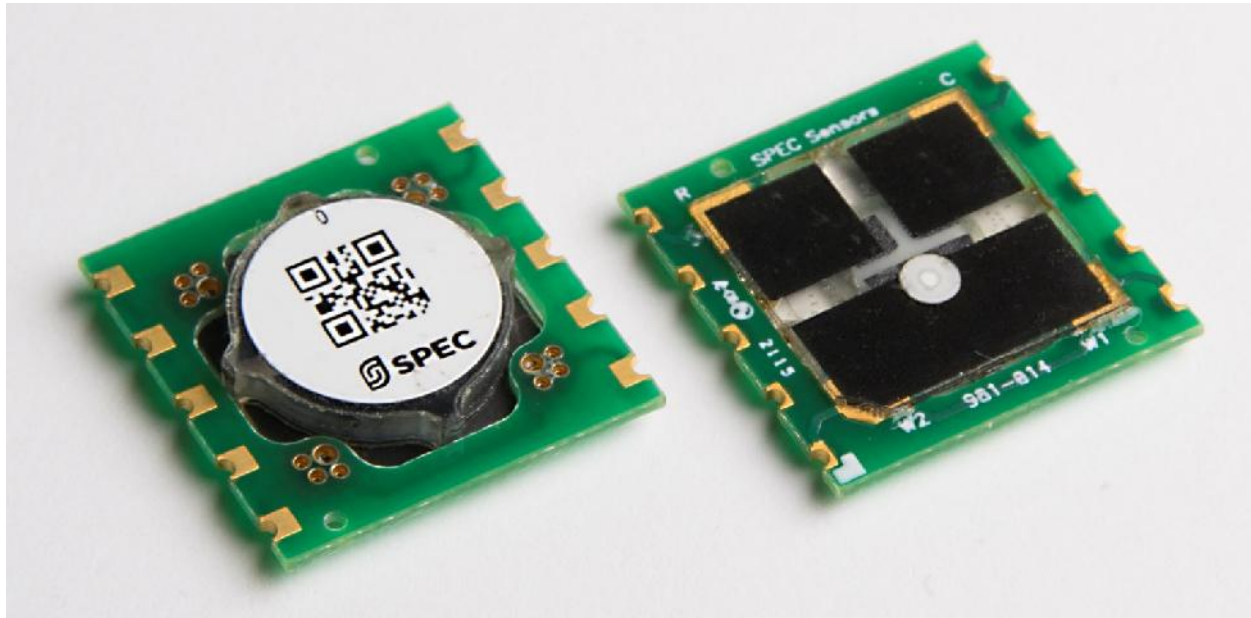


15x15 O3 Sensor 20 ppm C Package 110-402



BENEFITS

- Small Size with Low Profile (20x20x3 mm)
- Long Life (10 years expected life)
- Fast Response (< 15 seconds)
- Low Power Consumption
- Individually Calibrated (NIST Traceable)
- ROHS Compliant

APPLICATIONS

- Air Quality Monitoring
- Industrial Safety
- Air Purification Control

DESCRIPTION

SPEC's printed sensors offer the performance of the best quality electrochemical sensors at a fraction of the price. SPEC's printed sensors are also ultra-thin, offering easy integration into wireless, portable, and networked solutions. These sensors are ideal for health, environmental, industrial and residential monitoring, because of their high performance, low cost and small size.

| | |
|--------------------------------------------------|----------------------------------------------|
| Measurement Range | 0 to 20 ppm |
| Lower Detectable Limit | < 20 ppb (instrumentation dependent) |
| Repeatability | < +/- 3 % of reading |
| Response Time | < 15 seconds typical |
| Sensitivity @ 0 mV bias | -32 +/- 10 nA/ppm |
| Expected Operating Life | > 5 years (10 years @ 23+/-3C; 40+/-10% RH) |
| Operating Temperature Range | -30 to 50 C (-20 to 40 C continuous) |
| Operating Humidity Range – non-condensing | 0 to 100% RH (15 to 95% continuous) |
| Power Consumption | 10 to 50 uW (circuit & ambient O3 dependent) |

PRODUCTION DATA information is current as of publication date. Products conform to specifications per the terms of the SPEC Sensors standard warranty. Production processing does not necessarily include testing of all parameters.

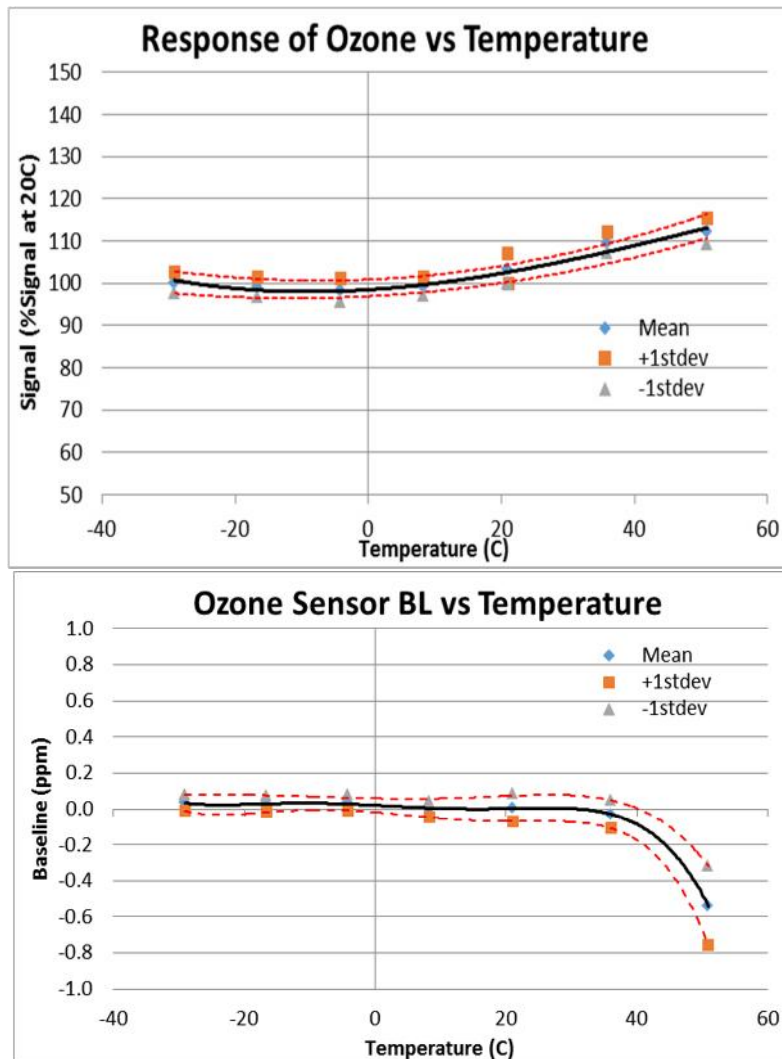
技术 & 商务联系方式: 深圳市南频科技有限公司
 陈小姐 业务工程师 156 2521 4151
 rita.chen@dwintech.com 座机 0755-82565851
 www.dwintech.com

CROSS SENSITIVITY

| Gas/Vapor | Concentration | Typical Response PPM O3 |
|------------------|---------------|-------------------------|
| Methane | 500 ppm | < 0.05 |
| Nitrogen Dioxide | 10 ppm | 5 |
| Hydrogen Sulfide | 25 ppm | -12.5 |
| Carbon Monoxide | 400 ppm | < 0.05 |
| Ozone | 5 ppm | 5 |
| Chlorine | 10 ppm | 10 |
| n-Heptane | 500 ppm | -0.2 |

TEMPERATURE EFFECT

Temperature fluctuations have a predictable, easily compensated effect on the sensor signal. The figures at below shows the typical Temperature dependency the output and baseline of 3SP_O3_20 sensor. This information was collected under constant humidity of 40-50 % RH. It is a very uniform and repeatable effect, easily compensated for in hardware or software.



IMPORTANT PRECAUTIONS

All sensor designs are made for air monitoring @ 1 atm +/- 0.2 atm. Because applications of use and device implementation are outside our control, SPEC Sensors cannot guarantee performance in a given device or application, and disclaims any and all liability therefore. **Customers should test under their own conditions to ensure the sensors are suitable for their requirements.**

Contact the factory to discuss specific concerns that might damage the sensor performance or life.

- Condensation and Water (1)
- Salt Water Contamination (1)
- High Temperature Operation (> 70C) for more than 1 month
- Low Humidity Operation (< 15% RH) for more than 3 months
- High Bias voltage
- Highly contaminated air over a prolonged period
- High levels of particles or soot (unless proper filtering is provided)

(1) Use of porous PTFE membrane or filter cap may address this concern)

MARKING INFORMATION

Sensors have serial numbers printed with individual NIST Traceable calibration data printed on each sensor. (CO version shown)

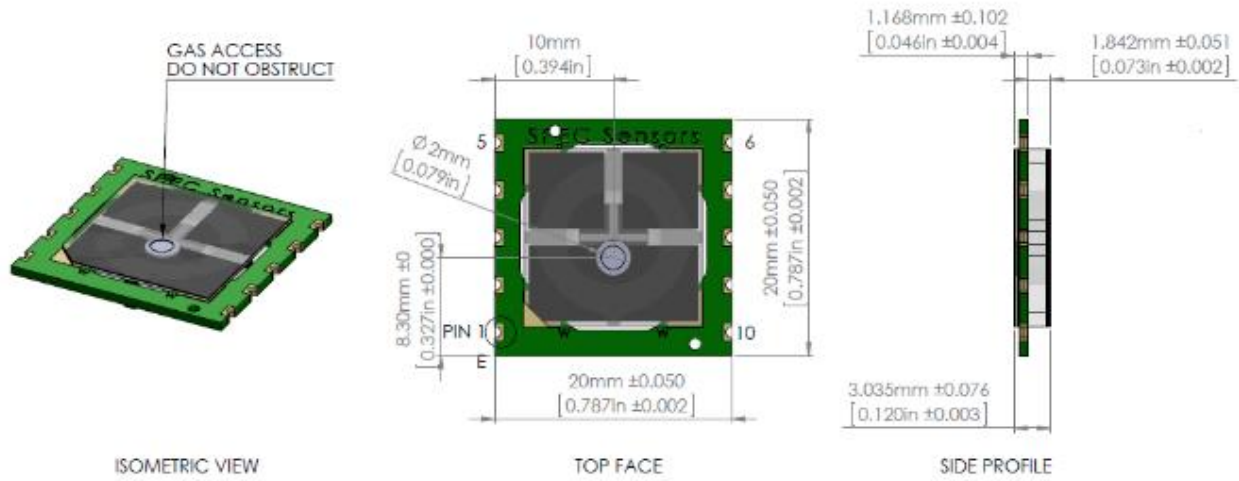
| | Unique Serial Number | Sensor Part Number | Target Gas | Date Code (YYMM) | Sensitivity Code (nA/ppm) |
|---------------------|----------------------|--------------------|------------|---------------------|------------------------------|
| Alph-Numerica Code: | | 100105 | CO | 1510 | 2.78 |
| 2D Code: | 101915010903 | 100105 | CO | 1510 | 2.78 |

STORAGE CONDITIONS

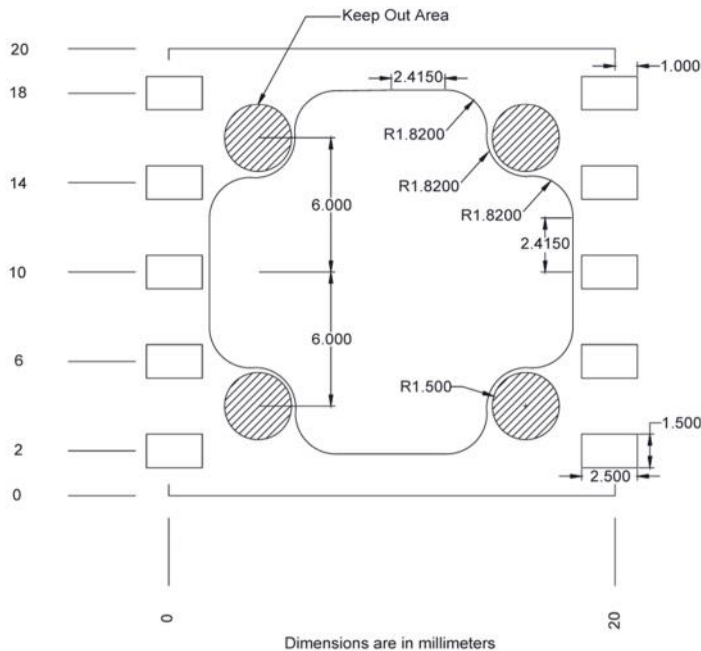
The calculated shelf life for sealed, packaged components is 12 months from the pack seal date, when stored in the factory-sealed bag under the following conditions:

- A. Temperature: 5 to 25 °C
- B. Relative Humidity: 20 to 80%
- C. Pressure: 1 ± 0.2 atm
- D. Storage Time: 12 months

DIMENSIONS



PCB LAYOUT GUIDELINES



| PIN | CONNECTION |
|-----|------------|
| 1 | WORKING |
| 2 | NC |
| 3 | NC |
| 4 | NC |
| 5 | REFERENCE |
| 6 | COUNTER |
| 7 | NC |
| 8 | NC |
| 9 | NC |
| 10 | WORKING |