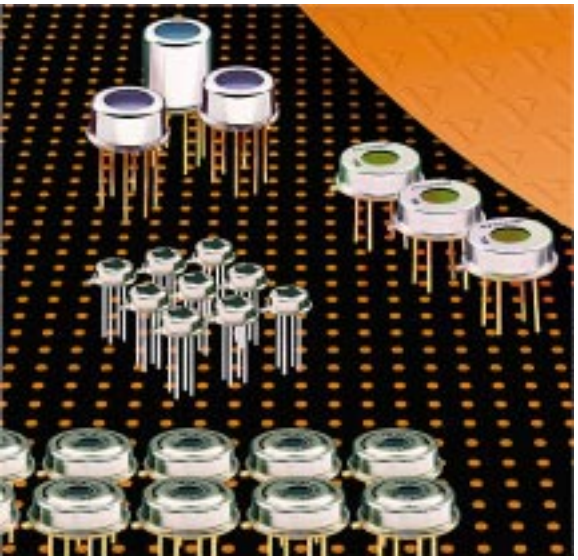
DATASHEET

Thermopile Detector TPS 434



Extremely small absorber size – for high precision pyrometers

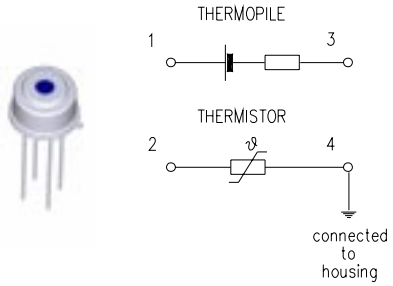
Thermistor temperature reference included

Low temperature coefficient of sensitivity

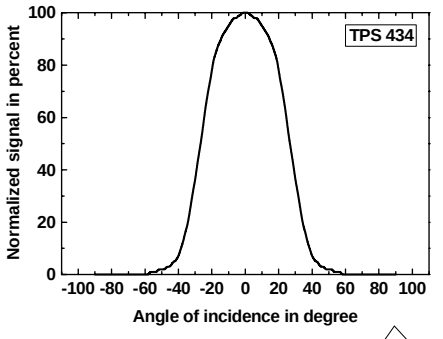
Applications: ear thermometers and pyrometers

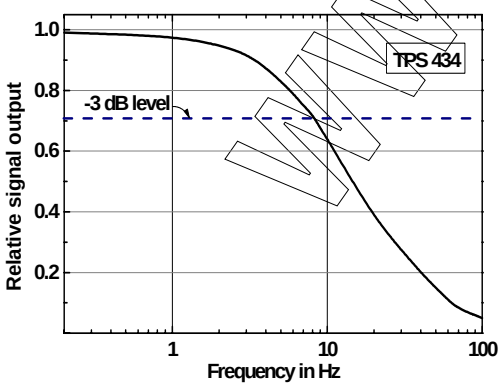
The **TPS 434** thermopile sensor in TO 5 type housing employs a chip of 0.5 x 0.5 mm² absorber size and a 30 kΩ thermistor as temperature reference. The round window opening is equipped with a 5.5 mm longpass (standard) infrared filter. The sensor shows a flat sensitivity characteristic over the wavelength.

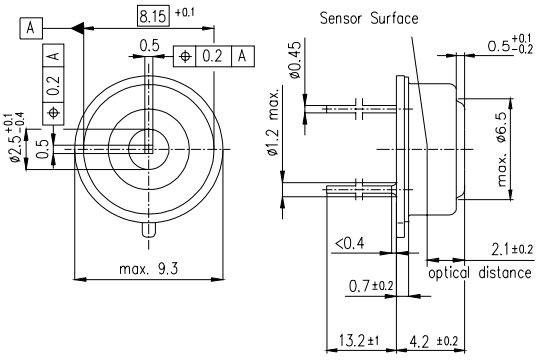
The **TPS 434** can be equipped with a G9 (8...14 µm) filter for precision pyrometers (TPS 434 G9).

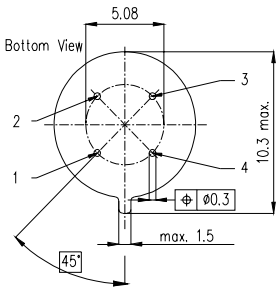


Parameters	TPS 434			
	typical		units	condition
Sensitive area	0.5 x 0.5		mm²	absorbing area
Window size	2.5		mm	diameter
DC sensitivity	35		V/W	500K BB 5..14µm
Resistance	35		kΩ	
Noise	21		nV/√Hz	r.m.s. 300K,
NEP	0.6		nW/√Hz	500K BB 5..14µm
D*	0.84 x 10⁸		cm√Hz/W	500K BB 5..14µmr
TC of sensitivity	0.02		%/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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