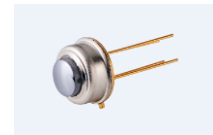


Thermopile Sensor

OTP-336

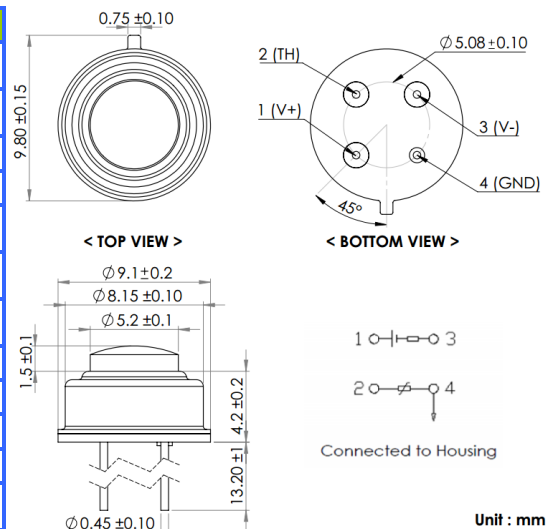
Revision Date: 2018/01/08 (Rev.07)



The OTP-336 sensor is composed of 116 elements of thermocouple in series on a floating micro-membrane having an active area of diameter 700 μm. The size of the housing is a TO5-package with a window opening. The window is equipped with an IR-transmissible filter and a lens. 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 filter and lens
- Thermistor reference included
- Low temperature coefficient of sensitivity
- Ideally suited for Forehead thermometers, miniature pyrometer.

Parameter	Typ	Unit	Conditions
Operating temperature	-20~100	℃	
Storage temperature	-40~100	℃	
Sensitivity	479	V/W	※1
TC of sensitivity	0.22±0.05	%/K	25℃
Thermopile Voltage	0.9±0.3	mV	※1
Active area in diameter	700	μm	
Resistance of thermopile	115±35	KΩ	25℃
TC of resistance	0.11±0.05	%/K	25℃
Time constant	20	ms	
Noise voltage	43	nV/Hz ^{1/2}	r.m.s, 25℃
NEP	0.09	nW/Hz ^{1/2}	※1
Normalized detectivity (D*)	6.9*10 ⁸	cm*Hz ^{1/2} /W	※1
Thermistor resistance	100±5%	KΩ	25℃
β value	3964±0.5%	K	25℃/100℃
Field of view	20	°	@50% target signal
Cut on wavelength	5±0.3	μm	@25℃, 50% transmittance



※1 Test condition : Tb:50℃, Ta:25℃, 5-14μm filter with lens

