



One Channel Thermopile Detector TS1x72B-A-D2.5-2-Kr-B1

Thermopile Detector based on thin film technology with a small active area recommended for temperature measurements.

Active Area	Ø 0.5	mm
Aperture	Ø 2.5	mm
Number of Thermocouples	72	
Time Constant $t_{(0-63\%)}^1$	typ. 35	ms
DC Output Voltage ¹	typ. 2.1	mV
DC Sensitivity ¹	typ. 70	V/W
Temperature Coefficient of Sensitivity ²	typ. -0.4	%/K
Noise Voltage ³	typ. 18	nV/Hz ^{1/2}
Noise Equivalent Power NEP ¹	typ. 0.26	nW/Hz ^{1/2}
Specific Detectivity D* ¹	typ. 3.44 x 10 ⁸	cmHz ^{1/2} /W
Resistance of Thermopile ³	20 ± 5	kΩ
Temperature Coefficient of Resistance ²	typ. -0.03	%/K
Thermistors ⁴	NTC 30 kOhm Technical specifications see document "thermistors".	
Filling Gas ⁵	Kr	
Filters	Micro-Hybrid standard narrow band pass filters and more information please see document "infrared filters". Customized filters possible on request.	
Operation Temperature	-20 ... +85	°C
Mass	1	g
Housing	T039 (modified)	

¹ on air without windows, Blackbody T=500 K; E=38 W/m²

² temperature range from +10 to +70 °C

³ at T_{amb}=25 °C

⁴ Modified pin assignment

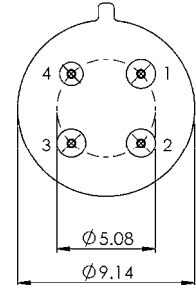
⁵ In case of Kr-filling increase of DC Output Voltage, DC Sensitivity, Specific Detectivity and Time Constant by the factor 1.8. Decrease of NEP by the same factor.



Bottom View

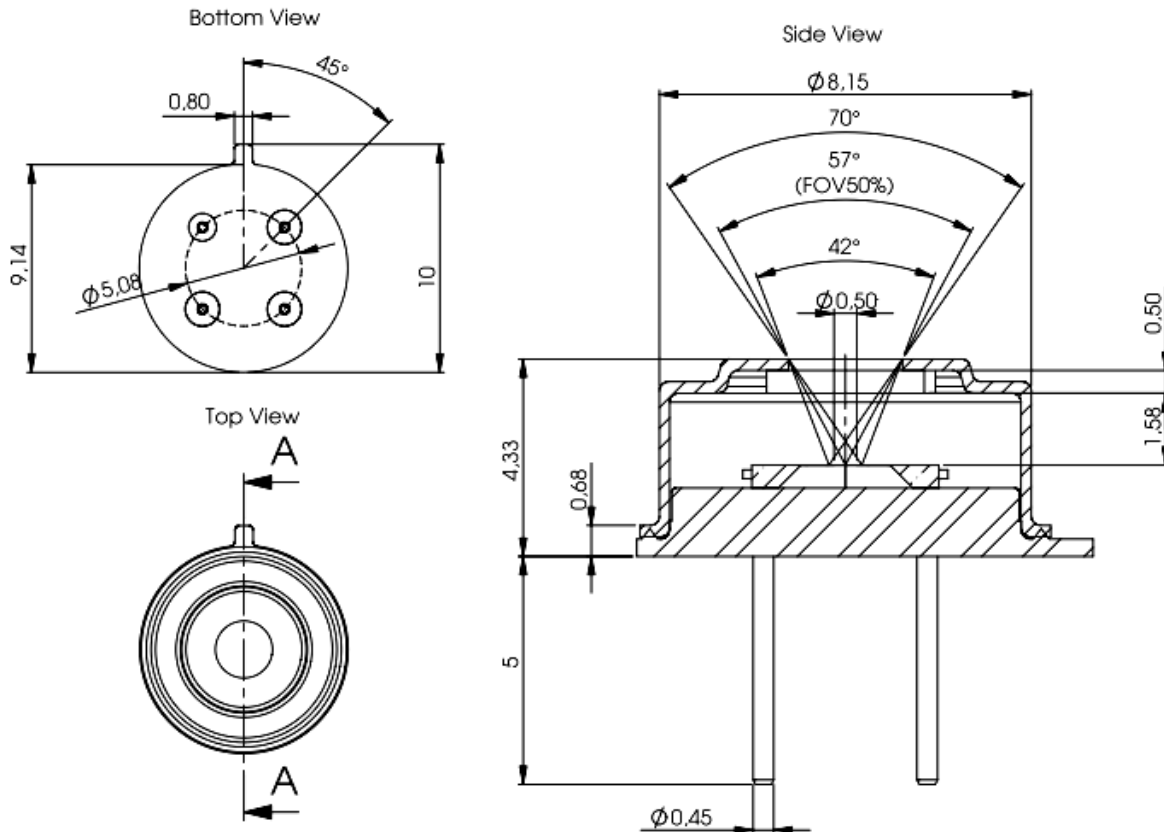
Pin Assignment:

- Pin 1 Output TP+
- Pin 2 Thermistor
- Pin 3 Output TP-
- Pin 4 GND



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Housing
T039 package



Optional parts:

IR-Source JSIR 350 - Fast IR emitter based on thin film technology
Art.-Nr. 6351.01-3.01

IR-Source JSIR 450 - Broadband IR emitter high performance for heavily absorbing media
Art.-Nr. 6350.01-3.01