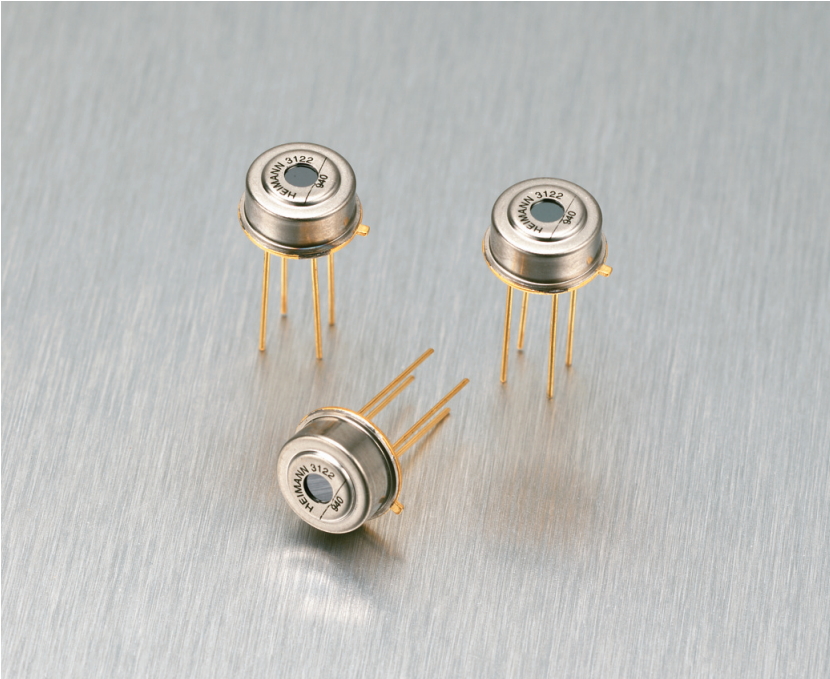


TPS 334 - Thermopile Detector

Small Absorber Size



Description

The **TPS 334** thermopile sensor in TO 5 type housing employs a chip of $0.7 \times 0.7 \text{ mm}^2$ absorber size and a $30 \text{ k}\Omega$ thermistor as a 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 characteristics over the wavelength.

The TPS 334 can be equipped with a G9 ($8 \dots 14 \mu\text{m}$) filter for precision remote temperature sensing (TPS 334 G9).

Features

- Small Absorber Size - Best Suited for Temperature Measurement Applications
- Standard Size for Pyrometers and Ear Thermometers

TPS 334 - Thermopile Detector Small Absorber Size

Figure 1. Package Drawing

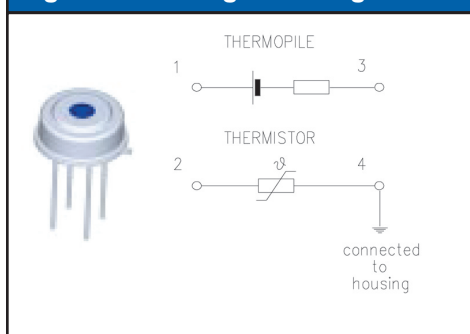


Figure 2.

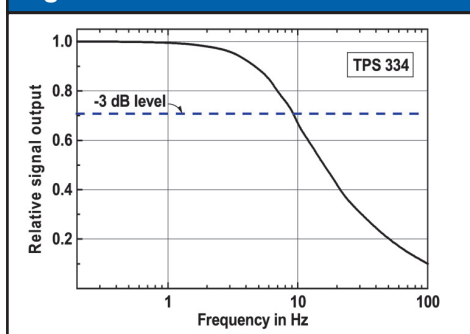


Figure 3.

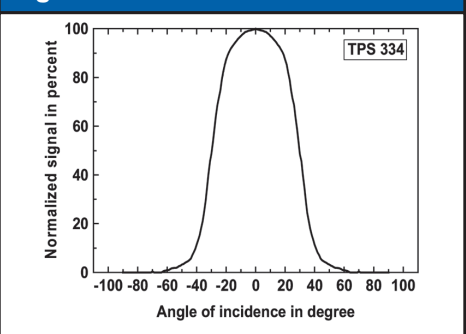


Figure 4. Top View Package Dimension

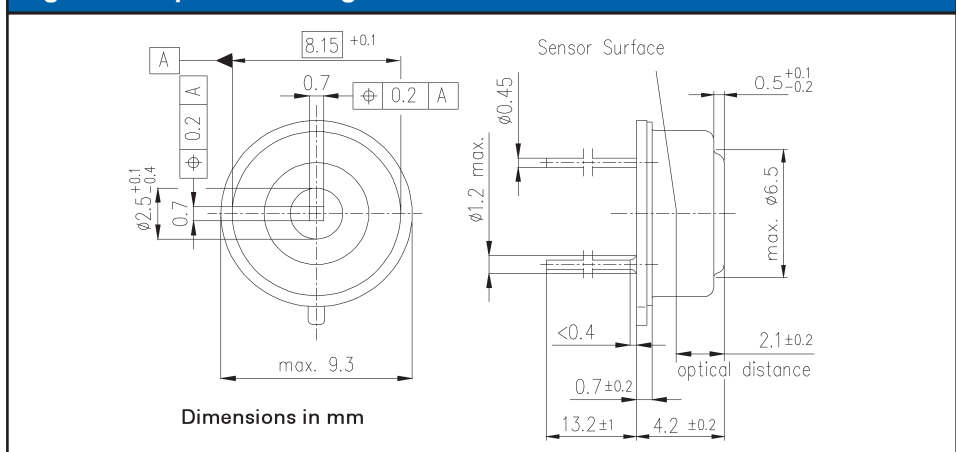


Figure 5. Bottom View

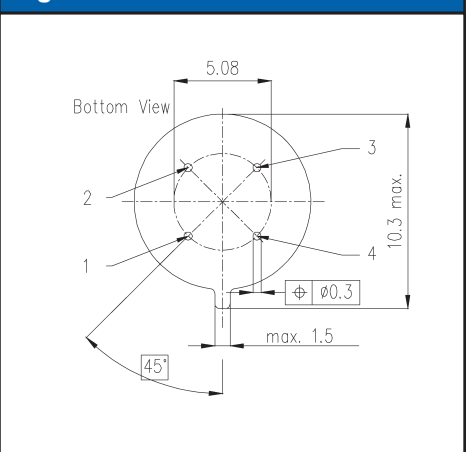


Table 1. TPS 334

| Parameter | Typical | Units | Condition |
|-----------------------|-----------------------|-----------------|--------------------|
| Sensitive area | 0.7 x 0.7 | mm ² | absorbing area |
| Window size | 2.5 | mm | diameter |
| 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 ⁸ | 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 | 30 | kΩ | 25°C |
| beta | 3964 | K | 25°C/100°C |
| Field of view | 60 | ° | at 50% points |

For more information e-mail us at opto@perkinelmer.com or visit our website at www.perkinelmer.com/optoelectronics

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

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