



# TECHNICAL INFORMATION SHEET

## NAP-55A Catalytic Gas Sensor, For Flammable (Explosive) Gases

Nemoto Sensor  
Engineering Co., Ltd.  
4-10-9, Takaido-higashi,  
Suginami-ku, Tokyo,  
JAPAN

### General Description

The NAP-55A Gas Sensor is a low-cost Catalytic Flammable Gas Sensor designed for the detection and measurement of Methane or Natural Gas in the range 0-50% LEL. Developed primarily for use in Residential Gas Detectors, the NAP-55A has also been found to be useful in a wide variety of applications where reliable detection of gas leaks and other gas hazards is required at low cost.

The NAP-55A uses the superior catalytic "pellistor" detection principle often used in high quality Industrial Gas Detectors. It hence has many benefits over other low cost gas sensor types



- **Monitors flammability directly**
- **Unaffected by humidity**
- **Very low long term drift**
- **Excellent resistance to catalytic poisons**
- **Single header design for ease of use**
- **Superb temperature stability**
- **Resistant to shocks and vibration**
- **Linear output to 50% LEL**

### Specifications:

Detectable Gas	All Flammable Gases (Optimised for the Detection of Methane / Natural Gas)
Recommended Voltage:	2.5V +/- 0.2V
Current Drawn:	170 +/- 10mA
Zero Offset:	0mV +/- 35mV
Signal Sensitivity:	37-53mV for 1% CH <sub>4</sub>
Range:	0-60% LEL
Repeatability:	+/- 0.5mV
<b>Maximum Long Term Drift:</b>	
Span:	< +/- 2% Signal / Month
Zero:	< +/- 2 mV / year
Response Time:	T <sub>90</sub> : <10 sec
Temperature Range:	-10°C to +50°C
Humidity:	0-95%RH, non-condensing
Linearity:	Effectively Linear to 60%LEL
Expected Lifetime	5 years

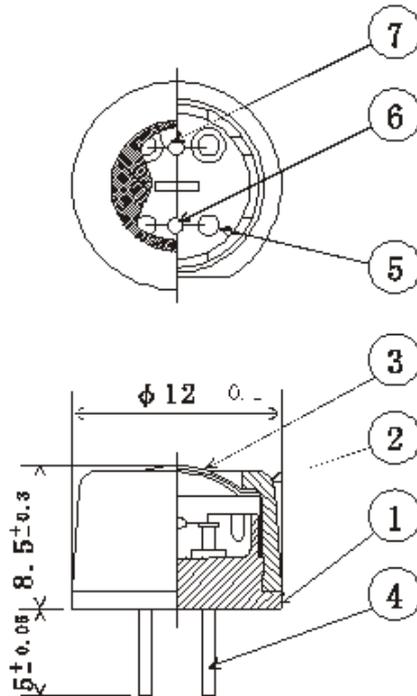
Test data on drift, poisoning, temperature performance, linearity are available on the Characterisation Document.

Nemoto has a policy of continuous development and improvement of its products. As such the specification for the device outlined in the data sheet may be changed without notice

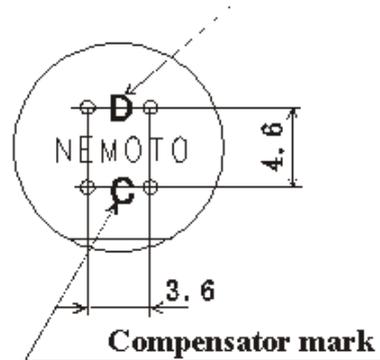
nap-55a.ppp, issue 2, Dec 2012

## Dimensions, Materials and Recommended Circuit

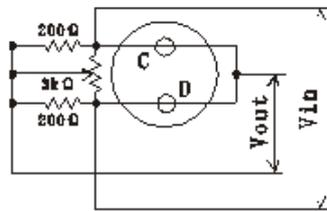
### Sensor : NAP-55A



### Detector mark



### Bottom view



### Measuring Circuit

No.	Parts names	Material	Remarks
1	Mount	Nylon 66	Glass 20% contained
2	Cap	Nylon 66	Glass 20% contained
3	Mesh	SUS 316	#100, Double mesh
4	Pin	Pure Ni	φ 0.8
5	Coil	PPT	φ 30μm
6	Compensator		Nemoto & Co, Ltd
7	Detector		Nemoto & Co, Ltd

	APPROVED	CHECKED	DESIGNED	DRAWN	MATERIAL	QTY	SCALE
THIRD ANGLE PROJECTION	TITLE				DATE	DRG NO	
	NAP-55A				DEC, 25, 1998	G-01-04-143	
	NEOTO & CO., LTD						

Test data on drift, poisoning, temperature performance, linearity are available on the Characterisation Document.

Nemoto has a policy of continuous development and improvement of its products. As such the specification for the device outlined in the data sheet may be changed without notice

Nap-55a.ppt, issue 2, Dec 2012