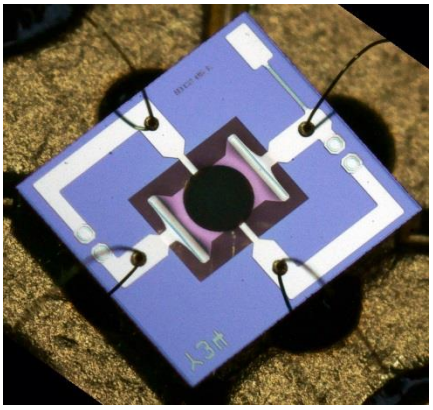
MICROSENS

Product Overview

MSGS-3000i

MICROSENS Semiconductor Gas Sensor

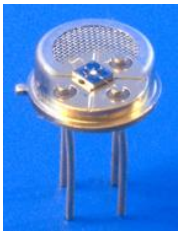
Sensor Description



- MSGS-3000i integrated semi-conductor gas sensors manufactured using standard microelectronic technology and silicon micromachining techniques.
- Detection of reducing gases such as carbon monoxide (CO), hydrocarbons (HC), ethanol, and volatile organic compounds (VOC).
- The sensitive element consists of a semiconducting metal oxide layer. The measurement of specific oxidizing or reducing gases is based on a reversible conductivity change of the sensing element at an appropriate working temperature.
- The thin semiconducting metal oxide is deposited on an integrated heater. The sensitive area is thermally insulated from the silicon substrate to minimize electrical power consumption.

Packaging and Dimensions

- Chip size: ~2mm x 2mm (mounted in center of TO5 element)
- Sensitive area: ø ~ 300µm
- Chip thickness: ~300 µm
- TO5 package: ø 9mm x 12.5mm, 4 pins



Key Features and Applications

Applications

- Indoor air quality
- Industrial process control
- Combustion control
- Environmental monitoring
- Security:
  - Toxic gases
  - Explosive gases

Key Features

- High sensitivity at low concentrations (< 5ppm)
- Low power consumption
- Fast response time: < 30s (90% signal level)
- Small size
- Stable longterm operation

Detectable Gases

- CO: 1 – 1000ppm
- C_2H_5OH: 10 – 500ppm
- H_2: 1 – 1000ppm
- NH_3: 1 – 500ppm
- CH_4: >1000ppm

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