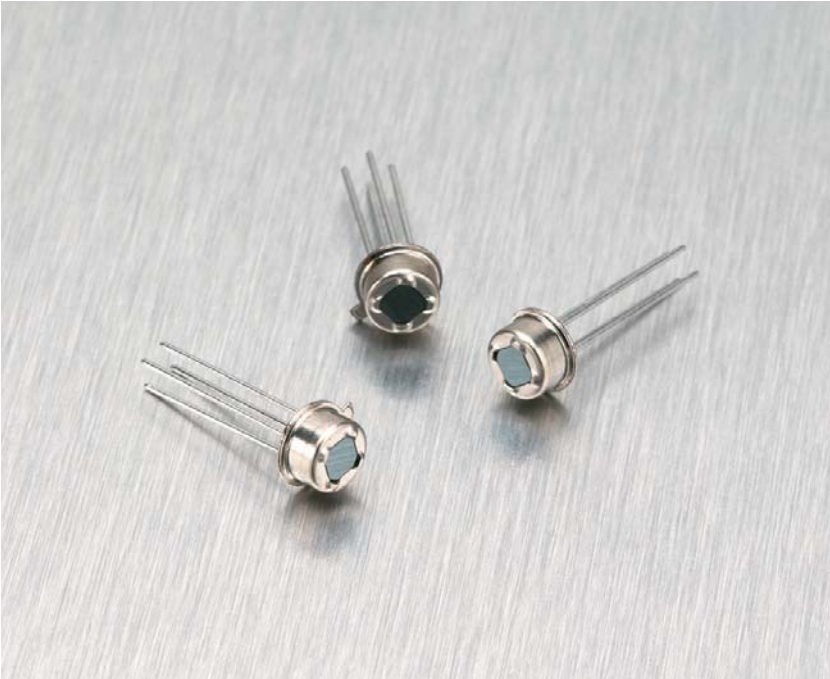


# TPS 333 - Thermopile Detector

## Miniature Sensor Housing



### Description

The **TPS 333** is an extremely small thermopile detector employing a chip of  $0.7 \times 0.7 \text{ mm}^2$  absorber size and a  $100 \text{ k}\Omega$  thermistor as a temperature reference.

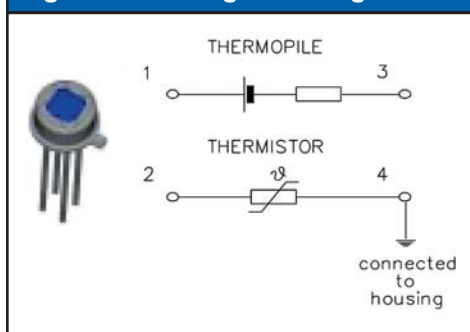
The square window opening is equipped with a  $5.5 \text{ }\mu\text{m}$  longpass (standard) infrared filter. The detector shows a constant sensitivity characteristics over the wavelength.

### Features

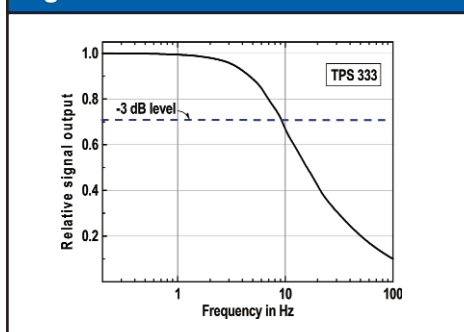
- Miniature Sensor Housing: TO 18
- Thermistor Temperature Reference Included
- Large Signal; Low Temperature coefficient of sensitivity
- Ideally Suited for Ear Thermometers, Miniature Pyrometers

# TPS 333 - Thermopile Detector Miniature Sensor Housing

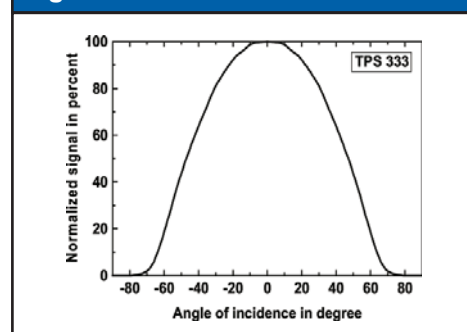
**Figure 1. Package Drawing**



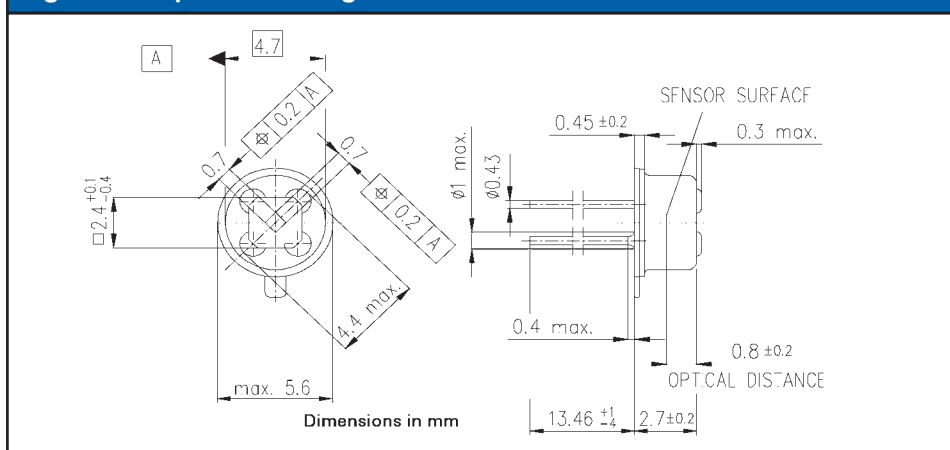
**Figure 2.**



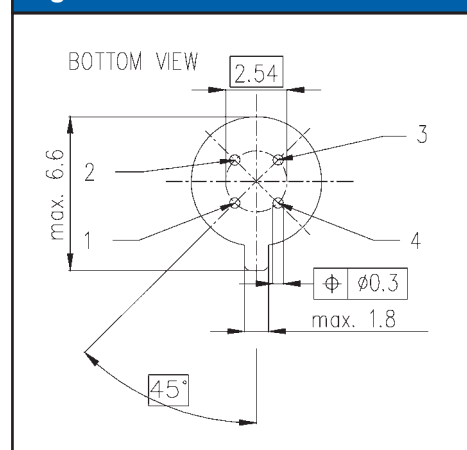
**Figure 3.**



**Figure 4. Top View Package Dimension**



**Figure 5. Bottom View**



**Table 1. TPS 333**

Parameter	Typical	Units	Condition
Sensitive area	0.7 x 0.7	mm <sup>2</sup>	absorbing area
Window size	2.4 x 2.4	mm <sup>2</sup>	
DC sensitivity	35	V/W	500K BB 5 ... 14μm
Resistance	75	kΩ	
Noise	38	nV/√Hz	r.m.s. 300K
NEP	1.2	nW/√Hz	500K BB 5 ... 14μm
D*	0.6 x 10 <sup>8</sup>	cm√Hz/W	500K BB 5 ... 14μm
TC of sensitivity	0.02	%/K	
TC of resistance	0.02	%/K	
Time constant	25	ms	
Operating temperature	-40 to 100	°C	non permanent
Storage temperature	-40 to 100	°C	non permanent
Thermistor resistance	100	kΩ	25°C
beta	3964	K	25°C/100°C
Field of view	100	°	at 50% points

For more information e-mail us at [opto@perkinelmer.com](mailto:opto@perkinelmer.com) or visit our website at [www.perkinelmer.com/optoelectronics](http://www.perkinelmer.com/optoelectronics)

All values are nominal; specifications subject to change without notice.

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