

## Hydrogen Sulphide CiTiceL<sup>®</sup> Specification



# 4H/LM CiTiceL<sup>®</sup>

(High sensitivity version)

### Performance Characteristics

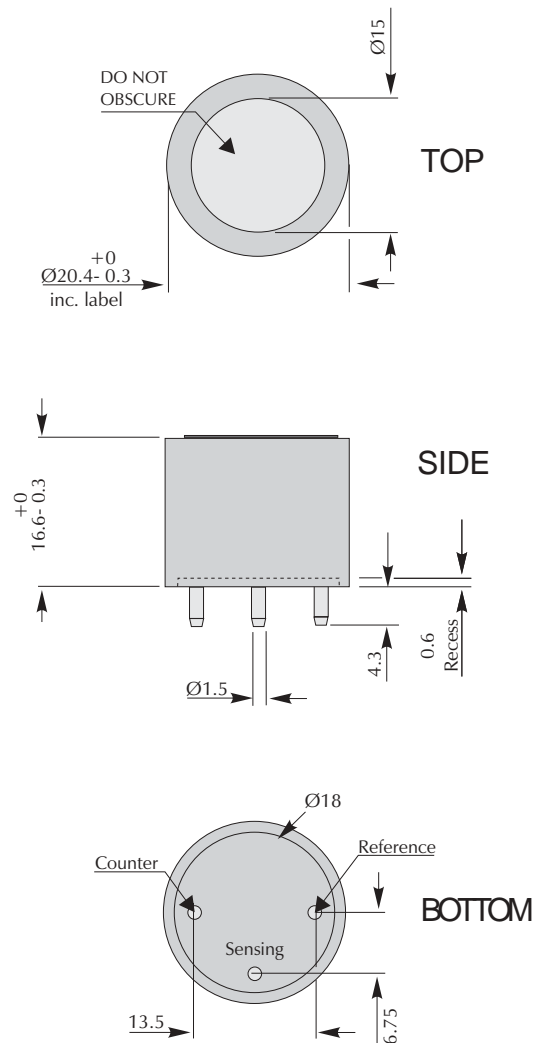
<b>Nominal Range</b>	0-100ppm
<b>Maximum Overload</b>	500ppm
<b>Expected Operating Life</b>	Two years in air
<b>Output Signal</b>	1.20 ± 0.25 µA/ppm
<b>Resolution</b>	0.1ppm
<b>Temperature Range</b>	-40°C to +50°C
<b>Pressure Range</b>	Atmospheric ± 10%
<b>T<sub>90</sub> Response Time</b>	≤30 seconds
<b>Relative Humidity Range</b>	15 to 90% non-condensing
<b>Typical Baseline Range (pure air)</b>	-0.02 to +0.2ppm equivalent
<b>Maximum Zero Shift (+20°C to +40°C)</b>	<0.1ppm equivalent
<b>Long Term Output Drift</b>	<2% signal loss/month
<b>Recommended Load Resistor</b>	10Ω
<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>	5g (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 ±0.15mm unless otherwise stated

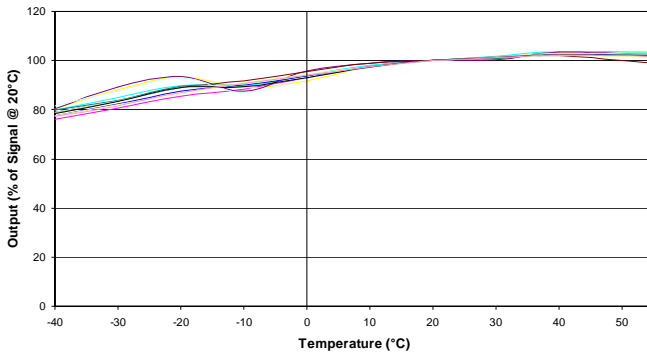
**IMPORTANT NOTE:** Connection should be made via PCB sockets only. Soldering to the pins will seriously damage your sensor.

**Testing:** 4H/LM Hydrogen Sulphide CiTiceLs should be tested monthly to confirm sensitivity and response time are adequate.

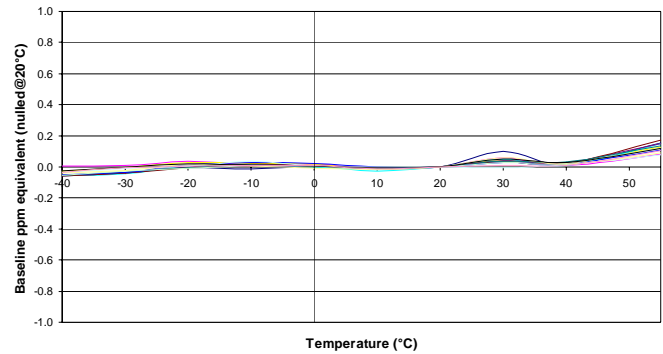
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4H Hydrogen Sulphide CiTiceL - Output vs Temperature



4H Hydrogen Sulphide CiTiceL - Baseline vs Temperature



### Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. 4H/LM 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>4H/LM</u>	<u>Gas</u>	<u>Conc.</u>	<u>4H/LM</u>
<b>Carbon monoxide:</b>	300ppm	≤6ppm	<b>Hydrogen:</b>	10000ppm	≤5ppm
<b>Sulphur dioxide:</b>	5ppm	≈0.5ppm	<b>Nitrogen dioxide:</b>	5ppm	-1ppm
<b>Nitric oxide:</b>	35ppm	<0.4ppm			

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

### Methanol Sensitivity

The 4H/LM CiTiceL is designed for use in applications where methanol might be present. Whilst cross sensitivity reactions on CiTiceLs are normally readily defined, the behavior of the 4H/LM when exposed to methanol is significantly more complex, and can not be specified as above for carbon monoxide. The 4H/LM CiTiceL is the result of an extensive development project, which has achieved, for this application, a significant performance advantage over standard 4H CiTiceLs.

For more detailed information about the response to methanol please contact Technical Support at 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.