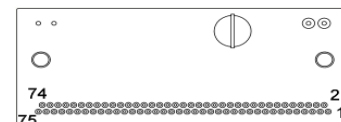


Thermopile Array TPL640Xe

High precise thermopile line 64 pixels with wide band filter for gas analysis and infrared spectroscopy. This array has very low mechanical tolerances to connect with optics.

Type	TPL640Xe	
Pixel	64	
Active Area per Pixel	0.675 mm ²	
Pitch	0.5 mm	
Number of Thermocouples per Pixel	30	
Pixel Resistance (at 25 °C)	typ.	9 kΩ
Relative Deviation of Resistance Between Adjacent Pixel	< 1/30	
Temperature Coefficient Resistance of Thermopile ¹	typ.	-0.4 %/K
Temperature Coefficient of Sensitivity ¹	typ.	-0.8 %/K
Noise Voltage (at 25 °C)	typ.	12 nV/Hz ^{1/2}
Filling Gas	Xenon	
DC Output Voltage (at 38μW/mm ²) ²	typ.	4.0 mV
DC Sensitivity (at 38μW/mm ²) ²	typ.	155 V/W
Time Constant t _(0-63%) ³	typ.	110 ms
Specific Detectivity D* (500K black body, DC) ²	typ.	1.05E+09 cmHz ^{1/2} /W
Noise Equivalent Power ²	typ.	0.08 nW/Hz ^{1/2}
Crosstalk Between Adjacent Pixels ³	typ.	25 %
Filter ⁴	typ.	AR coated silicon Average %T: ≥90% from 8-14μm
Working Temperature	-20 ... +70 °C	

Pin Assignments (bottom view)



Pin#	
1	nc
2	nc
3	nc
4	NTC+
5	NTC-
6	GND
7	Pixel 1
8	Pixel 2
69	Pixel 63
70	Pixel 64
71	GND
72	PTC+
73	PTC+
74	PTC-
75	PTC-

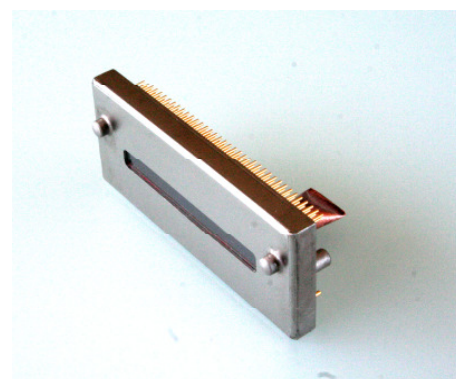
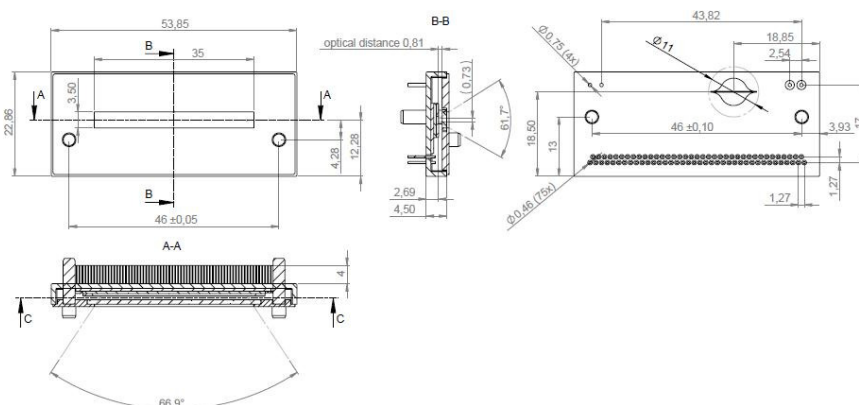
May 2009 – Subject to change

¹ in the temperature range from +25 to +70 °C

² filling gas Xenon, assumed window transmission 1

³ filling gas Xenon

⁴ others on customers request



Order Information:

Thermopile Array TPL640Xe

Art.-Nr. 7102.02-A.00

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