

## Phosphine CiTiceL<sup>®</sup> Specification



# 4PH-Fast CiTiceL<sup>®</sup>

### Performance Characteristics

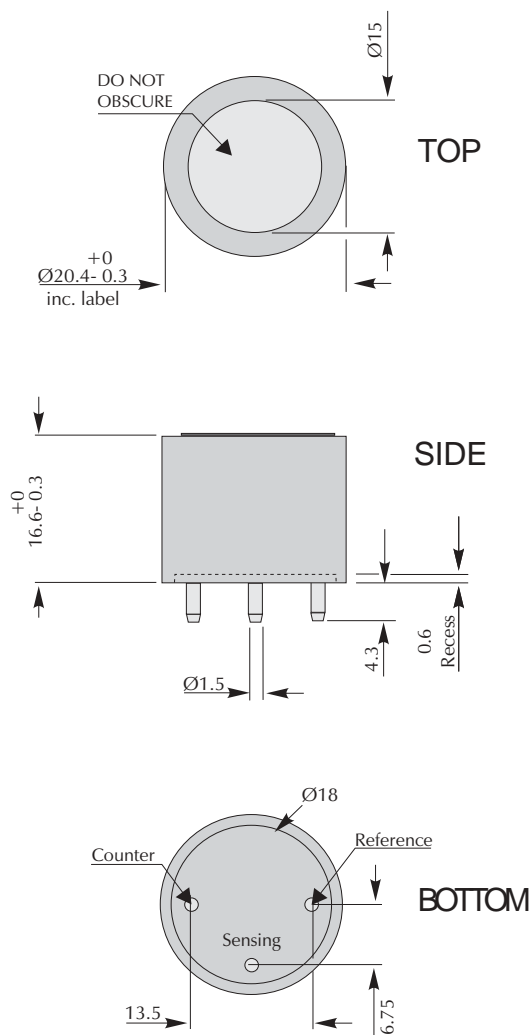
|  |                             |
|--|-----------------------------|
| <b>Nominal Range</b>                       | 0-5ppm                      |
| <b>Maximum Overload</b>                    | 20ppm                       |
| <b>Expected Operating Life</b>             | Two years in air            |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

Phosphine CiTiceL<sup>®</sup> Specification**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).

| <u>Gas</u>       | <u>Conc.</u> | <u>4PH</u> | <u>Gas</u>              | <u>Conc.</u> | <u>4PH</u> |
|------------------|--------------|------------|-------------------------|--------------|------------|
| <b>Arsine:</b>   | 150ppb       | 100ppb     | <b>Sulphur dioxide:</b> | 5ppm         | 1ppm       |
| <b>Silane:</b>   | 1000ppb      | 900ppb     | <b>Hydrogen:</b>        | 1000ppm      | 1ppm       |
| <b>Diborane:</b> | 300ppb       | 105ppb     | <b>Ethylene:</b>        | 100ppm       | 1ppm       |
| <b>Germane:</b>  | 600ppb       | 550ppb     | <b>Carbon monoxide:</b> | 1000ppm      | 5ppm       |

\*\*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.