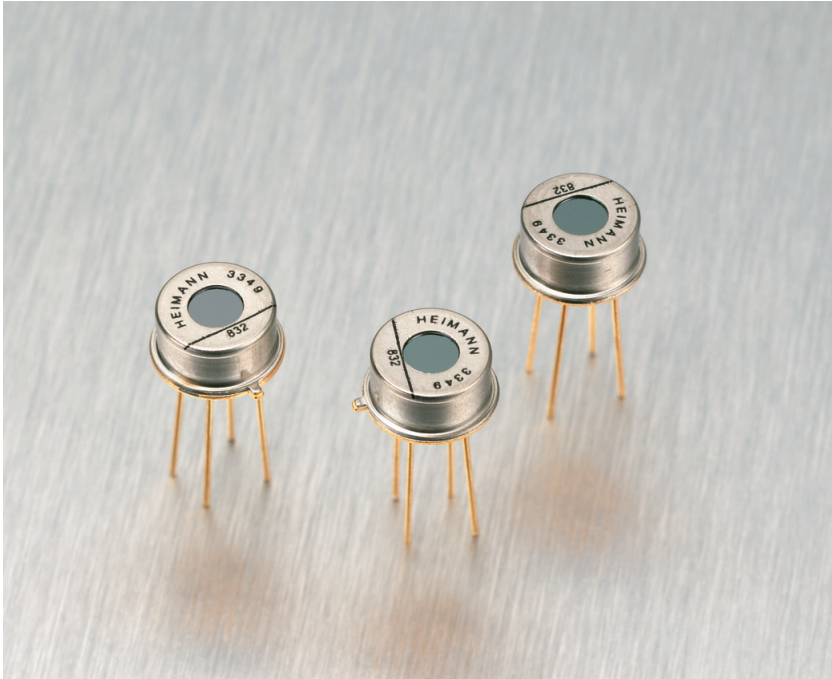


# TPS 534 - Thermopile Detector

## Large Absorber Size



### Description

The **TPS 534** thermopile sensor in a TO 5 type housing employs a chip of  $1.2 \times 1.2 \text{ mm}^2$  absorber size and a  $30 \text{ k}\Omega$  thermistor as temperature reference. The round window opening is equipped with a  $5.5 \mu\text{m}$  longpass (standard) infrared filter. The sensor shows a flat sensitivity characteristic over the wavelength.

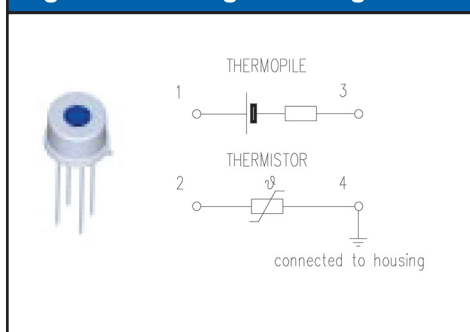
Remark: The TPS 534 can also be equipped with infrared bandpass filters for NDIR gas detection.

### Features

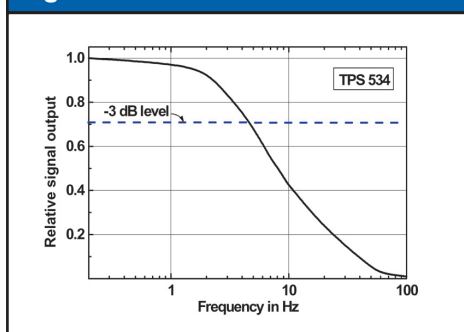
- Large Absorber Size - High Signal Output
- Low Temperature Coefficient of Sensitivity
- Thermistor Temperature Reference included
- Applications in Pyrometers, and with Additional Bandpass Filters, in Gas Detectors

# TPS 534 - Thermopile Detector Large Absorber Size

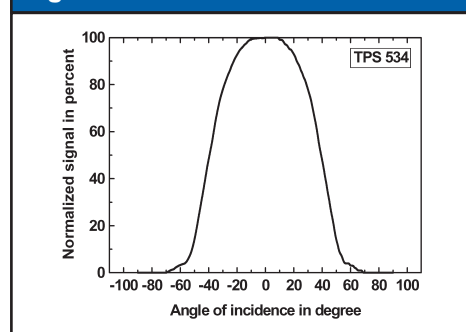
**Figure 1. Package Drawing**



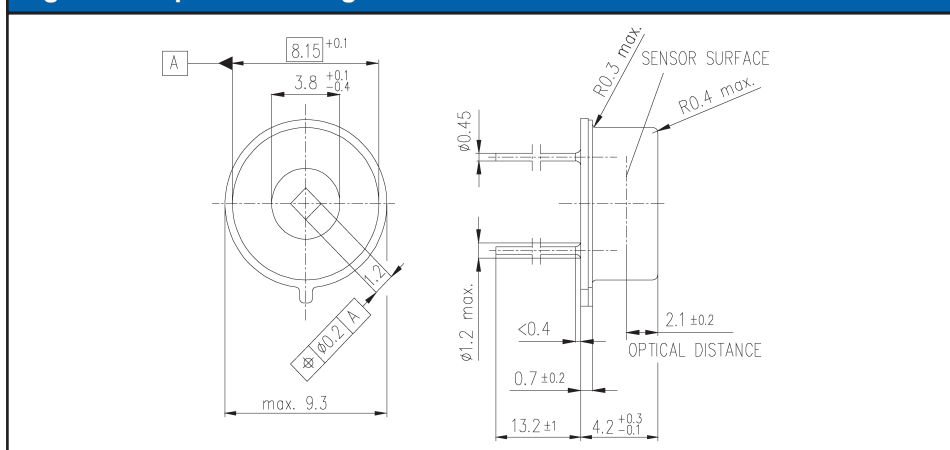
**Figure 2.**



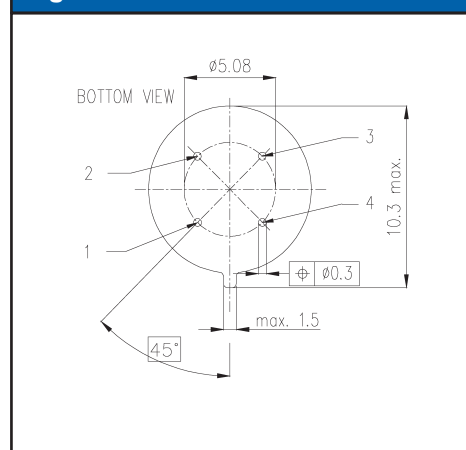
**Figure 3.**



**Figure 4. Top View Package Dimension**



**Figure 5. Bottom View**



**Table 1. TPS 534**

Parameter	Typical	Units	Condition
Sensitive area	1.2 x 1.2	mm <sup>2</sup>	absorbing area
Window size	3.8	mm	diameter
DC sensitivity	20	V/W	500K BB 5 ... 14µm
Resistance	40	kΩ	25°C
Noise	25	nV/√Hz	r.m.s. 300K, 1 Hz
NEP	1.26	nW/√Hz	500K BB 5 ... 14µm
D*	0.96 x 10 <sup>8</sup>	cm√Hz/W	500K BB 5 ... 14µm
TC of responsivity	-0.01	%/K	
TC of resistance	0.02	%/K	
Time constant	35	ms	
Operating temperature	-40 to 100	°C	non permanent
Storage temperature	-40 to 100	°C	non permanent
Thermistor resistance	30	kΩ	25°C
beta	3964	K	25°C/100°C
Field of view	80	°	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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