Phosphine CiTiceL® Specification

4PH-Fast CiTiceL®

Performance Characteristics

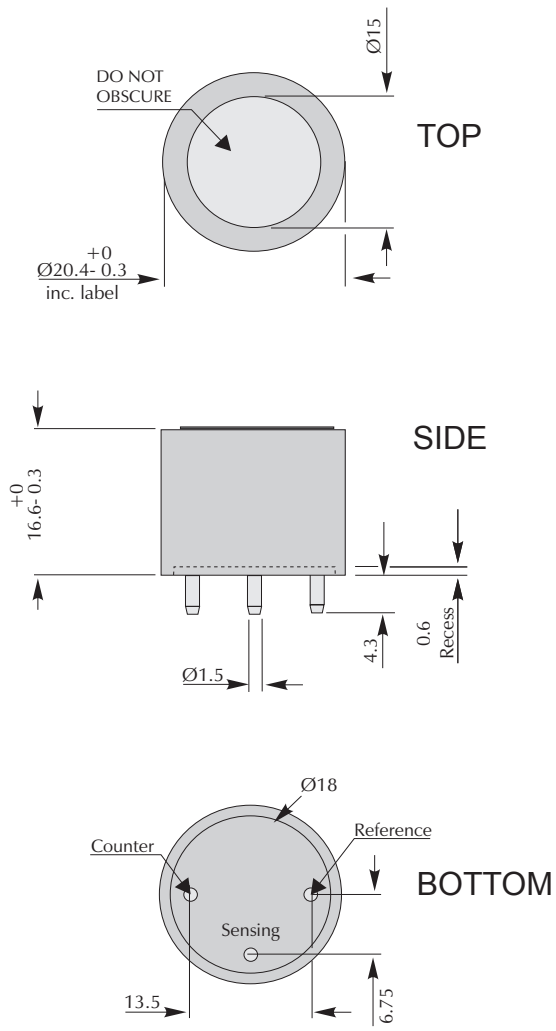
Nominal Range	0-5 ppm
Maximum Overload	20 ppm
Expected Operating Life	Two years in air
Output Signal	1.7±0.3 µA/ppm
Resolution	<0.05 ppm
Temperature Range	-20°C to +50°C
Pressure Range	Atmospheric ± 10%
Pressure Coefficient	No data
T_{90} Response Time	<60 seconds
Relative Humidity Range	15 to 90% non-condensing
Typical Baseline Range (pure air)	-0.05 to +0.2 ppm equivalent
Maximum Zero Shift (+20°C to +40°C)	<0.07 ppm 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 1013 mBar

Physical Characteristics

Weight	5 g (approx.)
Position Sensitivity	None
Storage Life	Six months in CTL container
Recommended Storage Temperature	0-20°C
Warranty Period	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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Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. 4PH 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.	4PH	Gas	Conc.	4PH
Arsine:	150ppb	100ppb	**Sulphur dioxide:**	5ppm	1ppm
Silane:	1000ppb	900ppb	**Hydrogen:**	1000ppm	1ppm
Diborane:	300ppb	105ppb	**Ethylene:**	100ppm	1ppm
Germane:	600ppb	550ppb	**Carbon monoxide:**	1000ppm	5ppm

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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