



## 特征

- 优越的 HMDS 抵抗性
- 优越的 H<sub>2</sub>S 抵抗性
- 优秀的冲击抵抗性及稳定性
- 敏锐的反应性

## Specifications

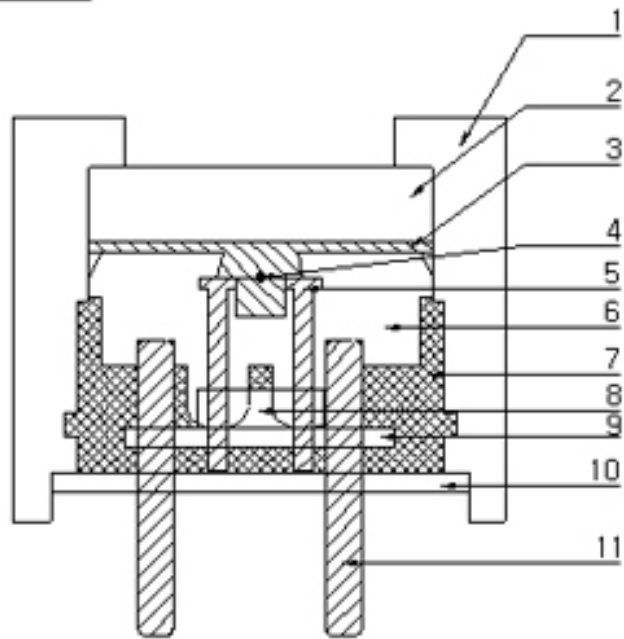
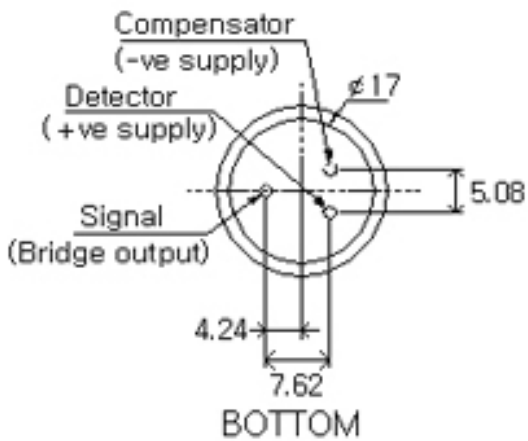
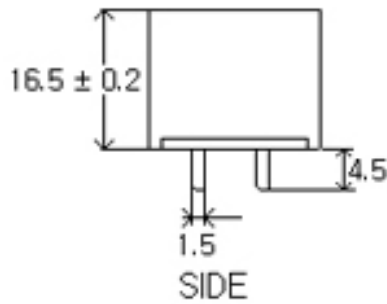
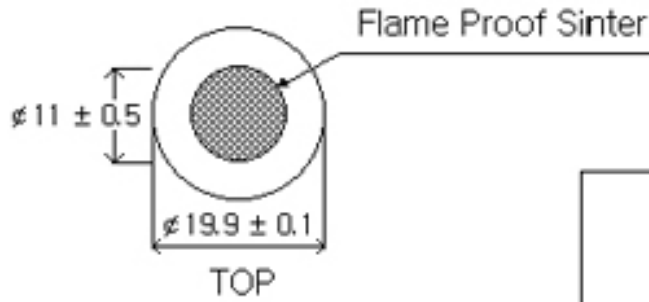
检测气体	大部分的可燃性气体
检测范围	0 ~ 100% LEL
工作电压	3.0 V
电流	> 76 ± 6 mA
输出灵敏度(Output Sensitivity)	27 ± 5 mV / % methane
初始时(Zero Offset Voltage)	-20 ~ 20 mV (23 ± 2°C, 60% RH)
线性度(Linear to)	3% methane
T <sub>90</sub> 响应时间	< 10 秒 (methane)
灵敏度变化 (Long Term Sensitivity Drift)	< 5% signal / 月
零点漂移 (Long Term Zero Drift)	< 5% LEL (methane) / 月
保修期	从销售日1年

\* 流量: 300ml/min. 环境条件: 温度23±2°C, 相对湿度60%, 1标准大气压

## Relative Sensitivity

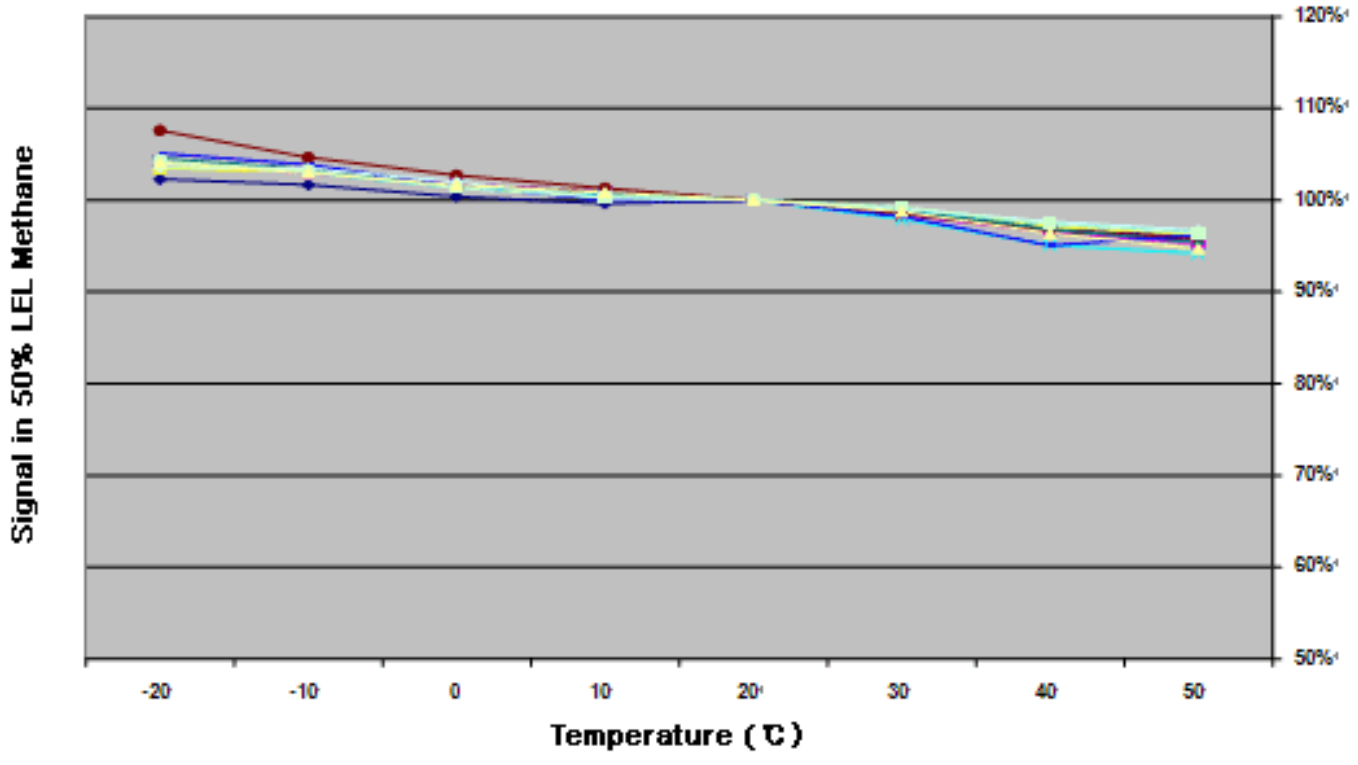
Gas/Vapor	% Relative Sensitivity
Methane	100
Hydrogen	106
Ethylene	96
Propane	82
Isobutane	74
n-Pentane	67
Hexanes	50

\* The results are intended for guidance only at the same %LEL concentration.

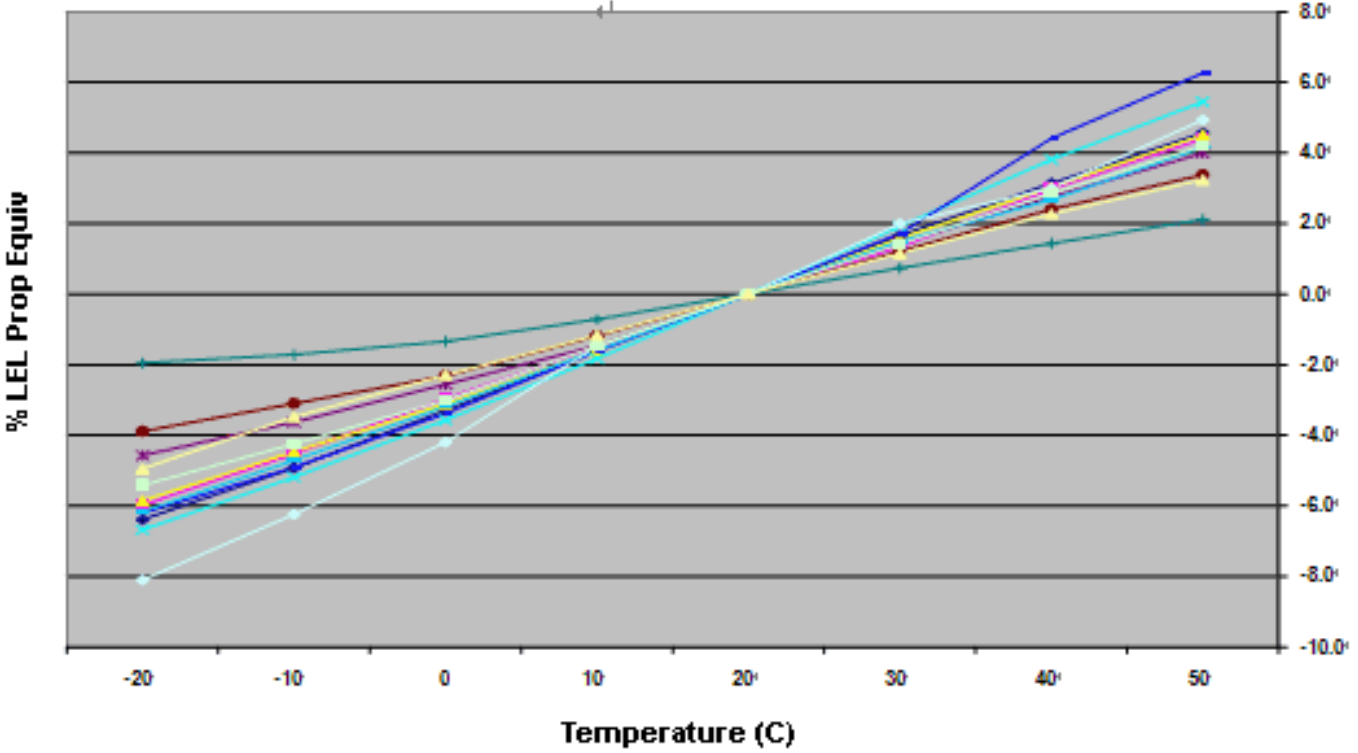


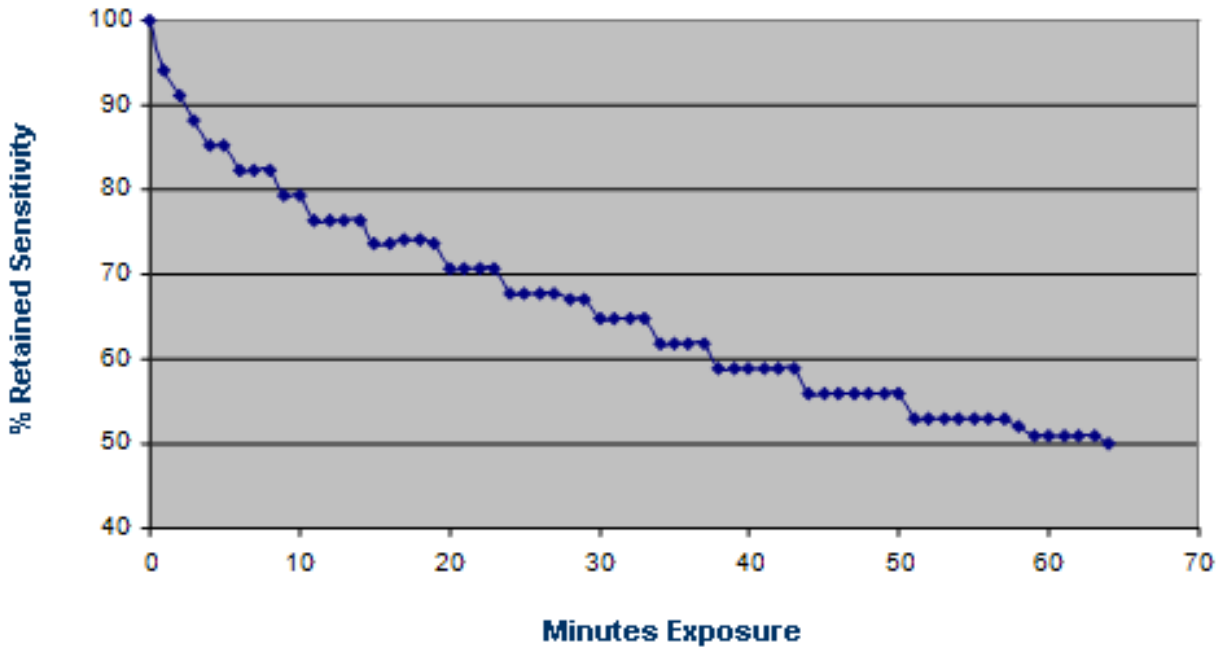
No	Description
1	SUS Housing (SUS316 or 316L)
2	Flame Proof Sinter (SUS 316L)
3	Shock Absorber (Glass Micro Filter)
4	Sensor Bead (Catalyst)
5	Inner Ni Pin
6	Inner Sensor Body (Nylon 66)
7	Potting Material (Epoxy)
8	Trim Resistor (optional)
9	Inner PCB (Epoxy FR-4)
10	Outer PCB (Epoxy FR-4)
11	Lead Pin (Ni Pin)

## Effect of Temp. on Methane Signal



## Effect of Temp. on Zero Offset Signal





## Product Approval



Approval Body : Underwriters Laboratories Inc.  
 Test Standard : UL 913  
 Product Categories : Class 1, Division 1, Groups A, B, C, D  
 Certificate Number : E248963



Approval Body : Canadian Standards Association  
 Test Standard : CAN/CSA-C22.2 No. 0-M91  
 CSA Std C22.2 No. 30-M1986  
 File Number : 237868



Approval Body : Bureau Veritas  
 Test Standard : EN60079-0:2009 EN60079-1:2007  
 Product Categories :  $\text{Ex}$  II 2G Ex d IIC Gb T6  
 $-40^{\circ}\text{C} \leq T_a \leq 55^{\circ}\text{C}$   
 Certificate Number : EPS 12 ATEX 1 410 U



Test Standard : IEC 60079-0:2007-10, Edition 5  
 IEC 60079-1:2007-04 Edition 6  
 Product Categories : Ex d IIC T6 Gb  
 Certificate Number : IECEx EPS 12.0003U

## Instructions Specific to Hazardous Area Installations (reference European ATEX Directive 94/9/EC, Annex II, 1.0.6)

Instructions for equipment covered by certificate number  
EPS 12 ATEX 1 410 U

1. With apparatus group IIA, IIB, and IIC, the equipment may be used with flammable gases and vapors with temperature classifications T1, T2, T3, T4, T5 and T6.
2. The equipment shall be used in ambient temperatures of -40°C to +55°C.
3. The equipment is not considered as a safety related device (as referred to by Directive 94/9/EC Annex II, clause 1.5)
4. Properly trained personnel shall install the equipment in accordance with the applicable code of practice (e.g. EN 60079-14)
5. Properly trained personnel shall carry out inspection and maintenance in accordance with the applicable code of practice (e.g. EN 60079-17)
6. Properly trained personnel shall carry out repair of this equipment in accordance with the applicable code of practice (e.g. EN 60079-19)
7. Sensor pins are designed to be connected to a gas detector which shall provide an intrinsically safe supply and having a maximum output power ( $P_{max}$ ) not exceeding 0.5W.
8. The confirmation of adequate sensor performance is recommended to be carried out regularly by a specified sensor calibration procedure. The calibration shall be done as often as needed according to surrounding environment where the sensor is intended to operate.
9. The following materials are used for the construction of this equipment.

Housing Material: Stainless steel 316 or 316L

Sinter Material: Stainless steel 316L

Maximum pore size of 70 $\mu$ m

Density of 4.0 to 6.0g/cm<sup>3</sup>

Cement Material: Epoxy resin

Maximum functional temperature of 150 °C

Where there is a risk of the equipment exposed to harmful substances (e.g. acidic liquids or gases that may damage metals, or solvents that may affect polymeric materials), the user is responsible for taking the suitable precautions (e.g. regular checks as part of routine inspections or establishing from the material's data sheet that it is resistance to specific chemicals). The precautions are to prevent the equipment from being adversely affected and to ensure that the type of protection shall be maintained.

10. The following factors are identified to have a harmful effect on catalytic elements as used in the gas sensors, KGS 701, KGS 702 and KGS 703.

**Poisoning:** some compounds will decompose on the catalyst and form a solid barrier over the catalyst surface. This action is cumulative and prolonged exposure will result in an irreversible decrease in sensitivity. The most common of these substances are: lead or sulphur containing compounds; silicones; phosphates.

**Inhibition:** certain other compounds, especially hydrogen sulphide and halogenated hydrocarbons, are absorbed or form compounds that are absorbed by the catalyst. The resultant loss of sensitivity is

temporary and in most cases a sensor will recover after a period of operation in clean air.

If the presence of poisoning or inhibition is suspected, adequate protective action for the sensor should be taken.

11. The Certification marking is shown below.

## ATEX Marking

	<b>Combustible Gas Sensor</b> <b>KGS 701</b>	EPS 12 ATEX 1 410 U EX d IIC T6 Gb -40 ≤ Ta ≤ 55
	Korea New Ceramics Co., Ltd. 11 Gyeongin-ro 364, Sosa-gu, Bucheon-si, Gyeonggi-do, 422-806 South Korea	CE 2004  IICG S/N: xxxxxxxx

## IECEx Marking

	<b>Combustible Gas Sensor</b> <b>KGS 701</b>	IECEx EPS 12.0003X EX d IIC T6 Gb -40 ≤ Ta ≤ 55
	Korea New Ceramics Co., Ltd. 11 Gyeongin-ro 364, Sosa-gu, Bucheon-si, Gyeonggi-do, 422-806 South Korea	S/N: xxxxxxxx