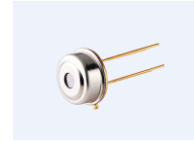


**Thermopile Sensor**

**OTP-N537F2**

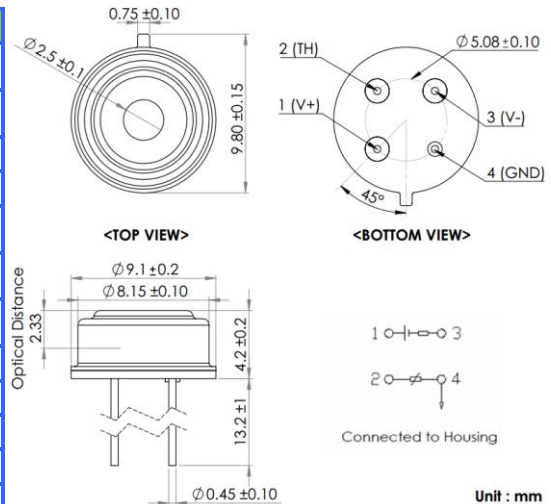
Revision Date: 2018/01/08 (Rev.05)



The OTP-N537F2 is a thermopile sensor in classic TO-5 housing. The sensor is composed of 116 elements of thermocouple in series on a floating micro-membrane having an active area of diameter 545 μm. The thermopile sensor provides nearly Johnson-noise-limited performance, which can be calculated by its ohmic series resistance. A thermistor with a lead connected to ground is also provided inside the TO package for ambient temperature reference.

- TO-5 metal housing with IR absorber coating inside
- Thermistor temperature reference included
- Low temperature coefficient of sensitivity
- Ideally suited for ear thermometers, miniature pyrometer.

Parameter	Typ	Unit	Conditions
Operating temperature	-20~100	°C	
Storage temperature	-40~100	°C	
Sensitivity	87	V/W	※1
TC of sensitivity	0.11±0.05	%/K	25°C
Thermopile Voltage	0.7±0.3	mV	※1
Active area in diameter	545	μm	
Resistance of thermopile	50±15	KΩ	25°C
TC of resistance	0.09±0.05	%/K	25°C
Time constant	16	ms	
Noise voltage	28	nV/Hz <sup>1/2</sup>	r.m.s, 25°C
NEP	0.33	nW/Hz <sup>1/2</sup>	※1
Normalized detectivity (D*)	1.5*10 <sup>8</sup>	cm*Hz <sup>1/2</sup> /W	※1
Thermistor resistance	30±5%	KΩ	25°C
β value	3811±0.5%	K	0°C/50°C
Field of view	55	°	@50% target signal
Cut on wavelength	5±0.3	μm	@25°C, 50% transmittance



※1 Test condition : Tb:50°C, Ta:25°C, 5-14μm filter

