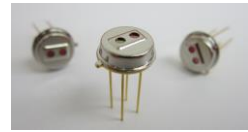


NDIR SENSOR

NDIR CO2 Dual Channels Gas Sensor

OGS-237

Revision Date: 2015/10/12



Introduction

The OGS-237 is a dual channels thermopile device having an output signal voltage directly proportional to the incident infrared (IR) radiation power. Two infrared narrow band pass filters in front of the sensor provide CO2 gas absorption signal and reference signal simultaneously.

Features

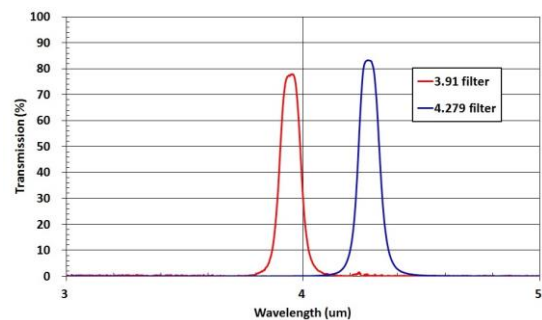
- Thermistor temperature reference included
- High sensitivity
- Fast response time
- Narrow band pass filters

Applications

- IR absorption (NDIR) gas sensing with reference channel to monitor light source
- Demand Control Ventilation (DCV)
- In door air quality monitoring
- Obstructive Sleep Apnea monitoring
- Industrial control
- Climate Control for Automobiles
- Combustion Control for Furnace
- Greenhouse

Specifications

Model	OGS-237		
Target Gas	CO2		
Filter CWLs	4.279 um (TP2) 3.91 um (TP1)		
Window Size	1.5 mm in diameter		
Spacing of Window	2.5 mm		
Package Type	TO-5		
Parameter	Typical	Unit	Conditions
Sensitivity	85	V/W	500K, w/o filter
TC of sensitivity	0.01	%/K	Typical
Sensitive area	$\Phi=1.35$	mm	In diameter
Resistance of thermopile	350±110	K Ω	25°C
TC of resistance	0.11±0.05	%/K	Typical
Time constant	30	ms	
Noise voltage	62.2	nV/Hz ^{1/2}	r.m.s. 300K
Noise Equivalent Power	0.7	nW/Hz ^{1/2}	500K, Typical
Normalized detectivity (D*)	3 x 10 ⁸	cm*Hz ^{1/2} /w	500K, Typical
Thermistor	Typical	Unit	Conditions
Resistance	100±5%	K Ω	25°C
β value	3964±1%	K	0°C/100°C



Transmittance of 4.279um filter and 3.91 um filter

