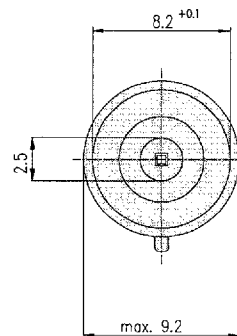
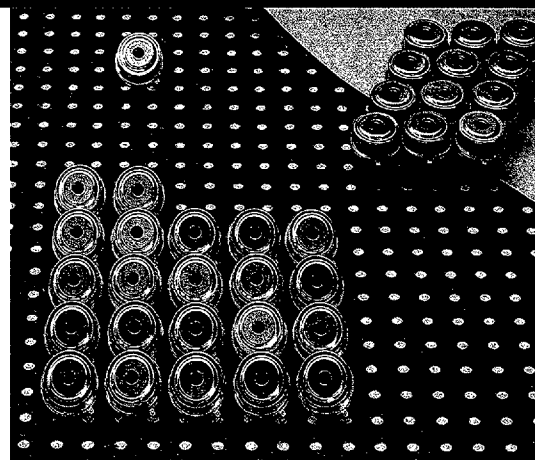


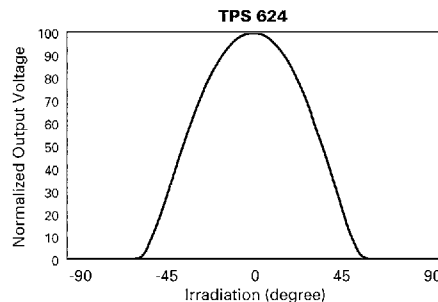
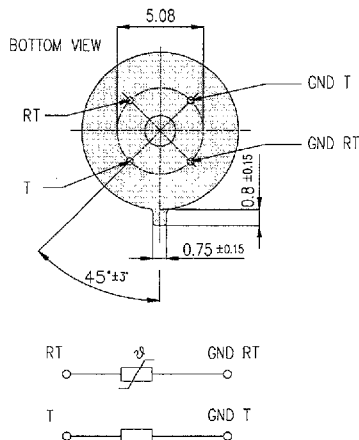
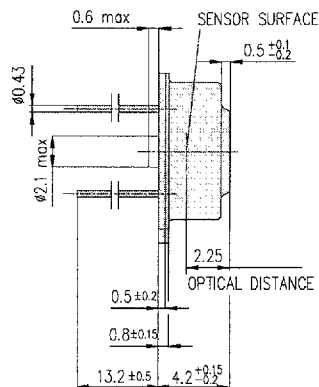
# TPS 624 / 634

- 1,8 x 1,8 Sensitive Area
- 68 Thermolements in Series
- Low Temperature Coefficient of Sensitivity

The Thermopile Sensor series TPS 624 consist of series of 68 thermolements, forming a sensitive area of 1,8 x 1,8 mm<sup>2</sup>. The sensor is hermetically sealed into a TO-5 housing with optical filter. The 6 series sensor is also available with built-in temperature reference: TPS 634-T. It can be supplied with either standard window 5.....14 μm or with special filters.



PARAMETER	TPS 624/634	unit	condition
Chip Size	3,5 * 3,5	mm <sup>2</sup>	
Elements	68		
Sensitive Area	1,8 * 1,8	mm <sup>2</sup>	Absorber
Sensitivity	10 (+30 %)	V/W	Standard, 1 Hz, 500 K
Resistance	16 (±6)	kΩ	
Noise Voltage	12..19	nV	r.m.s., 300 K, 1 Hz
	100..160		pk-pk, 300 K, 1 Hz
NEP	1,3	nW/√Hz	Standard, 1 Hz, 500 K
Detectivity	1,2*10 <sup>9</sup>	cm*√Hz/W	Standard, 1 Hz, 500 K
Time constant	55	ms	typical
TK of Resistance	< 0,1	%/K	
TK of Responsivity	< ±0,05	%/K	
Temperature Range	-20..100	°C	Operation
Temperature Range	-40..100	°C	Storage
<b>Temperature Reference Thermistor (Type 'T')</b>			



# AVAILABLE FILTERS

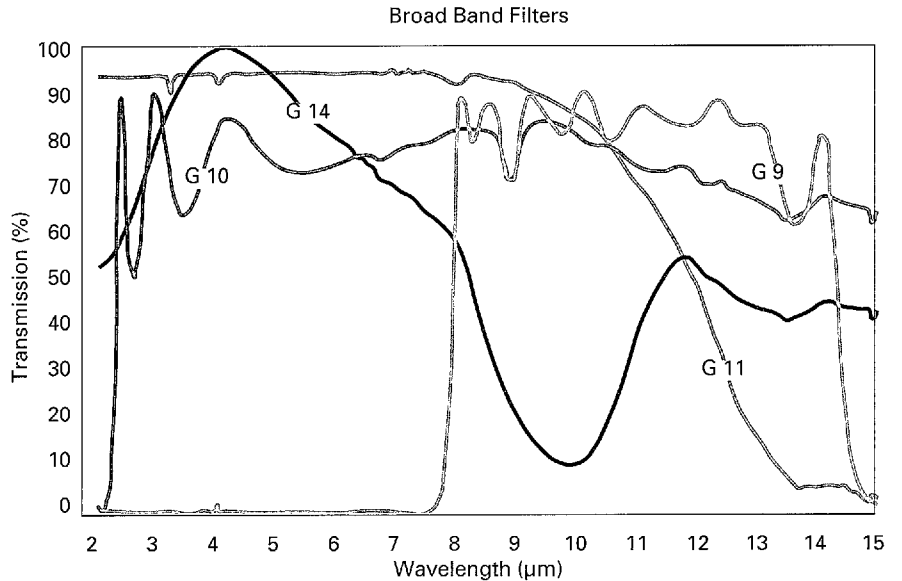
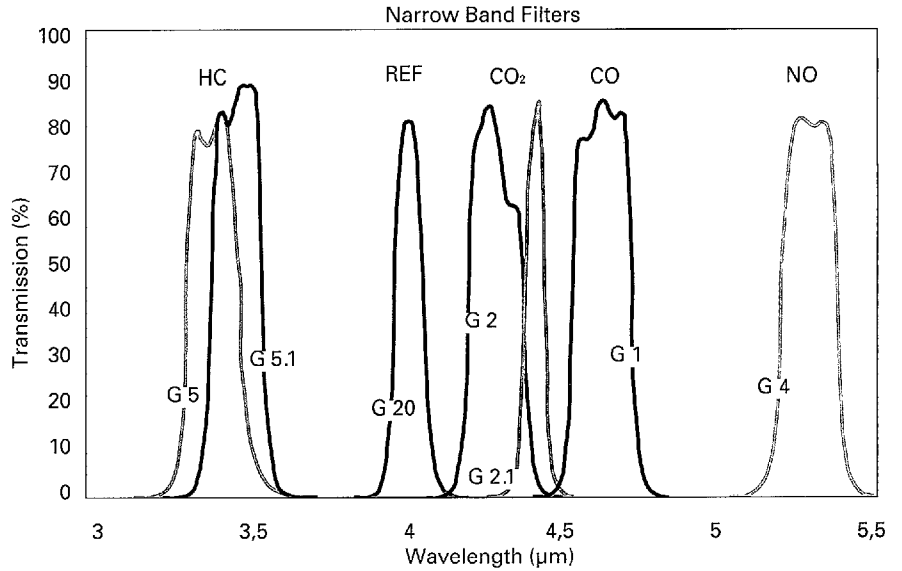
The Heimann line for thermopile sensors includes various types suitable for different applications. The individual types come with filters fit for their special use. As a standard unit it is fitted with filter having transmissions of 5...14  $\mu\text{m}$ . For special requirements the thermopile can be obtained with either broad band filters or very narrow band filters.

## Narrow Band Filters

Narrow band filters are designed for detection measurement of atmospheric gases. Many gases show a specific absorption line in the mid to far infrared range. With a filter which allows to monitor this specific gas absorption, measurement of gas concentration is possible. Filters G1 to G9 are such variants, which are available build into TPS 424 or TPS 624. All these filters are made of coated silicon.

## Broad Band Filters

A number of broad band filters are available for users who like to fit their own filter in front of the detector. Broad band filters can be either substrate filters, which use the material's transmission property or coated silicon. For pyrometer purpose we offer special window version. G9.



Type	Application	Centre Wave Length	HPB	Rest Transmission in Blocking range	
		CWL ( $\mu\text{m}$ )		( $\mu\text{m}$ )	below CWL
TPS ...-G1	CO	4,64 ( $\pm 1,0\%$ )	0,18 ( $\pm 0,02$ )	0,1%	1,0%
TPS ...-G2	CO <sub>2</sub>	4,24 ( $\pm 1,0\%$ )	0,18 ( $\pm 0,02$ )	0,1%	1,0%
TPS ...-G2.1	CO <sub>2</sub>	4,43 ( $\pm 1,0\%$ )	0,06 ( $\pm 0,005$ )	0,1%	1,0%
TPS ...-G4	NO	5,30 ( $\pm 1,0\%$ )	0,18 ( $\pm 0,02$ )	0,1%	1,0%
TPS ...-G5	HC	3,40 ( $\pm 2,0\%$ )	0,18 ( $\pm 0,02$ )	0,1%	1,0%
TPS ...-G5.1	HC	3,46 ( $\pm 1,5\%$ )	0,163 ( $\pm 0,01$ )	0,1%	1,0%
TPS ...-G7	Freon	10,90 ( $\pm 0,5\%$ )	0,24 ( $\pm 0,03$ )	0,1%	1,0%
TPS ...-G20	Reference	4,00 ( $\pm 2,0\%$ )	0,09 ( $\pm 0,02$ )	0,1%	1,0%

Type	Application	Transmission Range	
TPS ...-G9	Pyrometrics	8-14 $\mu\text{m}$	Coated Silicon
TPS ...-G10	Broadband	3-13 $\mu\text{m}$	Coated Silicon
TPS ...-G11	Broadband	0,1-9 $\mu\text{m}$	CaF <sub>2</sub> Substrate Filter
TPS ...-G12	Broadband	1-16 $\mu\text{m}$	Silicon
TPS ...-G14	IR-Window	3-5 $\mu\text{m}$	Silicon

