

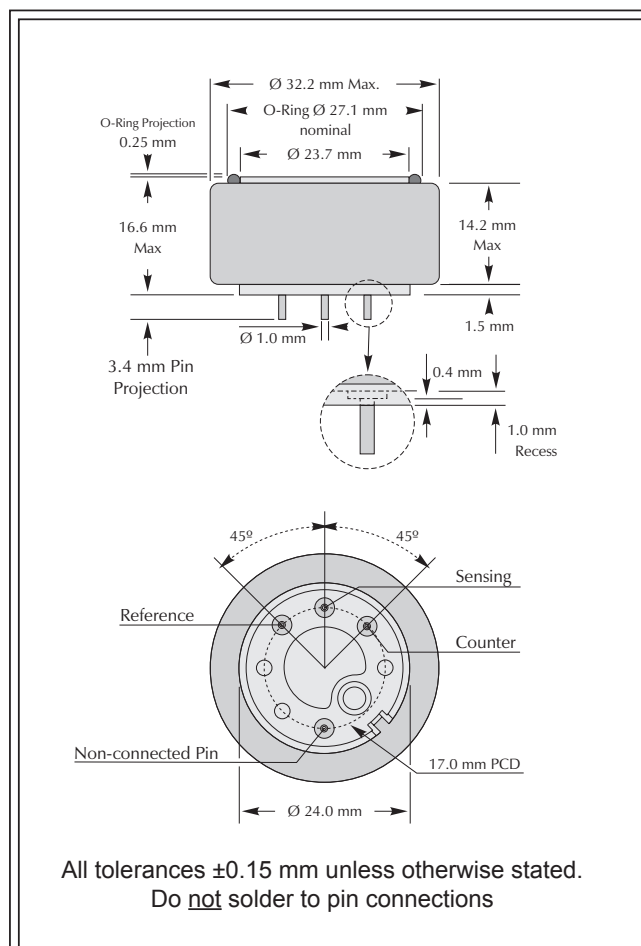


# 7OZ CiTiceL<sup>®</sup>

## Performance Characteristics

|  |                          |
|--|--------------------------|
| <b>Nominal Range</b>                           | 0-2 ppm                  |
| <b>Maximum Overload</b>                        | 5 ppm                    |
| <b>Expected Operating Life</b>                 | Two years in air         |
| <b>Output Signal</b>                           | 7.2 ± 2.3 µA/ppm         |
| <b>Resolution</b>                              | 20 ppb                   |
| <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>            | ≤150 seconds             |
| <b>Relative Humidity Range</b>                 | 15 to 90% non-condensing |
| <b>Typical Baseline Range (pure air)</b>       | 0 to +120 ppb equivalent |
| <b>Maximum Baseline Shift (+20°C to +40°C)</b> | +36 ppb equivalent       |
| <b>Long Term Output Drift</b>                  | <4% signal loss/month    |
| <b>Recommended Load Resistor</b>               | 33 Ω                     |
| <b>Bias Voltage</b>                            | Not required             |
| <b>Repeatability</b>                           | 5% of signal             |
| <b>Output Linearity</b>                        | Linear                   |

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



## Physical Characteristics

|  |                                 |
|--|---------------------------------|
| <b>Weight</b>                          | 17 g                            |
| <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 |

**IMPORTANT NOTE:** Connection should be made via PCB sockets only. Soldering to the pins will render your warranty void.



### Temperature Dependence

The output of a CiTiceL can vary with temperature. A programme of data acquisition is currently underway at City Technology to establish a statistically based relationship for 7OZ sensors. For applications where accurate data is required please contact City Technology.

### Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. 7OZ 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>7OZ</u> | <u>Gas</u>                | <u>Conc.</u> | <u>7OZ</u> |
|---------------------------|--------------|------------|---------------------------|--------------|------------|
| <b>Carbon monoxide:</b>   | 300ppm       | 0ppm       | <b>Chlorine:</b>          | 1ppm         | <1ppm      |
| <b>Hydrogen sulphide:</b> | 15ppm        | ≈-2ppm     | <b>Hydrogen:</b>          | 100ppm       | 0ppm       |
| <b>Sulphur dioxide:</b>   | 5ppm         | 0ppm       | <b>Hydrogen cyanide:</b>  | 10ppm        | 0ppm       |
| <b>Nitric oxide:</b>      | 35ppm        | 0ppm       | <b>Hydrogen chloride:</b> | 5ppm         | 0ppm       |
| <b>Nitrogen dioxide:</b>  | 5ppm         | ≈3.5ppm    | <b>Ethylene:</b>          | 100ppm       | 0ppm       |

\*\*For information on other possible cross-interferents please 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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Performance characteristics on this data sheet outline the performance of newly supplied sensors. Output signal can drift below the lower limit over time.