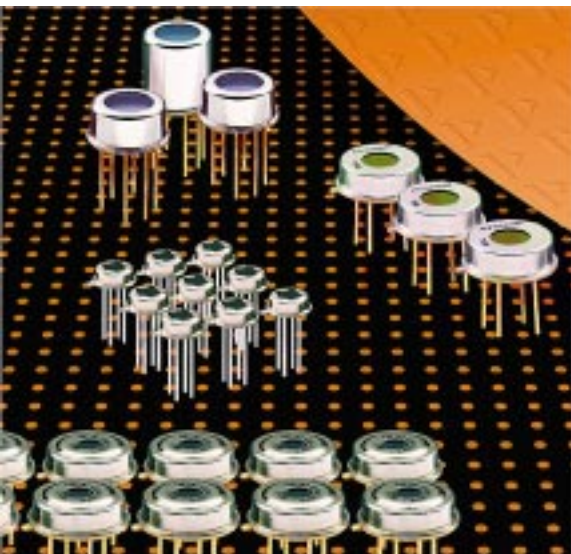


Thermopile Infrared Detectors

Thermopile Detector **TPS 434**



Extremely small absorber size – for high precision pyrometers

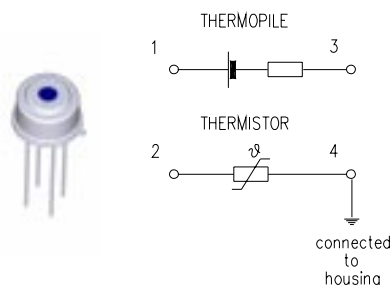
Thermistor temperature reference included

Low temperature coefficient of sensitivity

Applications: ear thermometers and pyrometers

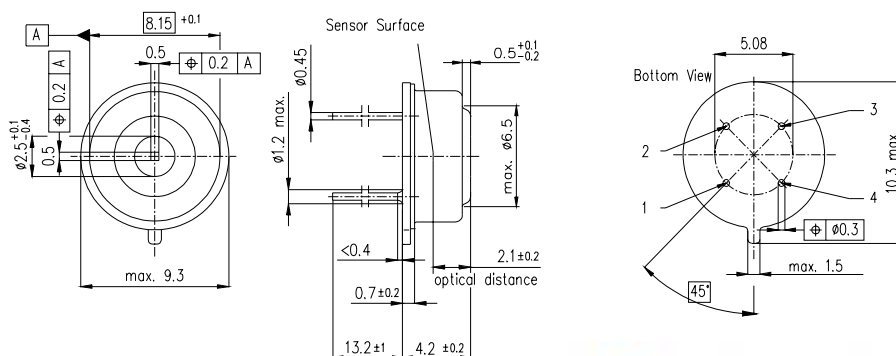
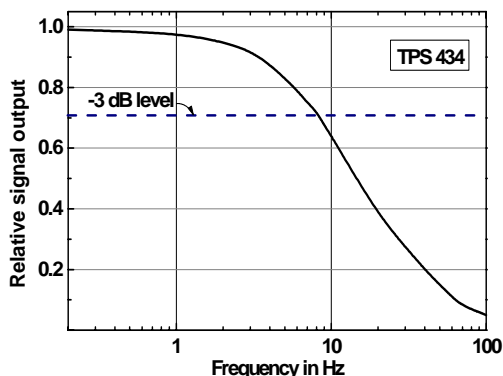
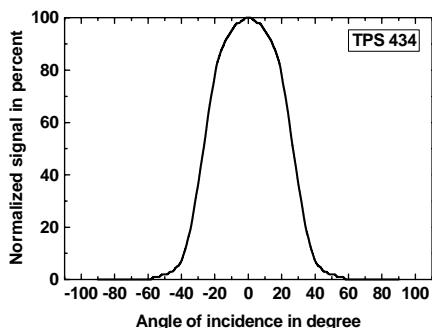
The **TPS 434** thermopile sensor in TO 5 type housing employs a chip of 0.5 x 0.5 mm² absorber size and a 30 kΩ thermistor as temperature reference. The round window opening is equipped with a 5.5 mm longpass (standard) infrared filter. The sensor shows a flat sensitivity characteristic over the wavelength.

The **TPS 434** can be equipped with a G9 (8...14 μm) filter for precision pyrometers (TPS 434 G9).



Parameters	TPS 434		
	typical	units	condition
Sensitive area	0.5 x 0.5	mm ²	absorbing area
Window size	2.5	mm	diameter
DC sensitivity	35	V/W	500K BB 5..14μm
Resistance	35	kΩ	
Noise	21	nV/√Hz	r.m.s. 300K,
NEP	0.6	nW/√Hz	500K BB 5..14μm
D*	0.84 x 10 ⁸	cm√Hz/W	500K BB 5..14μm
TC of sensitivity	0.02	%/K	
TC of resistance	0.02	%/K	
Time constant	20	ms	
Storage temperature	-40	100	°C non permanent
Operating temperature	-40	100	°C non permanent
Thermistor resistance	30	kΩ	25°C
beta	3964	K	25°C/100°C
Field of view	55	°	at 50% points

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Europe:
PerkinElmer Optoelectronics GmbH
 Wenzel Jaksch Str 31
 Wiesbaden / Germany
 Phone +49(0)611 492 0
 Fax +49(0)611 492 170

USA:
PerkinElmer Optoelectronics
 2175 Mission College Blvd
 Santa Clara, CA 95054
 Phone +408 565 0830
 Fax +408 565 0703

Asia:
PerkinElmer Optoelectronics
 47, Ayer Rajah Crescent #06-12
 Singapore 139947
 Phone +65 775 2022
 Fax +65 775 1008

