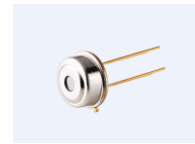


Thermopile Sensor

OTP-667F4P

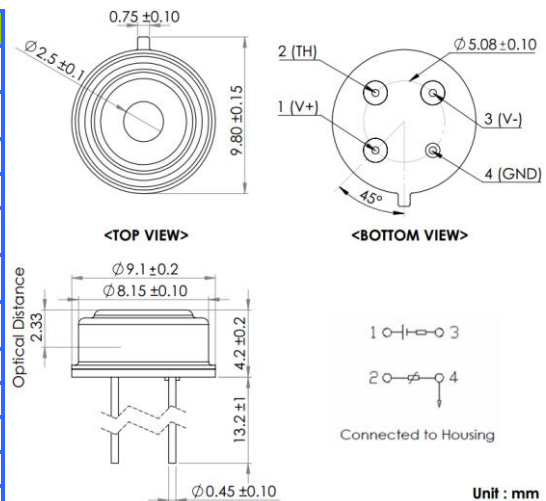
Revision Date: 2018/01/08 (Rev.08)



The OTP-667F4P 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 700 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	53	V/W	※1
TC of sensitivity	0.22±0.05	%/K	25°C
Thermopile Voltage	0.7±0.3	mV	※1
Active area in diameter	700	μm	
Resistance of thermopile	115±35	KΩ	25°C
TC of resistance	0.11±0.05	%/K	25°C
Time constant	20	ms	
Noise voltage	43	nV/Hz ^{1/2}	r.m.s, 25°C
NEP	0.81	nW/Hz ^{1/2}	※1
Normalized detectivity (D*)	7.6*10 ⁷	cm ² Hz ^{1/2} /W	※1
Thermistor resistance	100±5%	KΩ	25°C
β value	3964±0.5%	K	25°C/100°C
Field of view	55	°	@50% target signal
Cut on wavelength	8±0.3	μm	@25°C, 50% transmittance



※1 Test condition : Tb:50°C, Ta:25°C, 8-14μm filter

