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[Amphenol Advanced Sensors \(formerly GE Sensing\)
AD81](#)

For any questions, you can email us directly:
sales@integrated-circuit.com



GAS SENSORS : TYPE AD81

CO & NO₂ GAS SENSOR

PROVISIONAL DATA

DESCRIPTION:

Gas sensor made of thick film element.

FEATURES:

- Two sensing element on one chip: for CO(gasoline exhaust gas) and NO₂(diesel exhaust gas)
- Low influence of ambient atmosphere
- Typical applications include automatic damper in automotive cabin.

DATA:

Operating conditions:

Operating temperature -10 to + 55°C

Storage temperature -30 to + 85°C

Load Resistor R_L Variable

Heater resistance 19Ω (nom)

Rated power consumption P_s 20mW nom

Rated working voltage of circuit V_c

..... 5 ± 0.2V d.c.

..... 5 ± 0.2 Vrms a.c.

Parts and material:

Sensing element Semiconducting oxide

Thick film heater Platinum

Case Nylon 66

Pin Nickel alloy

Flame arrestor

.... Double 100-mesh stainless gauze(SUS316)

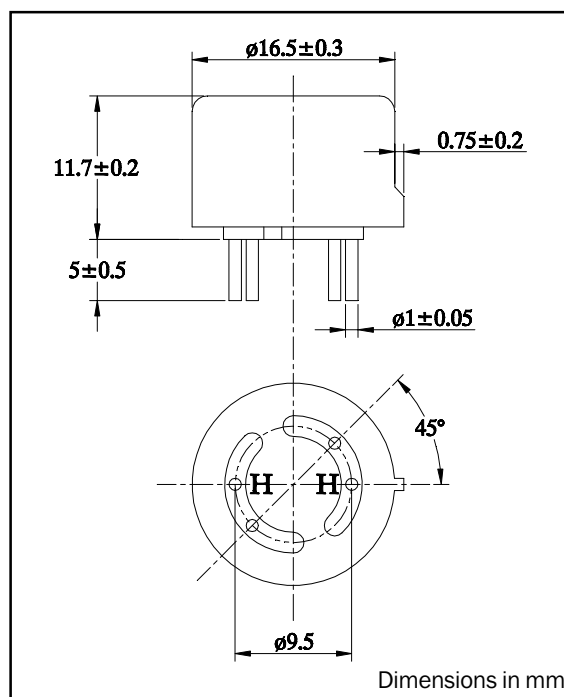
Sensitivity characteristics:

	Specification	Conditions
Output voltage in clean air	2 - 0.3 V	
Voltage change in gas	-0.5 - 0.15V	2ppm of NO ₂
Power consumption	620mW (nom)	

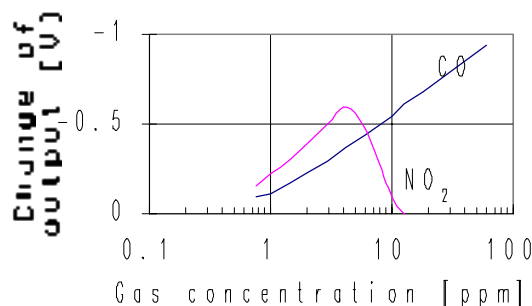
Mechanical characteristics:

Test	Condition	Performance
Vibration	Frequency: 10 - 500 Hz Amplitude (10 - 50Hz): 2 mm Acceleration (50 - 500 Hz) 10G Reciprical scanning time: 5 min Test time: 2 hours each for X, Y and Z directions	Should satisfy the specifications shown in the sensitivity characteristics
Shock	Acceleration: 100G Number of impacts: 5	

DIMENSIONS:



Typical gas sensitivity:





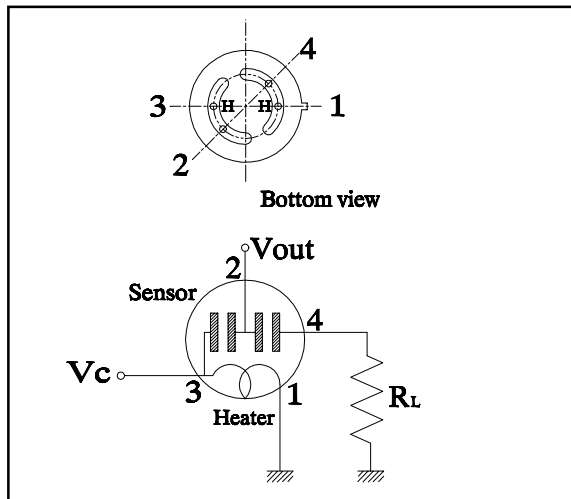
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NOTES:

Pin allocation and standard test circuit:



Test conditions:

Atmosphere

Clean air at $25 \pm 2^\circ\text{C}$ and $50 \pm 5\%$ RH without noise gas.

Circuit condition

V_c (circuit voltage) $5 \pm 0.05\text{V}$

R_L 340 to 1000Ω

Preheat time 24 hours

Test gas

NO₂ 2ppm

WARNING:

Do not use if the case or wire netting is damaged, otherwise built-in heater may cause explosions or fires.
 Do not disassemble or change any parts.
 Use only within specified conditions.