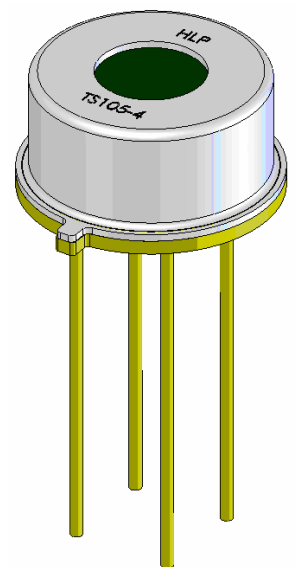


THERMOPILE SENSOR----- TS105-4

**The TS105-4 is a thermopile sensor
for use in long range contactless temperature measurement**

Thermopiles are mainly used for contactless temperature measurement in many applications. Their function is to transfer the heat radiation emitted from the objects into voltage output. Major applications are appliances like microwave oven, clothes dryer, automatic cooking, medical devices like ear and forehead thermometer, automotive applications like car climate control, seat occupancy, blind spot alert, black ice detection, consumer products like printer, copier, mobile phone and many industry applications like paper web, plastic parts etc.

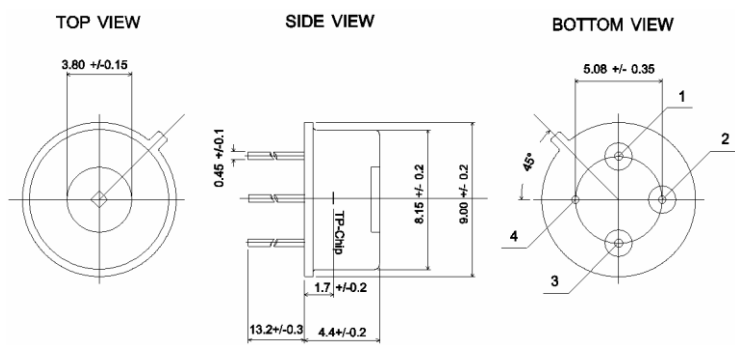
Parameter	Typical	Condition
Package	TO-5	
Absorber Area	$0.7 \times 0.7 \text{ mm}^2$	
Resistance of Thermopile	$43 \pm 8 \text{ k}_\Omega$	$+25^\circ\text{C}$
TC of Resistance	$-0.06 \pm 0.04 \text{ \%}/\text{K}$	$+25^\circ\text{C} \text{ -- } +75^\circ\text{C}$
Thermopile Voltage	$3.3 \pm 0.85 \text{ mV}$	$+25^\circ\text{C}$ BB $+100^\circ\text{C}$, DC
TC of sensitivity	$-0.45 \pm 0.08 \text{ \%}/\text{K}$	$+25^\circ\text{C} \text{ -- } +75^\circ\text{C}$
Noise Equivalent Voltage	$30 \text{ nV}/\text{Hz}^{1/2}$	$+25^\circ\text{C}$
Rise Time	$20 \pm 5 \text{ ms}$	63
Field of View	90°	
Filter	8-14	μm band pass
Operation Temperature -	$20 \dots +85^\circ\text{C}$	
Operation Temperature	$-20 \dots +100^\circ\text{C}$	non permanent
Ambient Temperature Sensor -		



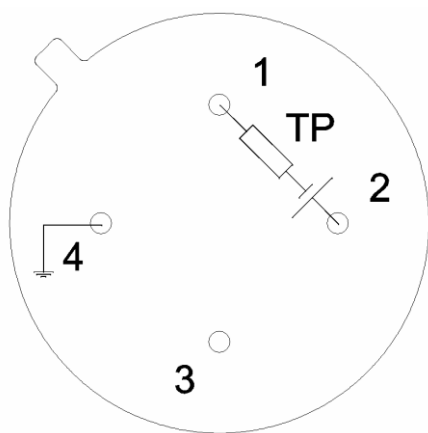
Connections

Pin 1 TP -
Pin 2 TP +
Pin 3 --
Pin 4 GND

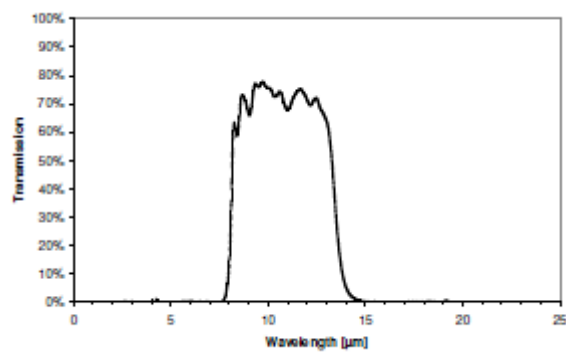
Mechanical Dimensions



Connections Filter Transmission



Bottom View



Thermopile Signal

