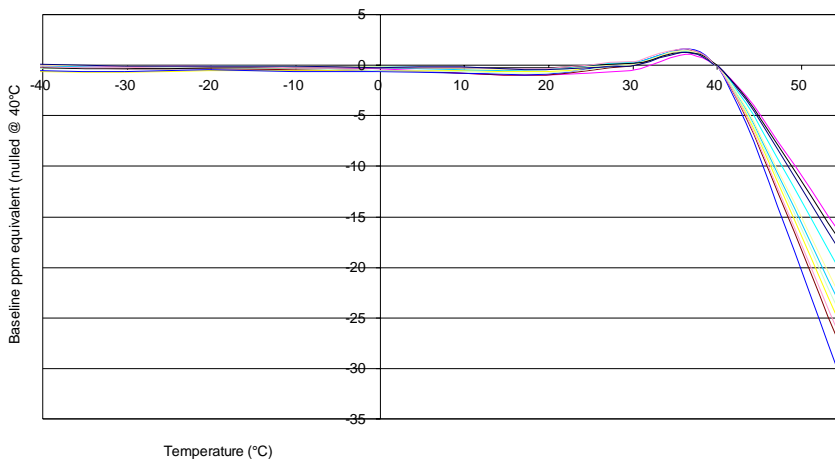
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**A7E/F Carbon monoxide CiTiceL - Output vs Temperature**



**A7E/F Carbon Monoxide CiTiceL Baseline vs Temperature**



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## Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. A7E/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).

<b>Gas</b>	<b>Conc.</b>	<b>A7E/F</b>	<b>Gas</b>	<b>Conc.</b>	<b>A7E/F</b>
<b>Hydrogen sulphide:</b>	15ppm	~1ppm	<b>Hydrogen:</b>	100ppm	0ppm
<b>Sulphur dioxide:</b>	5ppm	0ppm	<b>Hydrogen cyanide:</b>	10ppm	<2ppm
<b>Nitric oxide:</b>	35ppm	≤7ppm	<b>Hydrogen chloride:</b>	5ppm	0ppm
<b>Nitrogen dioxide:</b>	50ppm	-0.5<x\$<+1.0ppm	<b>Ethylene:</b>	100ppm	≤75ppm
<b>Chlorine:</b>	1ppm	0ppm			

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

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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.