



HMS P-Series

Heat Shock Compensating Miniature Thermopile Sensors for Temperature Measurements

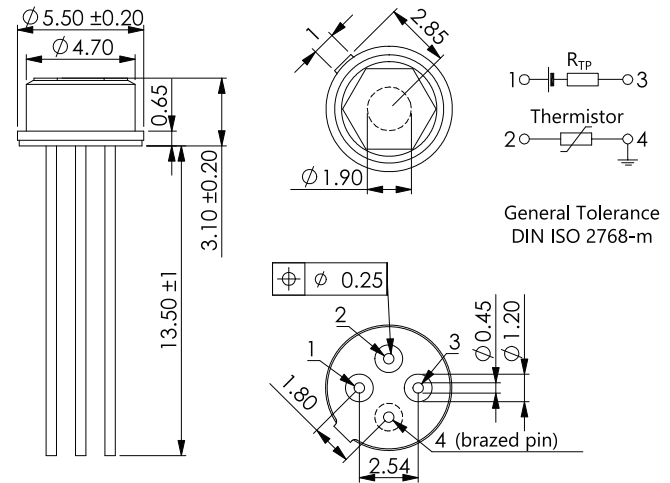
The HMS P-Series offers CMOS compatible thermopile sensor chips in a TO-46 housing with lower heat shock response to external temperature changes by factor 5 compared to our standard HMS J- and K-Series sensors.

This allows highly accurate, reproducible and reliable measurements even under instable ambient conditions.

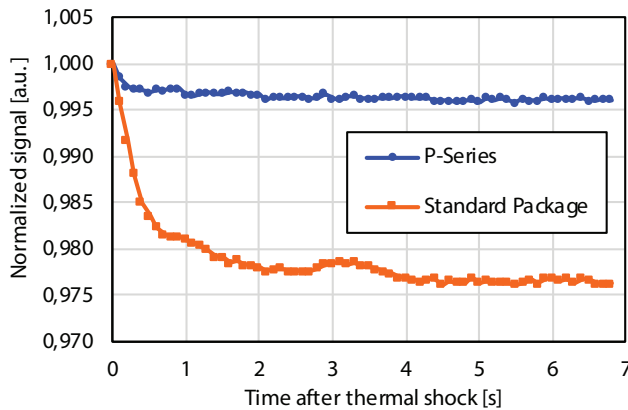
They feature a 50% higher sensitivity and a small temperature coefficient of sensitivity resulting in an improved temperature measurement performance.

Different available filters offer additional design flexibility and allow to customize the sensor according to your requirements.

Dimensions



Heat Shock Response



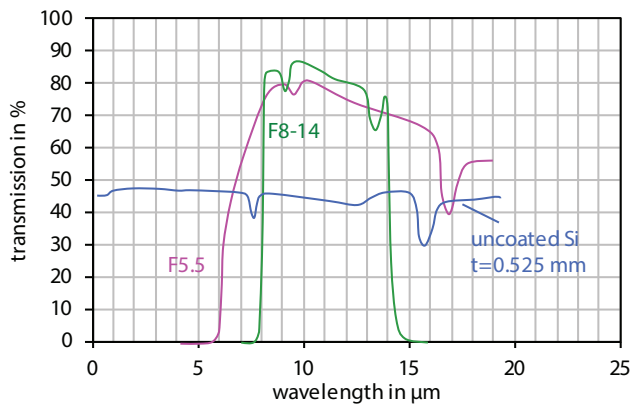
Characteristics

	HMS P11	HMS P1c1	HMS P21	Unit
Element size	0.61 ²	0.76 ²	1.2 ²	mm ²
Voltage response ^{a)}	22	30	63	Vmm ² /W
Sensitivity ^{a)}	77	68	55	V/W
Resistance R _{TP} ^{b)}	86	75	84	kOhm
TC of resistance R _{TP} ^{b)}	0.02	0.02	0.02	% / K
Noise ^{b)}	38	35	37	nV / Hz ^{1/2}
Detectivity ^{a),b)}	0.84·10 ⁸	1.0·10 ⁸	1.4·10 ⁸	cm Hz ^{1/2} / W
Time constant	<5	10	10	ms
Thermistor reference ^{b)}	100	100	100	kOhm
Field of view ^{d)}	87	87	87	°
Temp. coeff. of thermistor ^{c)}	3940	3940	3940	K
Operating temperature	-20 ... 120			°C
Storage temperature	-40 ... 120			°C

a) Without filter, T_{obj} = 100°C, DC
b) At T_{amb} = 25°C

c) 25°C, 50°C
d) Deg at 50% signal level

Filter Types for Temperature Measurements



Ordering Information

HMS	Heimann miniature thermopile sensor
P	Low Heat Shock – TO-46
1, 1c, 2	Thermopile Chip Size
1, 0	Thermistor 100kΩ, no thermistor
Fx	Filter type

Field of View

