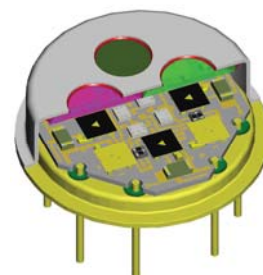


LMM-274-#

pyroelectric multispectral detector

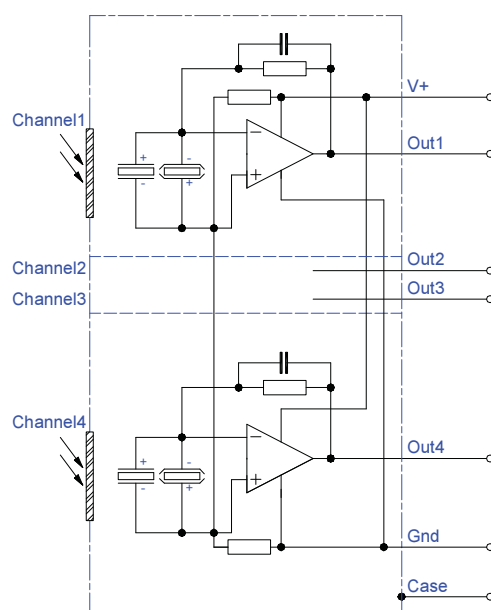
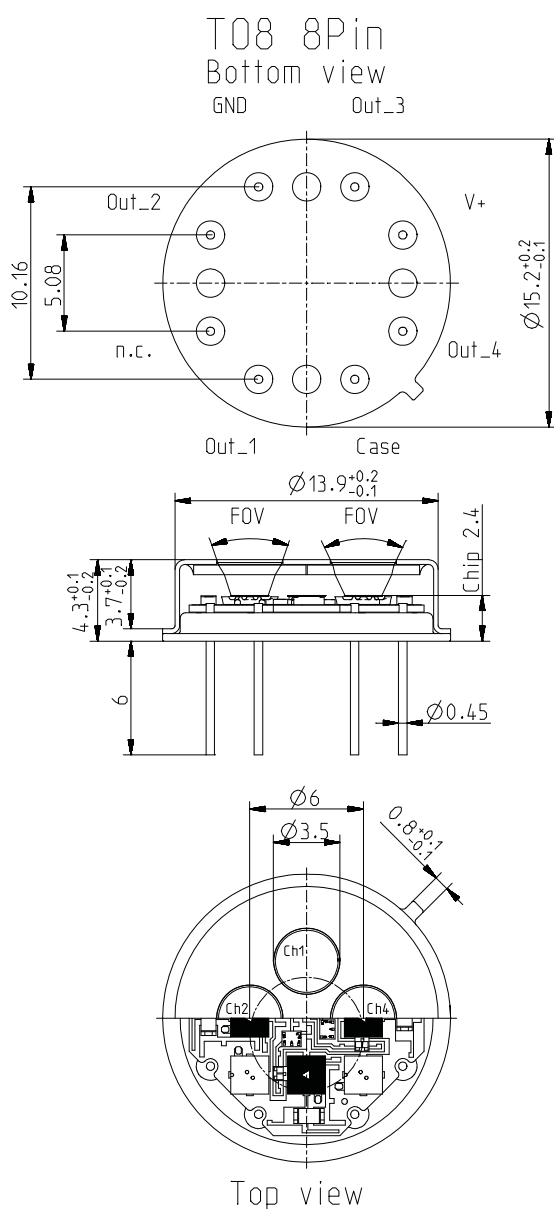
Description:

quad channel; TO8 housing; medium chip size; thermal compensation; low Micro; OpAmp;
current mode; feedback 100GOhm;
ultra low power consumption, single supply

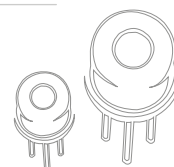
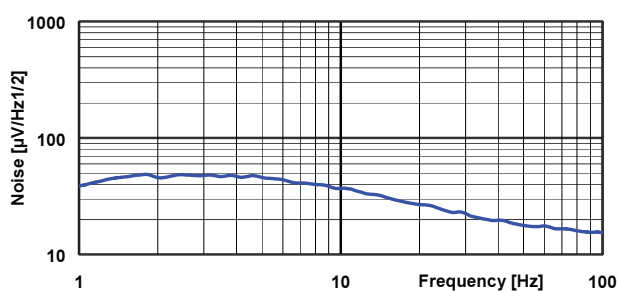
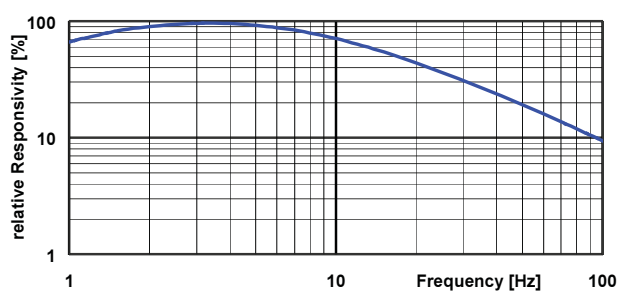


HOUSING:

PIN ASSIGNMENT:



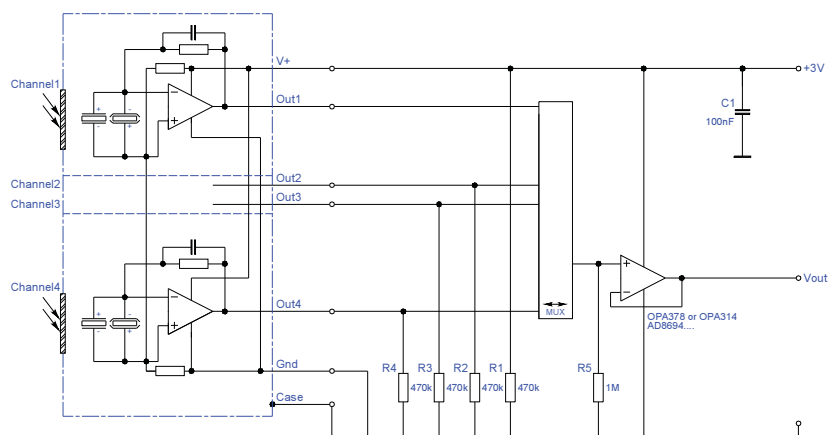
FREQUENCY RESPONSE:



LMM-274-#

pyroelectric multispectral detector

TEST CIRCUIT:



PARAMETERS:

Aperture size	nom	ø9.5 mm, single channel ø3.5 mm
Element size / type	nom	2.0x2.0 mm ² lithium-tantalate with black layer
Thermal time constant	typ	150 ms
Feedback resistor	nom	100 GOhm ±20 %
Feedback capacitor	nom	0.2 pF ±0.1 pF
Polarity	nom	negative signal by positive IR flux change
Voltage responsivity (rms) {500 K, 3 Hz, 25 °C, without filter/window}	min	90,000 V/W
Noise density (rms) {3 Hz, BW 1 Hz, 25 °C}	max	65 µV/(sqrt[Hz])
Detectivity {500 K, 3 Hz, 1 Hz, 25 °C, without filter/window}	typ	6.0E+08 cm(sqrt[Hz])/W
Acceleration response {5 ... 200 Hz}	typ	300 µV/g; g = 9.81 m/s ²
CMOS operational amplifier	nom	OpAmp3
Operating supply voltage V+		2.7 ... 10 V
Recommended supply voltage V+	nom	V+ = +3 V
Supply current {output load 1 MOhm}	max	90 µA
Offset voltage {25 °C; output load 1 MOhm}		V+/2 ±10%
Optimal output load	nom	330 kOhm
Absolute output current	max	1 mA
Operating / Storage temperature	nom	-25 ... +85 °C
IR window		Combinations of all InfraTec standard narrow band pass filters are available. Customized filters upon request.
Filter sizes	nom	rectangular filters: (4.20 x 4.20) mm ±0.1 mm circular filters: not applicable standard thickness: 0.50 mm +0.2/-0.1 mm thickness range 0.70 ... 1.10 mm on request
Field of View	min	CaF ₂ or BaF ₂ ; 0.4 mm thick: not applicable Silicon substrate; 0.5 mm thick: 50°

InfraTec reserves the right to change these specifications at any time without notification.