

## New OZONE SENSOR MODULES

equipped with excellent sensitivity, selectivity, stability and long life OZONE SENSOR.

For OZONE detection in air purifying, deodorizing, sterilization systems, photocopiers and for environmental monitoring systems

### Features

- Detecting 0 to 250ppb of ozone in atmosphere
- Suitable for environmental monitor.
- Semiconductor type sensor
- Low cost
- Maintenance free
- Long life

Recently ozone has started to be used in commercial/ domestic applications : e.g. in HVAC (Heating Ventilation and Air Conditioning) systems.

FIS has developed a new semiconductor ozone sensor using an inovative ITO (Indium Tin Oxide) sensing material for ozone detection.

Configuration of the ozone sensor is shown in Figs. 1 and 2. The gas sensitivity is in Fig. 3, and the response is in Fig. 4.

This module has two models. One is for the output of 0 to 1V. The other is for 0 to 5V.

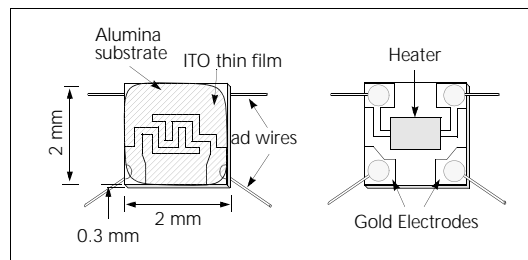


Fig. 1 Sensing Elements

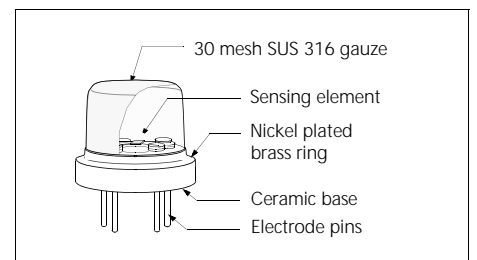


Fig. 2 Structure

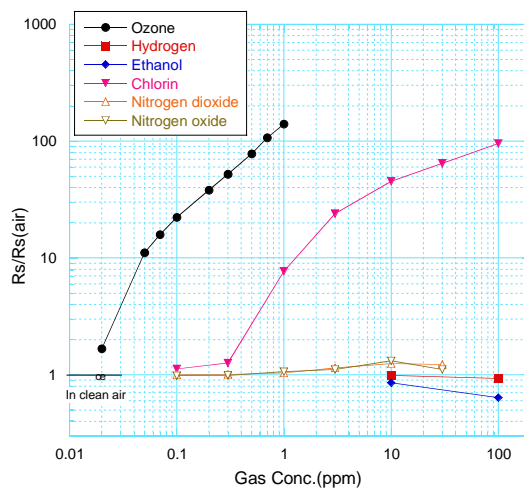


Fig. 3 Sensitivity characteristics

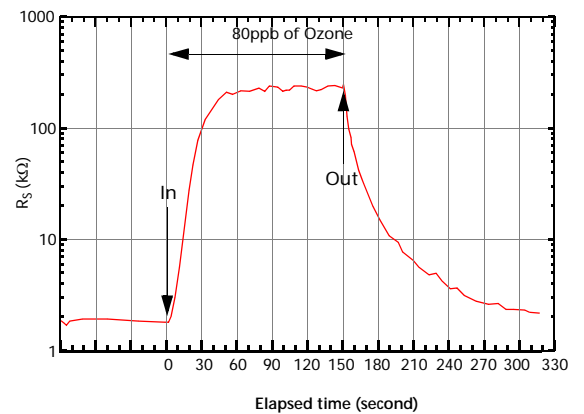
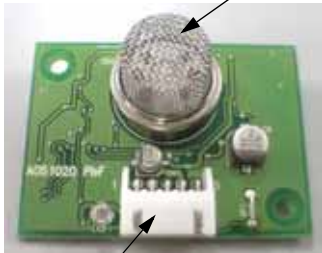


Fig. 4 Response

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## Products range of Ozone modules

Basic specifications		
<ul style="list-style-type: none"> <li>• Power supply: 5V DC <math>\pm</math> 5%</li> <li>• Initial warm-up time: About 3 minutes</li> <li>• Sensor: SP-61</li> <li>• Detection range: 0 to 250ppb</li> <li>• Analogue output: 0 to 1V or 0 to 5V (Mounted connector: S5B-XH-A by JST)</li> <li>• Alarm output: MOS output, 5V DC output at ON, no delay alarm, auto-reset</li> <li>• Alarm concentration: 80ppb of ozone</li> <li>• Power consumption: Lower than 600mW (400mW for sensor)</li> <li>• Operating temperature: 0°C to 40°C</li> <li>• Storage temperature: -10°C to 60°C</li> <li>• Size: 51(W) x 37(D) x 22(H) mm</li> <li>• Weight: 15 g</li> </ul>		Note: Only the module is available.
Model	Features	Applications
A051020-SP61-01	<ul style="list-style-type: none"> <li>• Sensor: SP-61</li> <li>• Analogue output: 0 to 1V</li> </ul>	 <p>Ozone sensor</p> <p>I/O connector (S5B-XH-A)</p>
A051020-SP61-02	<ul style="list-style-type: none"> <li>• Sensor: SP-61</li> <li>• Analogue output: 0 to 5V</li> </ul>	
<p>I/O connector specifications</p> <p>Pin No.</p> <p>1: GND for power supply</p> <p>2: +5V DC for power supply</p> <p>3: Analogue output</p> <p>4: GND for analogue output</p> <p>5: Alarm output</p>	<p>Operation procedure</p> <ol style="list-style-type: none"> <li>1. Connect 5V DC to pins 1 and 2.</li> <li>2. LED starts blinking which indicates warm-up period. Wait 2 minutes 30 seconds until LED turns off.</li> <li>3. Measure analogue output from pins 3 and 4 to convert ozone concentration.</li> </ol> <p>* When the concentration exceeds the alarm level, LED blinks and the alarm output turns ON. When the concentration decreases and becomes lower than the alarm level, LED turns off and the alarm output turns OFF.</p> <p>* The relationship between analogue output and ozone concentration is as below:                      0 to 1V output model: ppb of ozone = 255 x output voltage (V)                      0 to 5V output model: ppb of ozone = 255 x output voltage (V) / 5</p>	

### Example of monitoring ozone produced from photocopier

