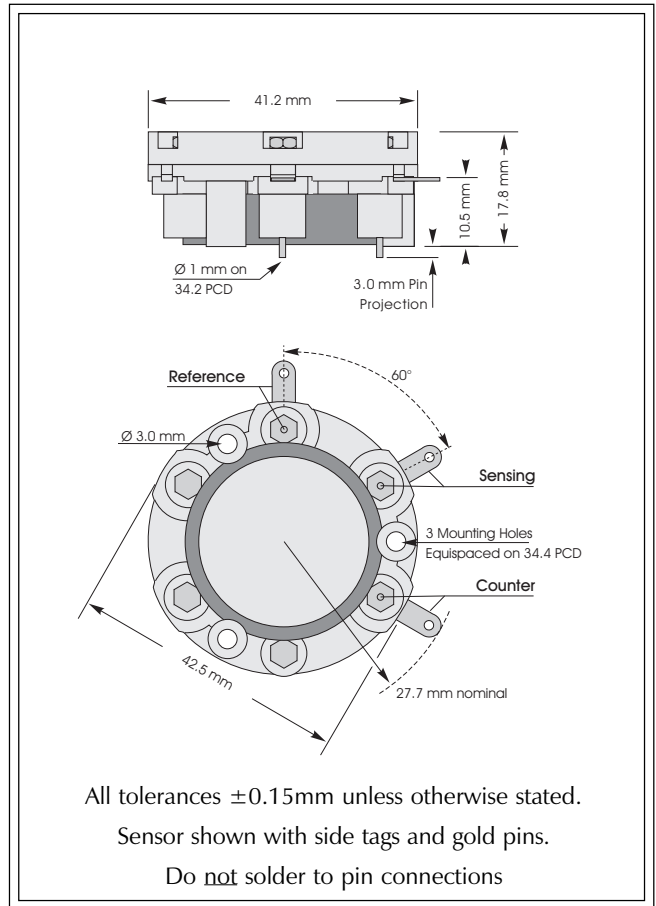




3HYE Hydrogen CiTiceL

Performance Characteristics

Nominal Range	0-10 000ppm
Maximum Overload	20 000ppm
Expected Operating Life	Two years in air
Output Signal	0.003 ± 0.001 µA/ppm
Resolution	10ppm
Temperature Range	-20°C to +50°C
Pressure Range	Atmospheric ± 10%
Pressure Coefficient	0.006 % signal/mBar
T₉₀ Response Time	<70 seconds
Relative Humidity Range	15 to 90% non-condensing
Typical Baseline Range (pure air)	+2 to -150ppm equivalent
Maximum Zero Shift (+20°C to +40°C)	-150ppm equivalent
Long Term Output Drift	<2% signal loss/month
Recommended Load Resistor	10 Ω
Bias Voltage	Not required
Repeatability	2% of signal
Output Linearity	Linear



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

Physical Characteristics

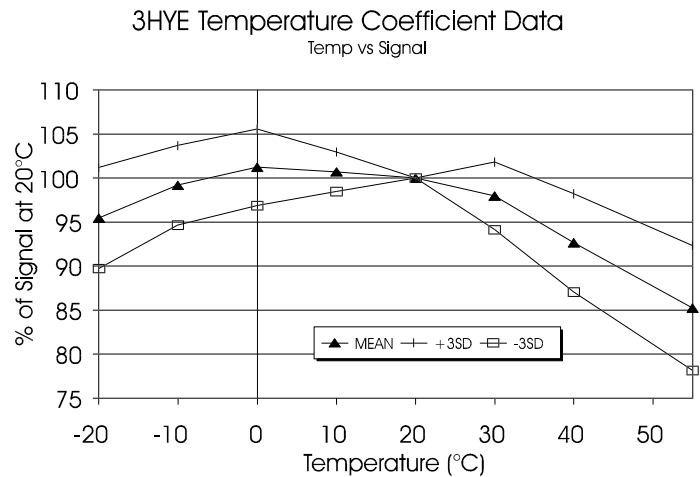
Weight	22g
Position Sensitivity	None
Storage Life	Six months in CTL container
Recommended Storage Temperature	0-20°C
Warranty Period	12 months from date of despatch



Temperature Dependence

The output of a CiTiceL can vary with temperature. The graph here shows the variation in output with temperature for 3HYE CiTiceLs based on a sample of about 16 sensors. The results are shown in the graph as a mean for the batch, and expressed as a percentage of the signal at 20°C.

From a statistical viewpoint, for a sample of this size, the range in values observed for all sensors of this type will fall within a range three times the standard deviation above or below the mean. Assuming therefore this sample is typical, then the temperature behaviour of all 3HYE CiTiceLs will fall in the band +3SD to -3SD.



Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. 3HYE 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.	3HYE	Gas	Conc.	3HYE
Carbon monoxide:	300ppm	<120ppm	Chlorine:	1ppm	0ppm
Hydrogen sulphide:	15ppm	≈10ppm	Hydrogen cyanide:	10ppm	≈10ppm
Sulphur dioxide:	5ppm	0ppm	Hydrogen chloride:	5ppm	0ppm
Nitric oxide:	35ppm	<10ppm	Ethylene:	100ppm	≈40ppm
Nitrogen dioxide:	5ppm	0ppm			

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

Ordering Information

The 3HYE Hydrogen CiTiceL is available with side tags, gold-plated PCB pins, or both PCB pins and side tags. To ensure the appropriate option is supplied care must be taken to provide the correct code when ordering.

Type 3HYE:- With side tag and PCB pin connections - **3HYE**
 With side tag connection - **3HYE(S)**
 With gold-plated PCB pin connection - **3HYE(G)**

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