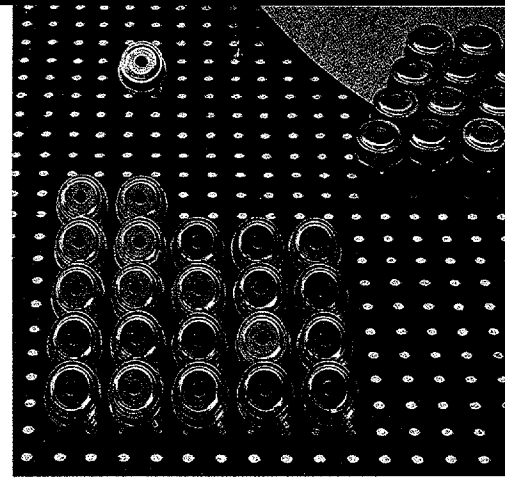


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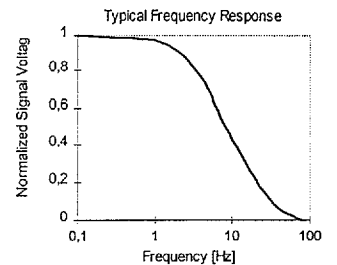
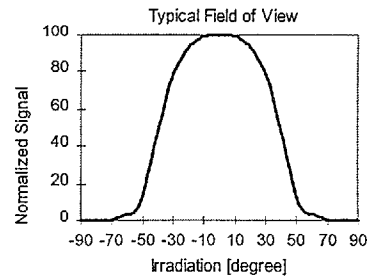
TPS 524 / 534

- High Signal Voltage
- Low Temperature Coefficient of Responsivity
- Low Time Constant



The sensor TPS 524 consists of a series of thermoelements forming a sensitive area of $1.2 \times 1.2 \text{ mm}^2$. The sensor is hermetically sealed into a housing, similar to TO 5, suited with optical filter. It is supplied with HEIMANN standard broadband window. The series TPS534 consists of the same thermopile, additionally fit with a thermistor reference.

The thermopiledetector exhibits an almost white noise, comparable to an ohmic resistance. The output signal is directly proportional to incident radiation. The signal is constant versus frequency up to its frequency limit. Below mentioned parameters of responsivity, detectivity and NEP do not include filter transmission.



Parameter	Value	Unit	Conditions
Sensitive Area	1.2 x 1.2	mm ²	Absorber
Responsivity	42	V/W	500K, 1Hz, typical
Resistance	40	kΩ	typical
Noise Voltage	25	nV/√Hz	r.m.s., 300K, 1Hz, typical
NEP	0.6	nW/√Hz	500K, 1Hz, typical
Detectivity	2×10^8	cm√Hz/W	500K, 1Hz, typical
Time Constant	35	ms	typical
TC of Resistance	<0.1	%/K	
TC of Responsivity	-0.01	%/K	typical
Temperature Range	-20..100	°C	Operation
	-40..120	°C	Storage
Filter Range	cut on 5.5	μm	Heimann Standard Filter
Temperature Reference	Thermistor		TPS53..
R [25°C]	30	kΩ	
ΔR [25°C]	+ 3/-5	%	
BETA:	3800	K	
BETA-TOLERANCE	±1	%	
Window Opening	Ø 3.8	mm	TPS5..4

