TP1A1F5.5

Silicon-Based Thermopile FIR or Thermal Infrared Sensor

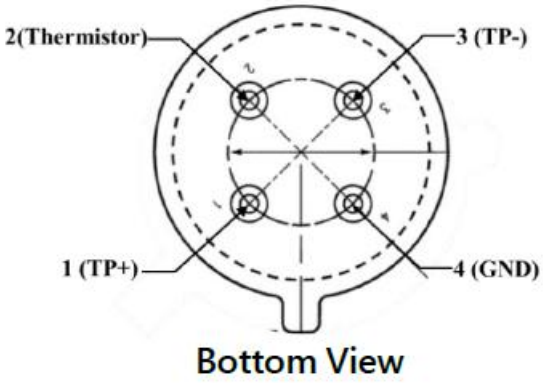
The TP1A1 series is a high performance with reasonable size of attractive price, sensitive, low-noise, single-channel thermopile sensor used for non-contact temperature measurement. It is designed especially for forehead thermometer use with membrane size of 1.69 mm^2

Features

- Analog Output
- TO-46 packaged
- Quick thermal response
- Thermistor temperature reference included
- Used for non-contact temperature measurement or forehead thermometers

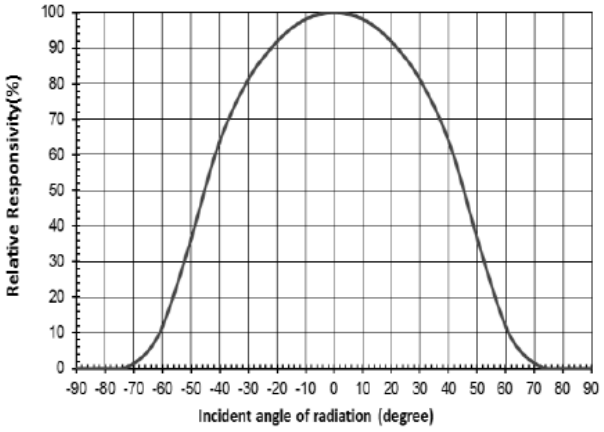
Pin Definition

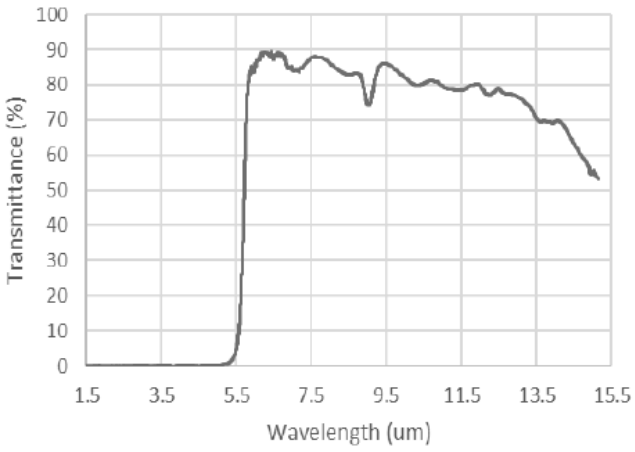
Pin No.	Pin Description
1	TP+
2	NTC
3	TP-
4	GND



Bottom View

Optical Characteristics

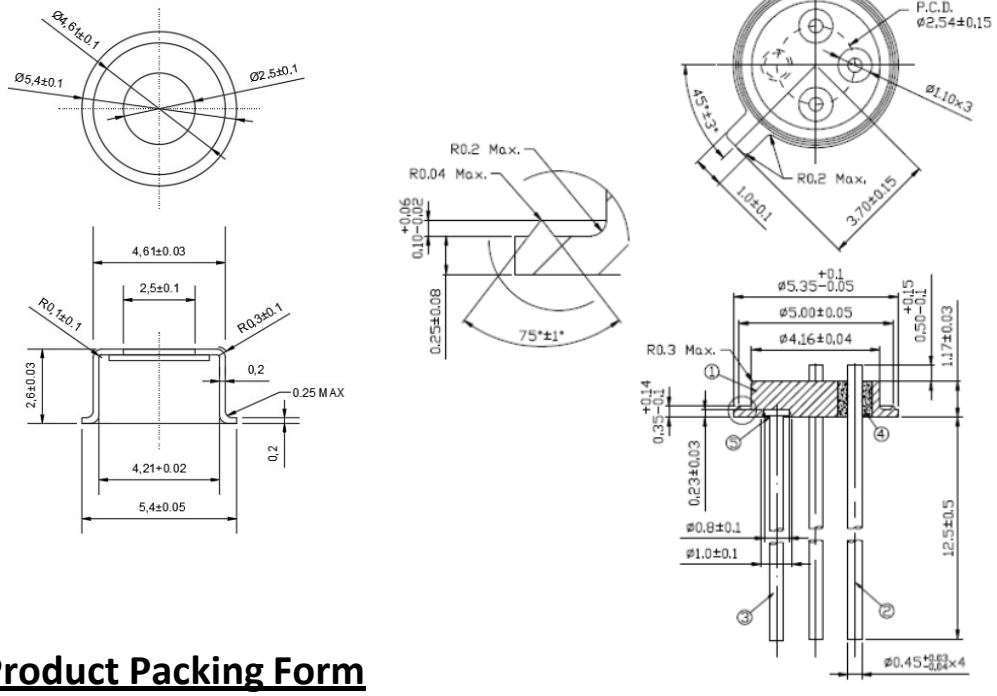




Technical Specifications

Parameter	Symbol	Value	Unit	Conditions
Membrane Area	A	1.69	mm^2	1.3 x 1.3 mm^2
Output Voltage	V_s	2.8 ± 30%	mV	Tb = 50˚C, Ta = 25˚C, 5.5-14um, FOV = 90◦
Voltage Responsivity	R_v	41.1	V/W	Tb = 50˚C, Ta = 25˚C, 5.5-14um, FOV = 90◦
Temperature Coefficient of Rv	TCR_v	0.04± 0.02	%/K	Reference
Resistance	R_S	155 ± 30%	kΩ	
Temperature Coefficient of R	TCR	0.1	%/K	Tb = 100˚C, Ta = 0 to 80˚C, best fit
Time Constant		15	ms	
Nominal Noise Voltage	V_n	50.5	$nV/Hz^{½}$	
Noise Equivalent Power	NEP	1.23	$nW/Hz^{½}$	
Normalized Detectivity	D*	$5.15*10^7$	$cmHz^{½}/W$	
Thermistor Resistance	R_t	100	kΩ	Ta = 25˚C
β Value of NTC	β	3950	K	
Field of View		90	◦	@50% target signal
Operating Temperature		-20~100	˚C	
Storage Temperature		-40~100	˚C	

Package Information



Standard Product Packing Form

Stick Magazine – 50pcs per stick magazine