

# e2v

## EC4-1-CIO2 Electrochemical Sensor

### PERFORMANCE

Range ..... 0 - 1 ppm  
 Sensitivity (see note)..... 380 - 540 nA/ppm ClO2  
 Zero in air at 20 °C..... <±0.06 ppm ClO2  
 Resolution ..... 0.03 ppm ClO2  
 Expected lifetime ..... 2 years  
 Linearity ..... linear across range  
 Response time, t90 ..... <60 s  
 Temperature range ..... -20 to +50 °C  
 Pressure range ..... 90 – 110 kPa (nominal)  
 Humidity range..... 15 - 90% RH (non-condensing)  
 Long-term output drift..... change in output per month  
 Operating circuit..... see Electrochemical Toxic Sensor  
 Application Note

**Note:** This output current is negative. This is because the sensor reaction is a reduction of the target gas.

### OPERATING CONDITIONS

Temperature range ..... -20 to +50 °C  
 Operating humidity..... 15 - 90% RH (non-condensing)  
 Pressure range ..... 90 - 110 kPa (nominal)  
 Operating circuit..... see Electrochemical Toxic Sensor  
 Application Note  
 Applied potential ..... 0 V  
 Storage life..... 6 months in original packaging (0 - 25 °C)

### PHYSICAL CHARACTERISTICS

Label colour ..... silver  
 Weight..... 6 g  
 Dimensions ..... see outline  
 Shelf life ..... 6 months

This device is designed to be RoHS compliant.

### CROSS-SENSITIVITY DATA

GAS	Concentration (ppm)	Sensor Response (As ppm ClO2)
Carbon Dioxide	500	0
Carbon Monoxide	100	0
Chlorine	1	0.35
Hydrogen	3000	0
Hydrogen Sulfide	20	-12
Nitrogen Dioxide	10	6

### Important Note

Do not solder to the connector pins as this may damage the sensor and thereby invalidate the warranty.

Details on recommended connector pins can be found in the Frequently Asked Questions within the Gas Sensor section of the e2v website.

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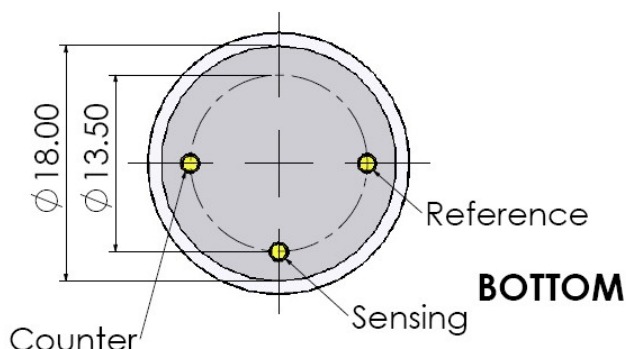
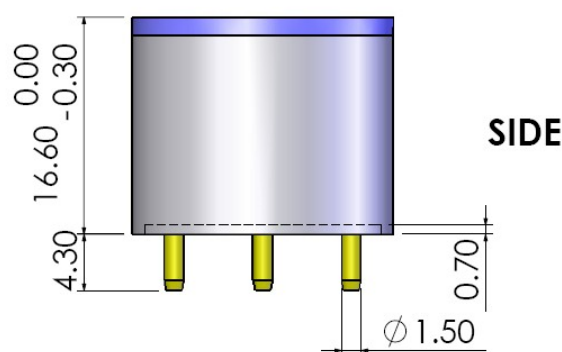
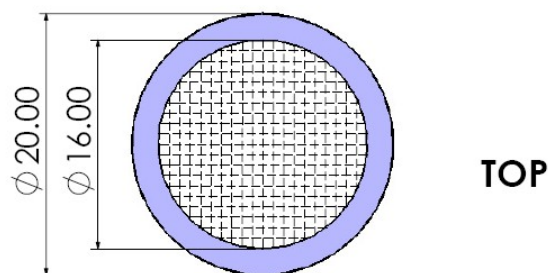
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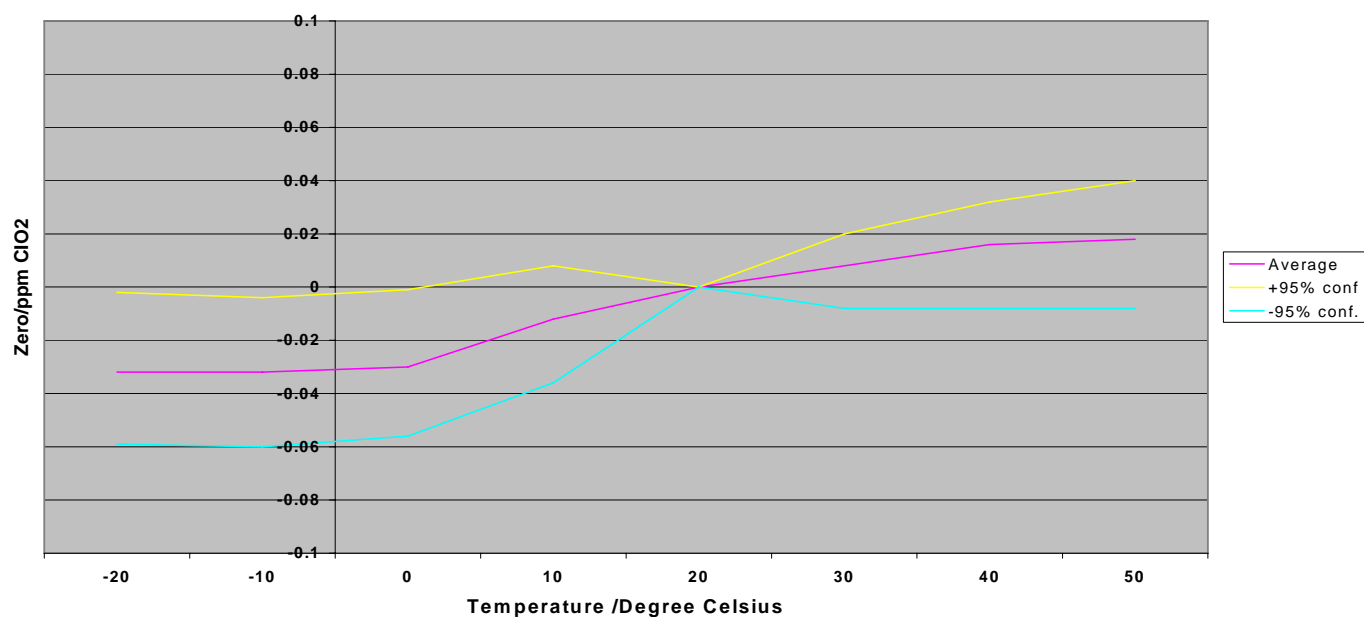
### OUTLINE



All dimensions in mm.  
 All tolerances ±0.15mm unless otherwise stated.

## TEMPERATURE DEPENDENCE

EC4-1-CIO2 Graph of Zero vs Temperature



EC4-1-CIO2 Sensitivity Graph of Sensitivity vs Temperature

