

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

## 4ND CiTiceL<sup>®</sup>

### Performance Characteristics

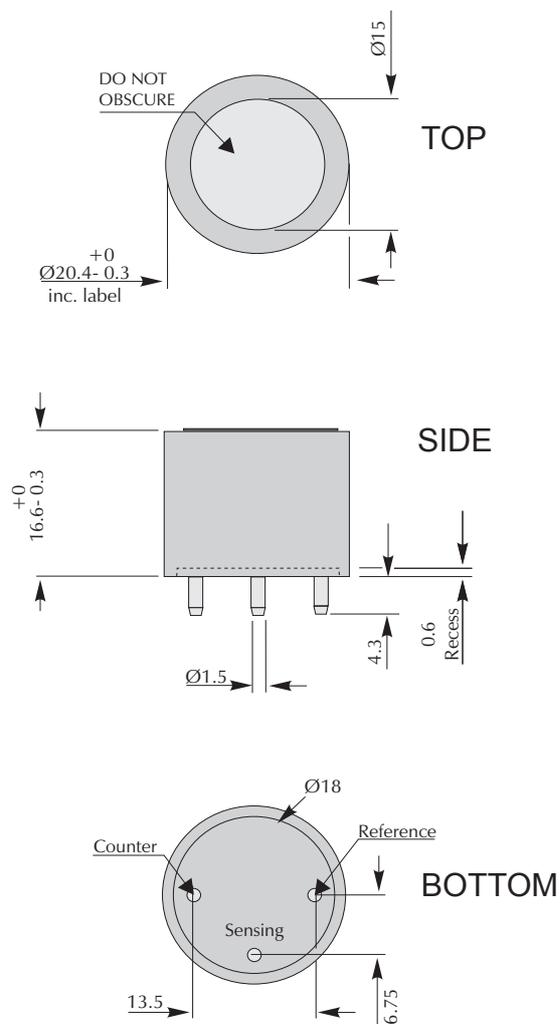
<b>Nominal Range</b>	0-20 ppm
<b>Maximum Overload</b>	150 ppm
<b>Expected Operating Life</b>	Two years in air
<b>Output Signal</b>	0.6 ± 0.15 µA/ppm
<b>Resolution</b>	0.1 ppm
<b>Temperature Range</b>	-20°C to +50°C
<b>Pressure Range</b>	Atmospheric ± 10%
<b>T<sub>90</sub> Response Time</b>	<25 seconds
<b>Relative Humidity Range</b>	15 to 90% non-condensing
<b>Typical Baseline Range (pure air)</b>	-0.2 to +0.2 ppm equivalent
<b>Maximum Zero Shift (+20°C to +40°C)</b>	0.2 ppm equivalent
<b>Long Term Output Drift</b>	<2% signal loss/month
<b>Recommended Load Resistor</b>	33 Ω
<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 1013 mBar

### Physical Characteristics

<b>Weight</b>	5 g (approx.)
<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

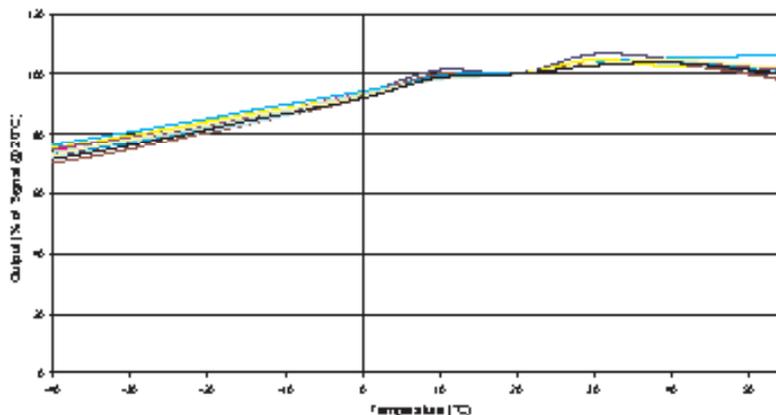


All dimensions in mm  
All tolerances ±0.15 mm unless otherwise stated

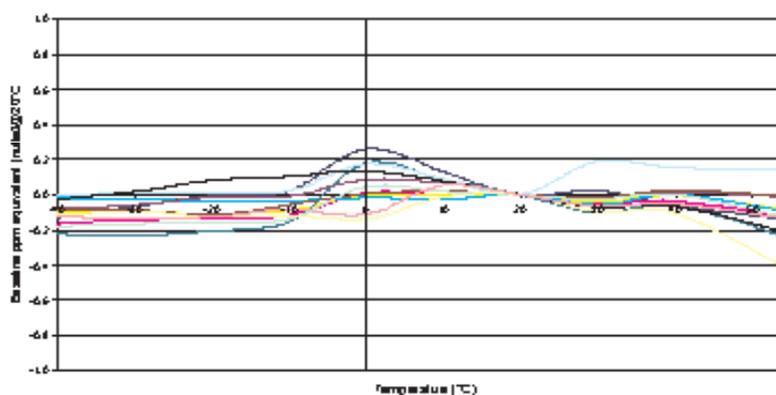
**IMPORTANT NOTE:** Connection should be made via PCB sockets only. Soldering to the pins will seriously damage your sensor.

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4ND Nitrogen Dioxide CiTiceL - Output vs Temperature



4ND Nitrogen Dioxide CiTiceL - Baseline vs Temperature



## Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. 4ND 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.	4ND	Gas	Conc.	4ND
Carbon monoxide:	300ppm	0ppm	Nitric oxide:	35ppm	0ppm
Hydrogen sulphide	15ppm	~-1.2ppm	Chlorine:	1ppm	~1ppm
Sulphur dioxide:	5ppm	0ppm			

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

### SAFETY NOTE

This sensor is designed to be used in safety critical applications. To ensure that the sensor and/or instrument in which it is used, are operating properly, it is a requirement that the function of the device is confirmed by exposure to target gas (bump check) before each use of the sensor and/or instrument. Failure to carry out such tests may jeopardize the safety of people and property.

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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.