

# Nitrogen dioxide CiTiceL<sup>®</sup> Specification



## 7NDH CiTiceL<sup>®</sup>

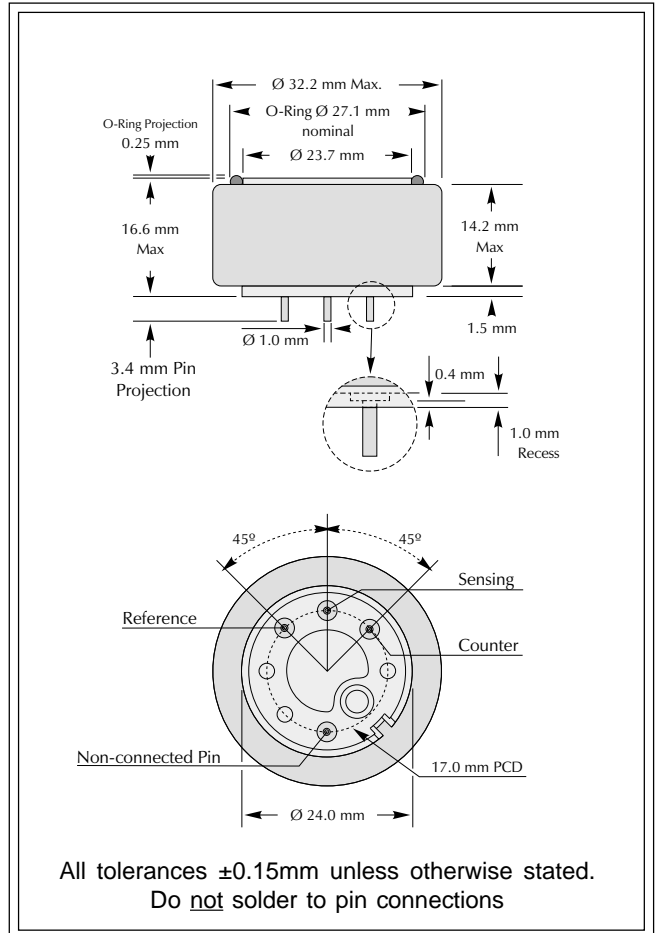
### Performance Characteristics

<b>Nominal Range</b>	0-20ppm
<b>Maximum Overload</b>	200ppm
<b>Expected Operating Life</b>	Two years in air
<b>Output Signal</b>	1.40 ± 0.30 µA/ppm
<b>Resolution</b>	0.1ppm
<b>Temperature Range</b>	-20°C to +50°C
<b>Pressure Range</b>	Atmospheric ± 10%
<b>Pressure Coefficient</b>	No data
<b>T<sub>90</sub> Response Time</b>	T <sub>90</sub> < 40 seconds
<b>Relative Humidity Range</b>	15 to 90% non-condensing
<b>Typical Baseline Range (pure air)</b>	-0.1 to 0.1ppm equivalent
<b>Maximum Zero Shift (+20°C to +40°C)</b>	0.2ppm equivalent
<b>Long Term Output Drift</b>	<2% signal loss/month
<b>Recommended Load Resistor</b>	33Ω
<b>Bias Voltage</b>	Not required
<b>Repeatability</b>	2% 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>	17g
<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

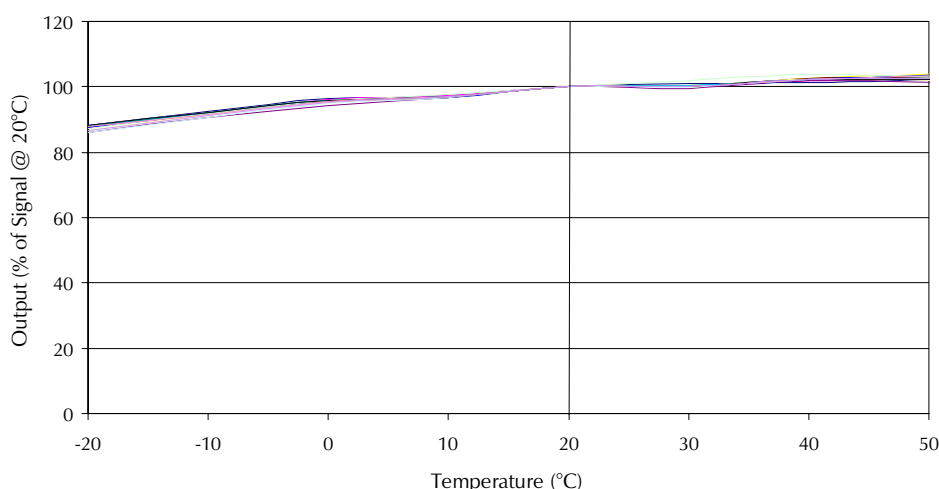


**IMPORTANT NOTE:** Connection should be made via PCB sockets only. Soldering to the pins will render your warranty void.

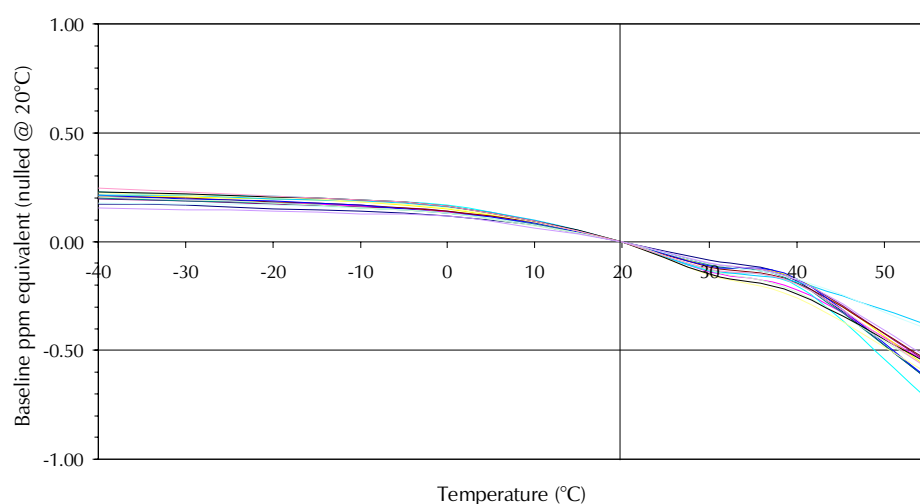
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7NDH Nitrogen dioxide CiTiceL - Output vs Temperature



7NDH Nitrogen dioxide 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. 7NDH 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).

<u>Gas</u>	<u>Conc.</u>	<u>7NDH</u>	<u>Gas</u>	<u>Conc.</u>	<u>7NDH</u>
<b>Carbon monoxide:</b>	300ppm	0ppm	<b>Hydrogen:</b>	100ppm	0ppm
<b>Hydrogen sulphide:</b>	15ppm	-1.5 ≤ x ≤ 0ppm	<b>Hydrogen cyanide:</b>	10ppm	0ppm
<b>Sulphur dioxide:</b>	5ppm	-0.05 ≤ x ≤ 0ppm	<b>Hydrogen chloride:</b>	5ppm	0ppm
<b>Nitric oxide:</b>	35ppm	0ppm	<b>Ethylene:</b>	100ppm	0ppm
<b>Chlorine:</b>	1ppm	≈1ppm	**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.