



## One Channel Thermopile Detector TS1x200B-A-D3.55

High sensitive thermopile detector based on thin film technology for NDIR gas analysis.

Active Area	1.2 x 1.2	mm <sup>2</sup>
Aperture	Ø 3.55	mm
Number of Thermocouples	200	
Time Constant $\tau_{(0-63\%)}$ <sup>1</sup>	typ. 30	ms
DC Output Voltage <sup>1</sup>	typ. 5.5	mV
DC Sensitivity <sup>1</sup>	typ. 100	V/W
Temperature Coefficient of Sensitivity <sup>2</sup>	typ. -0.4	%/K
Noise Voltage <sup>3</sup>	typ. 33	nV/Hz <sup>1/2</sup>
Noise Equivalent Power NEP <sup>1</sup>	typ. 0.33	nW/Hz <sup>1/2</sup>
Specific Detectivity D* <sup>1</sup>	typ. 3.6 x 10 <sup>8</sup>	cmHz <sup>1/2</sup> /W
Resistance of Thermopile <sup>3</sup>	65 ± 15	kΩ
Temperature Coefficient of Resistance <sup>2</sup>	typ. -0.03	%/K
Thermistor <sup>4</sup>	1 - PTC 1 kΩhm 2 - NTC 30 kΩhm 3 - NTC 100 kΩhm  Technical specifications see document "thermistors".	
Filling Gas <sup>5</sup>	N <sub>2</sub> / 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 ... +70	°C
Mass	1	g
Housing	T039 (modified)	

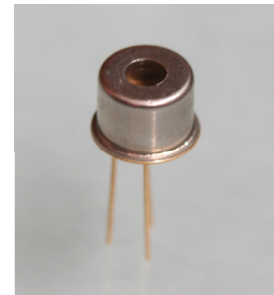
<sup>1</sup> on air without windows, Blackbody T=500 K; E=38 W/m<sup>2</sup>

<sup>2</sup> temperature range from +25 to +70 °C

<sup>3</sup> at T<sub>amb</sub>=25 °C

<sup>4</sup> Modified pin assignment

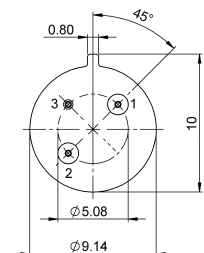
<sup>5</sup> In case of Kr-filling increase of DC Output Voltage, DC Sensitivity, Specific Detectivity and Time Constant by the factor 1.8. Decrease of NEP by the same factor. Other gases on customer's



### Bottom View

Pin Assignment:

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



### Ordering Information:

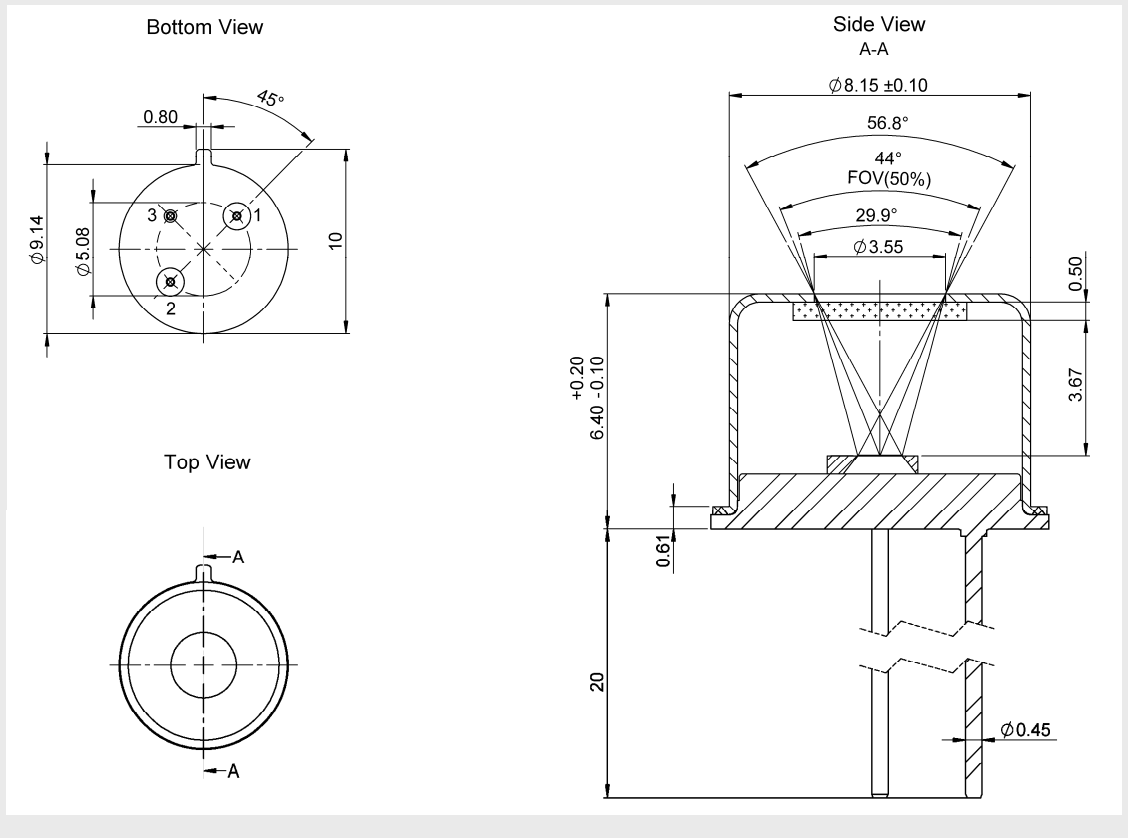
TS1x200B-A-D3.55- Thermistor (F) - Backfill

Gas (GG) - Filter (H)

e.g. TS1x200B-A-D3.55-1-Kr-A2

# One Channel Thermopile Detector TS1x200B-A-D3.55

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

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