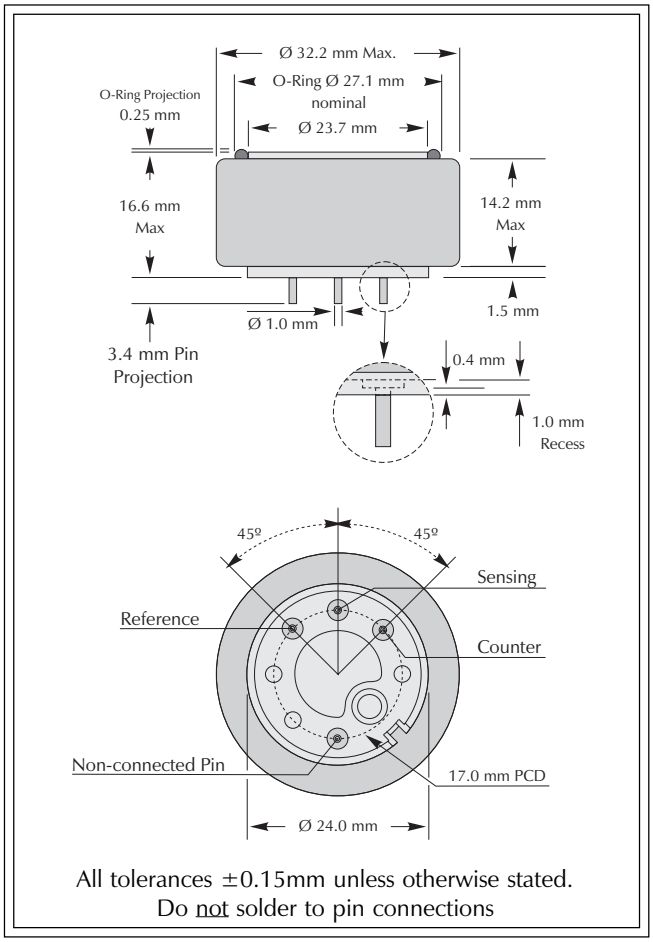
Carbon monoxide CiTiceL® Specification

7E & 7E/F CiTiceLs

Performance Characteristics

Nominal Range	0-1000ppm
Maximum Overload	2000ppm
Inboard Filter (7E/F only)	To remove SO_x/NO_x & H_2S
Expected Operating Life	Three years in air
Output Signal	0.10 ± 0.02 μA/ppm
Resolution	0.5ppm
Temperature Range	-20°C to +50°C
Pressure Range	Atmospheric ± 10%
Pressure Coefficient	0.020 ± 0.008 %signal/mBar
T_{90} Response Time	7E: ≤25 seconds 7E/F: ≤30 seconds
Relative Humidity Range	15 to 90% non-condensing
Typical Baseline Range (pure air)	-1 to +3ppm equivalent
Maximum Zero Shift (+20°C to +40°C)	9ppm equivalent
Long Term Output Drift	<5% signal loss/year
Recommended Load Resistor	10Ω
Bias Voltage	Not required
Repeatability	1% of signal
Output Linearity	Linear

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



All tolerances ±0.15mm 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.

Physical Characteristics

Weight	17g
Position Sensitivity	None
Storage Life	Six months in CTL container
Recommended Storage Temperature	0-20°C
Warranty Period	24 months from date of despatch (This amounts to a variation of condition 6 of our standard terms and conditions which otherwise apply)

Doc. Ref.: 7E_7EF.p65
Issue 3.5: Aug 10, 1999

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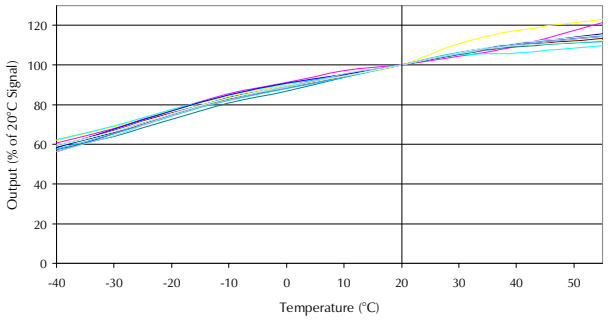
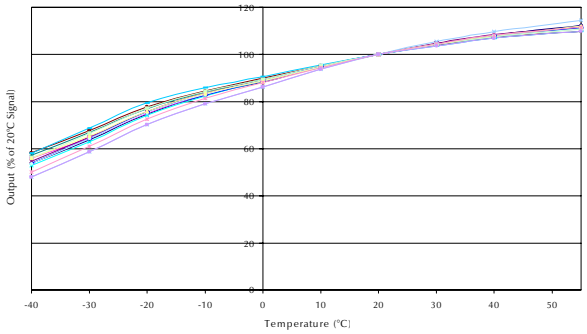
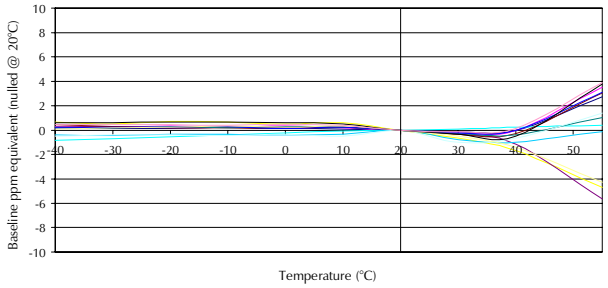
7E Carbon monoxide CiTiceL - Output vs Temperature



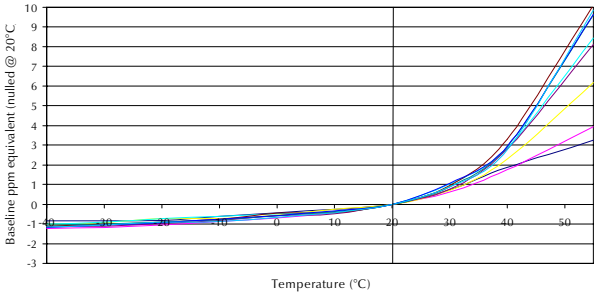
7E/F Carbon monoxide CiTiceL -Output vs Temperature



7E Carbon Monoxide CiTiceL - Baseline vs Temperature



7E/F Carbon Monoxide CiTiceL - Baseline vs Temperature



Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. 7E and 7E/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.	7E
Hydrogen sulphide:	15ppm	≈38ppm
Sulphur dioxide:	5ppm	≈3ppm
Nitric oxide:	35ppm	≈10ppm
Nitrogen dioxide:	5ppm	≈-3ppm
Chlorine:	1ppm	≈-0.5ppm
Hydrogen:	100ppm	<60ppm
Hydrogen cyanide:	10ppm	≈5ppm
Hydrogen chloride:	5ppm	0ppm
Ethylene:	100ppm	<100ppm

Gas	Conc.	7E/F
Hydrogen sulphide:	15ppm	<0.3ppm
Sulphur dioxide:	5ppm	0ppm
Nitric oxide:	35ppm	≤7ppm
Nitrogen dioxide:	5ppm	-1ppm ≤x$ ≤ 0ppm
Chlorine:	1ppm	0ppm
Hydrogen:	100ppm	<60ppm
Hydrogen cyanide:	10ppm	<2ppm
Hydrogen chloride:	5ppm	0ppm
Ethylene:	100ppm	≤100ppm
Ethanol:	200ppm	0ppm

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