



GAS SENSORS : TYPE AD35

AUTOMOTIVE CABIN GAS SENSOR

PROVISIONAL DATA

DESCRIPTION:

Gas sensor made of thick film element.

FEATURES:

- Two sensing elements for low sensitivity to ambient atmosphere
- Typical applications include air purifier 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 V rms a.c.

Parts and material:

Sensing element Semi-conducting oxide

Thick film heater Platinum

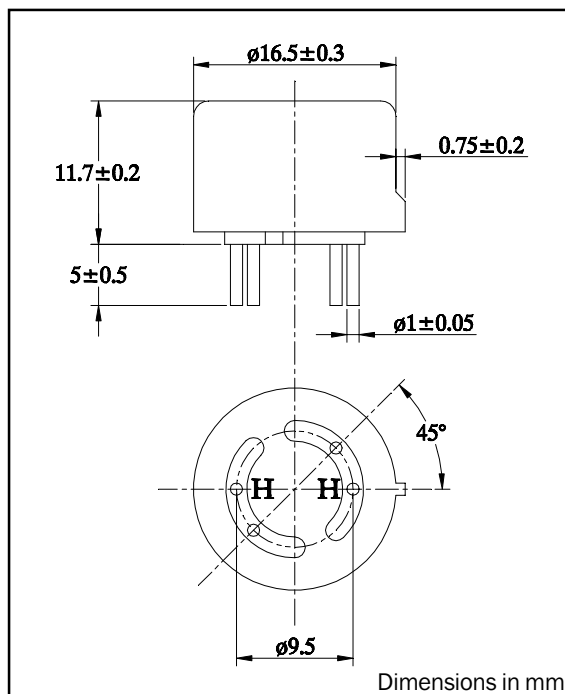
Case Nylon 66

Pin Nickel alloy

Flame arrestor

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

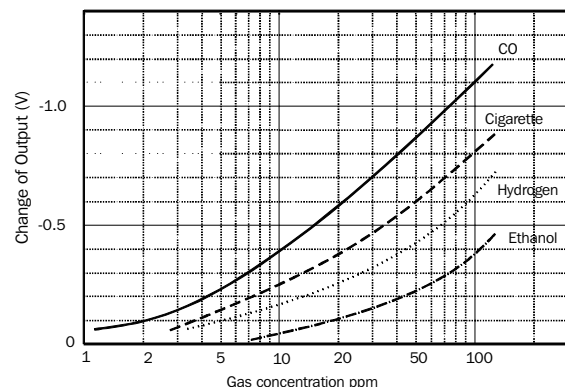
DIMENSIONS:



Sensitivity characteristics:

	Specification	Conditions
Output voltage in clean air	2 ± 0.3 V	
Voltage change in gas	-0.4 ± 0.15V	10ppm of CO ₂
Power consumption	620mW (nom)	

Typical gas sensitivity:



Note: 1 cigarette/25m³ is equivalent to 10ppm

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	
Shock	Acceleration:	100G
	Number of impacts:	5

Should satisfy the specifications shown in the sensitivity characteristics

Data sheet D-AD35-A



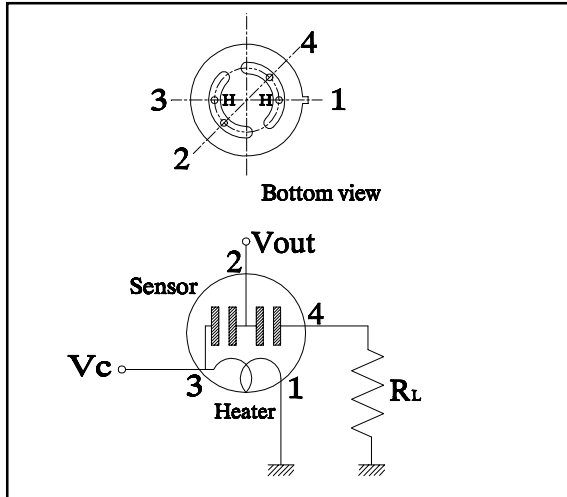
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NOTES:

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 (over current protection) 340 to 1000Ω

Preheat time 24 hours

Test gas

Carbon monoxide 10ppm

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.

Data sheet D-AD35-A