3H/LM CiTiceL®

Performance Characteristics

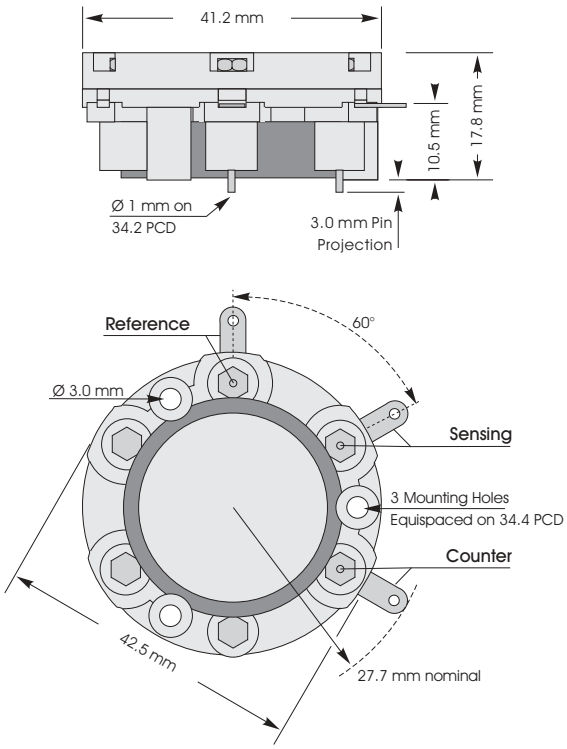
Nominal Range	0-200ppm
Maximum Overload	1000ppm
Expected Operating Life	One year in air
Output Signal	0.37 ± 0.07 µA/ppm
Resolution	0.25ppm
Temperature Range	-40°C to +50°C
Pressure Range	Atmospheric ± 10%
Pressure Coefficient	0.008 ± 0.002 % signal/mBar
T_{90} Response Time	≤70 seconds
Relative Humidity Range	15 to 90% non-condensing
Typical Baseline Range (pure air)	-0.6 to +1.9ppm equivalent
Maximum Zero Shift (+20°C to +40°C)	2ppm equivalent
Long Term Output Drift	<2% signal loss/month
Recommended Load Resistor	10Ω
Bias Voltage	Not required (See Application Note #7)
Repeatability	1% of signal
Output Linearity	Linear

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

Physical Characteristics

Colour of Ring	Dark Blue
Weight	22g
Position Sensitivity	None
Storage Life	Six months in CTL container
Recommended Storage Temperature	0-20°C
Warranty Period	12 months form date of despatch

Outline Dimensions



All tolerances ±0.15mm unless otherwise stated.

Sensor shown with side tags and gold pins.

Do not solder to pin connections

Testing

3H/LM Hydrogen Sulphide CiTiceLs should be tested monthly to confirm sensitivity and response time are adequate.

Ordering Information

The 3H/LM Hydrogen Sulphide CiTiceL is available with both PCB pins and side tags. To ensure the appropriate option is supplied care must be taken to provide the correct code when ordering.

With side tag and PCB pin connections - **3H/LM**

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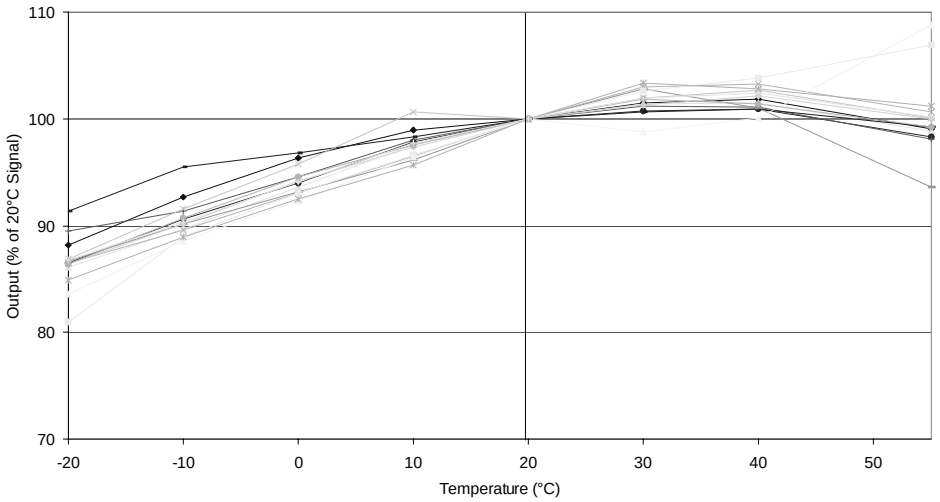
Hydrogen sulphide CiTiceL® Specification



Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. 3H/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).

Gas	Conc.	3H/LM	Gas	Conc.	3H/LM
Carbon monoxide:	300ppm	≤6ppm	**Hydrogen:**	10,000ppm	<15ppm
Sulphur dioxide:	5ppm	<1ppm	**Hydrogen cyanide:**	10ppm	-2<x$<0ppm
Nitric oxide:	35ppm	≤4ppm	**Hydrogen chloride:**	5ppm	0ppm
Nitrogen dioxide:	5ppm	≈-1ppm	**Ethylene:**	100ppm	0ppm
Chlorine:	5ppm	-0.25<x$<+0.25ppm			

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

Methanol Sensitivity

The 3H/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 3H/LM when exposed to methanol is significantly more complex, and can not be specified as above for carbon monoxide. The 3H/LM CiTiceL is the result of an extensive development project, which has achieved, for this application, a significant performance advantage over standard 3H CiTiceLs.

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

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