

GAS SENSOR
Methane(CH₄) Gas Sensor
OGS-401F4

Revision Date: 2015/10/12


Introduction

OGS-401F4 is a single channel thermopile device having an output signal voltage directly proportional to the incident infrared (IR) radiation power. An infrared narrow band pass filter in front of the sensor makes the device sensitive to methane (CH₄) gas concentration.

Features

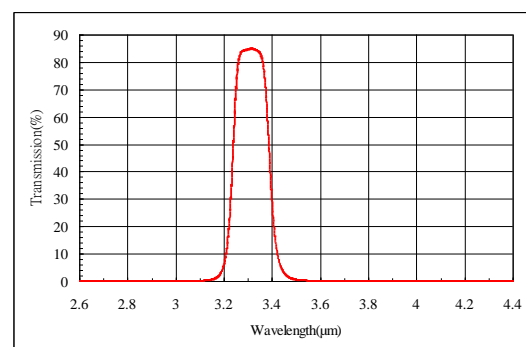
- Thermistor temperature reference included
- High sensitivity
- Fast response time
- Narrow band pass filters

Applications

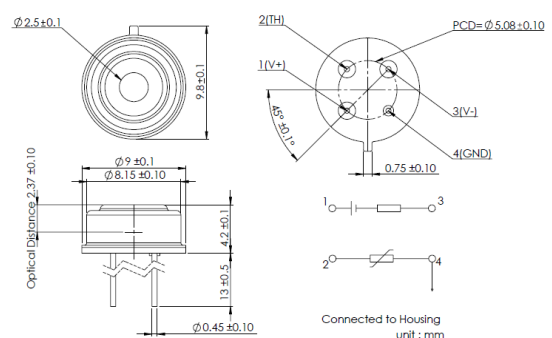
- Gas sensing and monitoring
- Mine safety

Specifications

Model	OGS-401F4		
Target Gas	Methane (CH ₄)		
Filter CWL	3.3μm		
Window Size (mm)	2.5mm		
Package Type	TO-5		
Parameter	Typical	Unit	Conditions
Sensitivity	46	V/W	500K, Typical
TC of sensitivity	0.22±0.05	%/K	Typical
Sensitive area in diameter	0.7	mm	
Resistance of thermopile	115±35	KΩ	25°C
TC of resistance	0.11±0.05	%/K	Typical
Time constant	20	ms	500K, Typical
Noise voltage	43	nV/Hz ^{1/2}	r.m.s. 300K
NEP	0.95	nW/Hz ^{1/2}	500K, Typical
Normalized detectivity (D*)	0.9*10 ⁸	cm*Hz ^{1/2} /w	500K, Typical
Thermistor	Typical	Unit	Conditions
Resistance	100±5%	KΩ	25°C
β value	3964±0.5%	K	25°C /100°C



Transmittance of 3.3μm filter



Mechanical Dimension