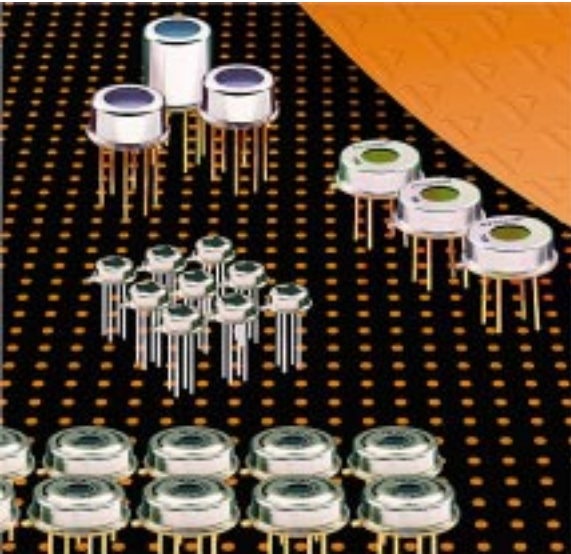


Thermopile Infrared Detectors

# Quad Thermopile **TPS 4339**



**Four individual thermopiles with different infrared bandpass filters in TO 5 housing for NDIR gas sensing – up to 4 gases possible**

**Thermistor temperature reference included**

**Internal aperture to avoid cross talk**

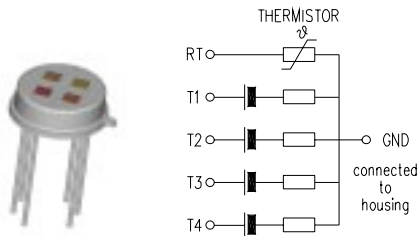
**Standard gas filter sets for reference, CO, hydrocarbon, CO<sub>2</sub>**

The quad thermopile sensor consists of four single thermopile chips mounted in a TO 5 housing with a thermistor as temperature reference. The window size is 1.5 x 1.5 mm<sup>2</sup> each. Due to the overall small sensor size the construction of a very compact equipment becomes possible.

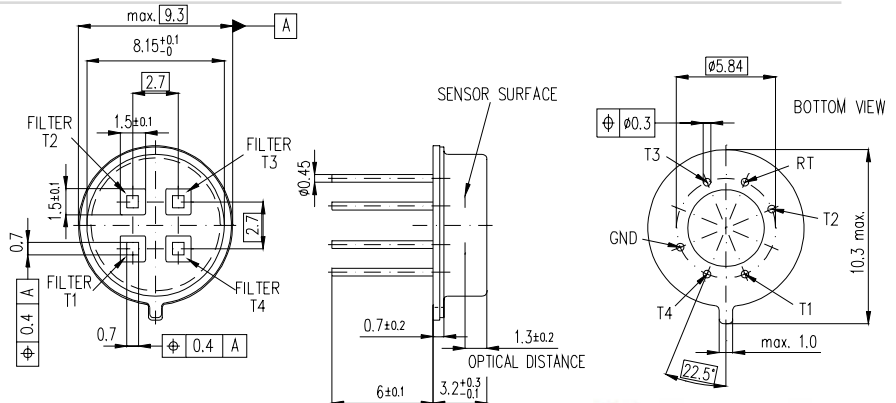
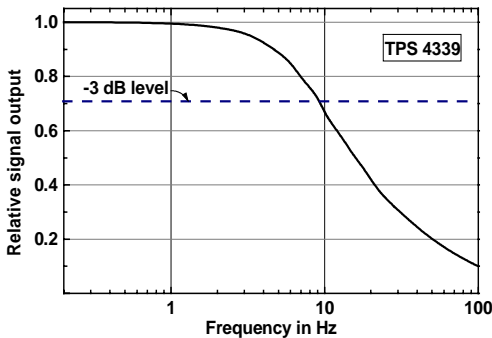
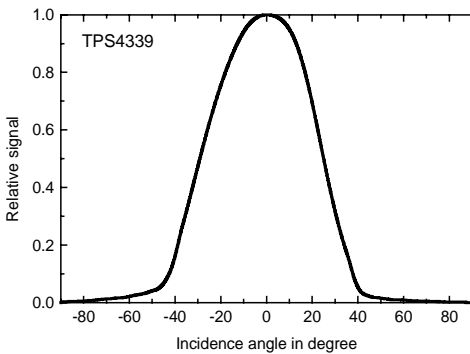
Applications in automotive exhaust gas control, multiple gas detection for the safety product market or air quality monitoring

For further information please refer to the TPS 4339 product note

Parameters	TPS 4339		units	condition
	typical			
<b>Sensitive area</b>	4x 0.7 x 0.7		mm <sup>2</sup>	absorbing area
<b>Window size</b>	1.5 x 1.5		mm <sup>2</sup>	each channel
<b>DC sensitivity</b>	75		V/W	500K BB w/o filter
<b>Resistance</b>	75		kΩ	
<b>Noise</b>	21		nV/√Hz	r.m.s. 300K
<b>NEP</b>	0.28		nW/√Hz	500K BB w/o filter
<b>D*</b>	1.6 x 10 <sup>8</sup>		cm√Hz/W	500K BB w/o filter
<b>TC of sensitivity</b>	0.02		%/K	
<b>TC of resistance</b>	0.02		%/K	
<b>Time constant</b>	25		ms	
<b>Operating temperature</b>	-40	100	°C	non permanent
<b>Storage temperature</b>	-40	100	°C	non permanent
<b>Thermistor resistance</b>	100		kΩ	25°C
<b>beta</b>	3964		K	25°C/100°C
<b>Field of view</b>	4x 60		°	at 50% points



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