Thermopile Sensor

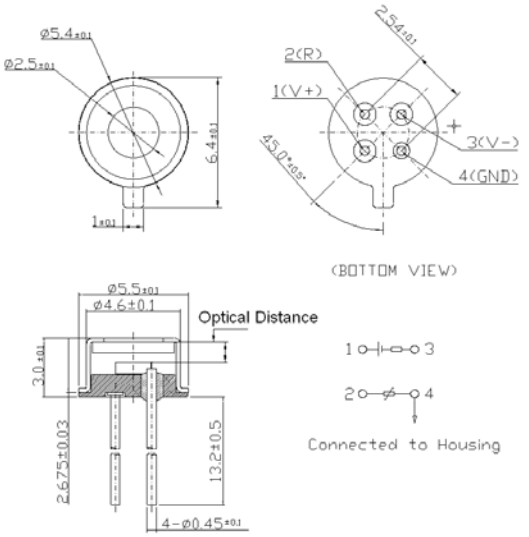
OTP-528D2

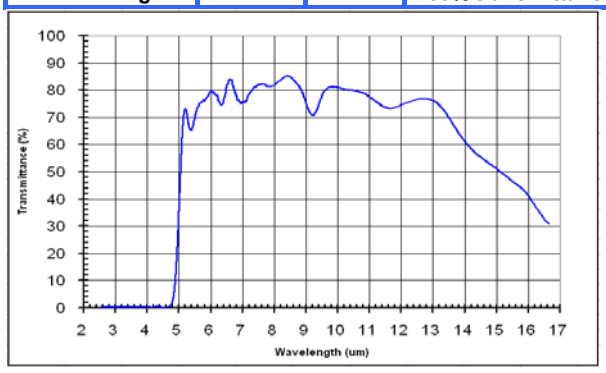
Revision Date: 2009/05/13

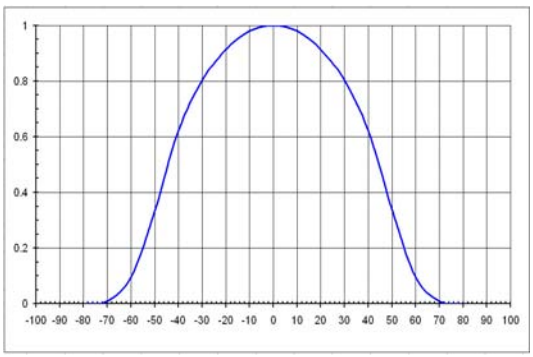
The OTP-528D2 is a thermopile sensor in classic TO-46 housing. The sensor is composed of 116 elements of thermocouple in series on a floating micro-membrane having an active area of 900 x 900 μm^2. The thermopile sensor provides nearly Johnson-noise-limited performance, which can be calculated by its ohmic series resistance. A thermistor element, with a lead connected to ground, is also provided inside the TO package for ambient temperature reference.

- TO-46 metal housing
- Thermistor temperature reference included
- Low temperature coefficient of sensitivity
- Ideally suited for ear thermometers, miniature pyrometer.

Parameter	Typ	Unit	Conditions
Sensitivity	46	V/W	500K, 5-14μm
TC of sensitivity	0.1±0.08	%/K	Typical
Thermopile Voltage	1.5±0.5	mV	Tb:50℃, Ta:25℃ 5-14μm
Sensitivity area in diameter	0.9x0.9	mm^2	
Resistance of thermopile	65±15	KΩ	25℃
TC of resistance	0.1±0.05	%/K	Typical
Time constant	20	ms	
Noise voltage	32	$nV/Hz^{1/2}$	r.m.s 300K
NEP	0.7	$nW/Hz^{1/2}$	500K, 5-14μm
Normalized detectivity (D*)	$1.3*10^8$	$cm*Hz^{1/2}/W$	500K, 5-14μm
Thermistor resistance	100±3%	KΩ	25℃
β value	3964±0.5%	K	25℃/100℃
Field of view	90	°	At 50% target signal
Cut on wavelength	5.0±0.3	μm	At 25℃, 50% transmittance







Oriental System Technology Inc
www.orisystech.com
Tel: 886-3-5785177 Fax: 886-3-5787070 e-mail: sales@orisystech.com
2F. No.25, Industry E.Road 9th, Science-Based Industrial Park, Hsinchu 30075, Taiwan