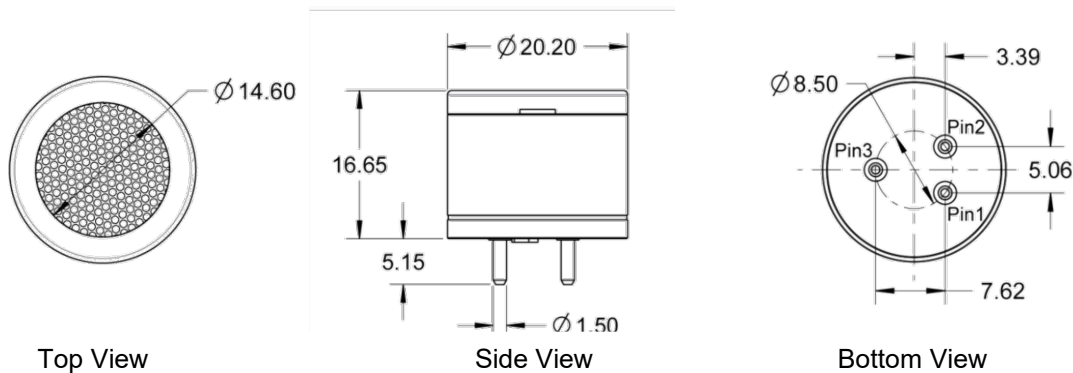




## Photoionization Detector (PID) Sensors 4-Series

Senovol PID Sensors are designed for the detection of a wide variety of volatile organic compounds (VOCs). In general, any compound with ionization energy (IE) lower than that of the lamp photons can be measured. Based on its proprietary ultraviolet (UV) lamp technology, Senovol PID sensors have the advanced features of high UV outputs, and long lamp life spans,

### Product Dimensions



All dimensions in mm

### Performance

|                       |                           |
|-----------------------|---------------------------|
| Photon energy         | 10.6 eV                   |
| Measurement range     | 0 ~ 10000 ppm isobutylene |
| Resolution            | 5 ~ 1000 ppb isobutylene  |
| Response time (T90)   | < 5 seconds               |
| Baseline shift (20°C) | 50 ± 30mV                 |
| Linearity             | linear from 0.045 ~ 2.5 V |

### Electrical

|                 |                              |
|-----------------|------------------------------|
| Supply voltage  | 3.3 ~ 5.5 V (5V recommended) |
| Working current | < 80 mA at 5 V               |
| Output signal   | 0.045 ~ 2.5 V                |

### Mechanical

|           |                 |
|-----------|-----------------|
| Enclosure | Stainless steel |
| Weight    | 15 grams        |

### Environmental

|                   |                                 |
|-------------------|---------------------------------|
| Temperature range | -20°C ~ +50°C                   |
| Pressure range    | 1 atm ± 10%                     |
| Humidity range    | 15 % ~ 95 %RH<br>Non-condensing |

### Life Time

|                     |   |
|---------------------|---|
| Storage Temp        | 0 °C ~ 30 °C                            |
| Operating life time | 5 years (excluding lamp and electrodes) |
| Typical lamp life   | 15,000 hours                            |
| Storage life        | 2 years in original packaging           |
| Warranty            | 12 months                               |

### Approvals

Pending

### Installation

Output signals from the sensor pins are different. Inappropriate use of the pins in product design will affect the sensor functionality. Exposure to high concentrations of solvent vapors should be avoided under any condition. Mechanical overstress may cause deformation of the sensor enclosure and damage the internal components including the lamp. If the sensor is used in extreme environmental conditions, please contact us for more details

## Pin Out Details

Pin 1 – VCC    Pin 2 – GND    Pin 3 - VOUT

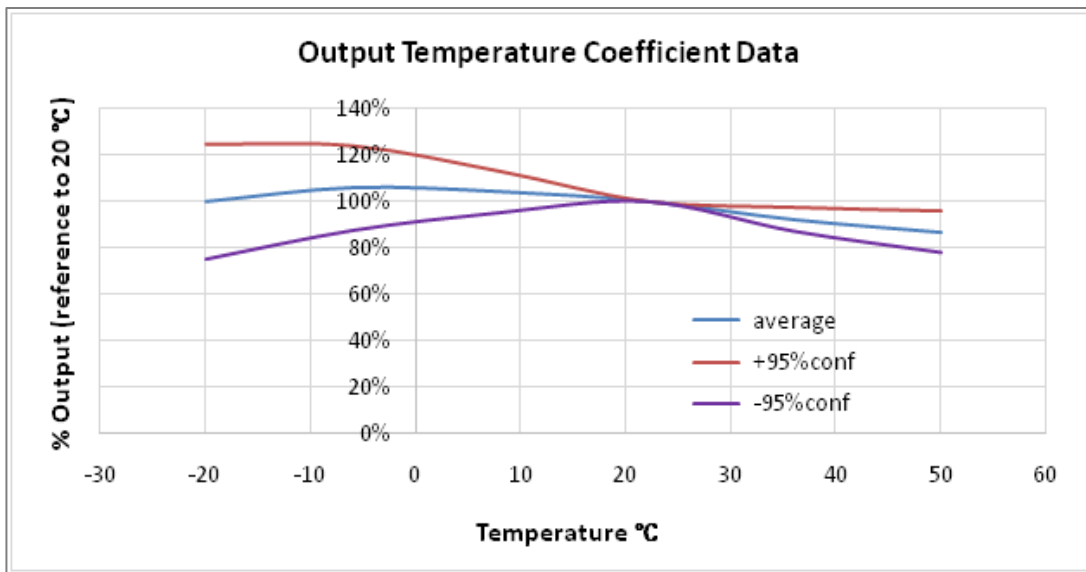
## Product Selection

| Part Number   | Measurement Range | Photon Energy | Resolution | Sensitivity  | Response Time |
|---------------|-------------------|---------------|------------|--------------|---------------|
| PID-106S-2000 | 0 ~ 200 ppm       | 10.6 eV       | 50 ppb     | > 5 mV/ppm   | < 5 s         |
| PID-106S-2001 | 0 ~ 2,000 ppm     | 10.6 eV       | 500 ppb    | > 0.5 mV/ppm | < 5 s         |
| PID-106S-5001 | 0 ~ 5,000 ppm     | 10.6 eV       | 1,000 ppb  | > 0.3 mV/ppm | < 5 s         |

## Note

The performance data in this document is taken by applying isobutylene to the PID sensor using Senovol lab testers. The PID sensor may perform differently if gases other than isobutylene are used.

## Sensitivity Temperature Data



## Safety Note

If the sensor is used in certain instruments for life critical applications, it is required to read the instrument user's guide carefully and comply with the calibration procedures by using the certified target calibration gas before each use. Failure to do so may cause serious injury and fatality. It is highly recommended for customers to validate the sensor performance using this document as a reference for their product designs or applications.