



# 7HYE CiTiceL<sup>®</sup>

## Performance Characteristics

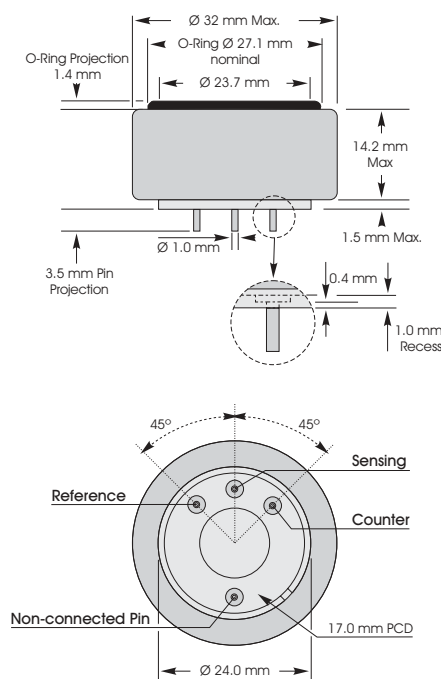
<b>Nominal Range</b>	0-10000ppm
<b>Maximum Overload</b>	20000ppm
<b>Expected Operating Life</b>	Two years in air
<b>Output Signal</b>	0.003 ± 0.001 µA/ppm
<b>Resolution</b>	10ppm
<b>Temperature Range</b>	-20°C to +50°C
<b>Pressure Range</b>	Atmospheric ± 10%
<b>Pressure Coefficient</b>	0.006 % signal/mBar
<b>T<sub>90</sub> Response Time</b>	<110 seconds
<b>Relative Humidity Range</b>	15 to 90% non-condensing
<b>Typical Baseline Range (pure air)</b>	+25 to -150ppm equivalent
<b>Maximum Zero Shift (+20°C to +40°C)</b>	-150ppm equivalent
<b>Long Term Output Drift</b>	<2% signal loss/month
<b>Recommended Load Resistor</b>	10 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 1013mBar

## Physical Characteristics

<b>Weight</b>	12g
<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



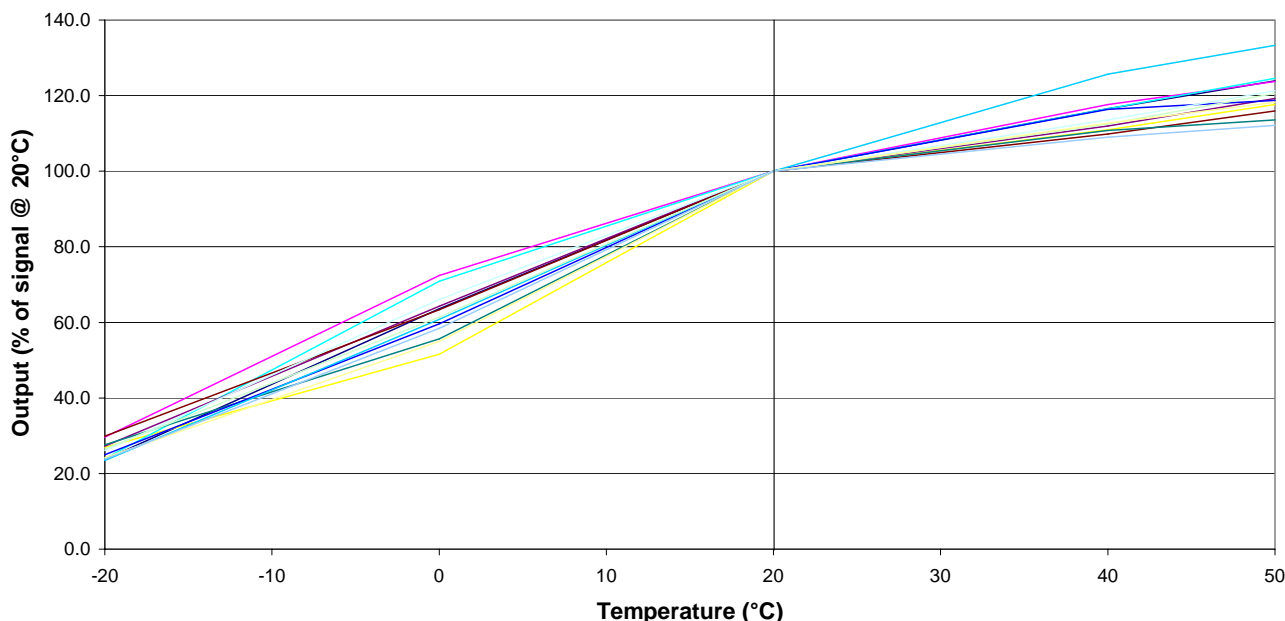
All tolerances ±0.15mm unless otherwise stated.  
Do not solder to pin connections

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



The data below has been measured via changing the temperature of the sensor and gas in an environmental chamber. When the sensor is held at room temperature and only the gas temperature changed the effect may be different.

## 7HYE Hydrogen CiTiceLs - Output vs Temperature



## Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. 7HYE 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>7HYE</u>	<u>Gas</u>	<u>Conc.</u>	<u>7HYE</u>
<b>Carbon monoxide:</b>	300ppm	<120ppm	<b>Chlorine:</b>	1ppm	0ppm
<b>Hydrogen sulphide:</b>	15ppm	≈10ppm	<b>Hydrogen cyanide:</b>	10ppm	≈10ppm
<b>Sulphur dioxide:</b>	5ppm	0ppm	<b>Hydrogen chloride:</b>	5ppm	0ppm
<b>Nitric oxide:</b>	35ppm	<10ppm	<b>Ethylene:</b>	100ppm	≈40ppm
<b>Nitrogen dioxide:</b>	5ppm	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.