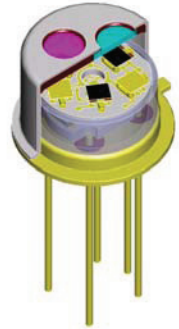


LIM-253-#

pyroelectric multispectral detector

Description: **PROTOTYPE**

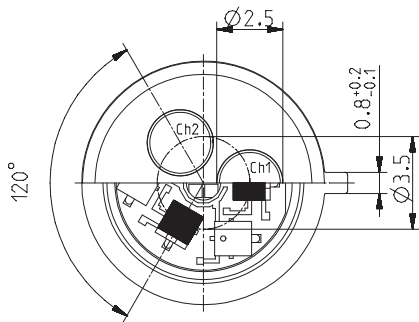
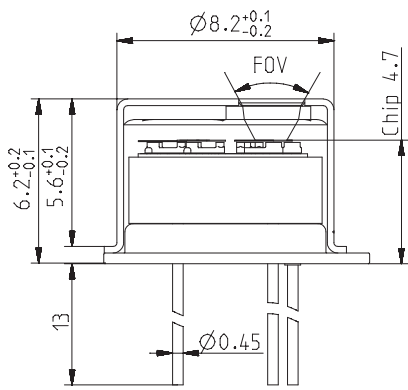
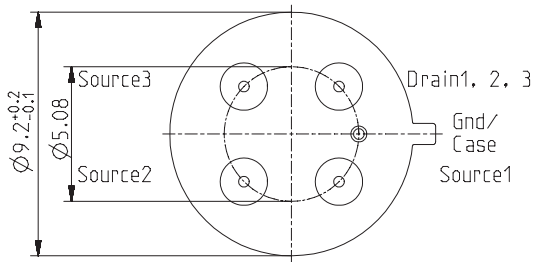
three channel; TO39 housing; small chip size; thermal compensation; JFET; voltage mode;



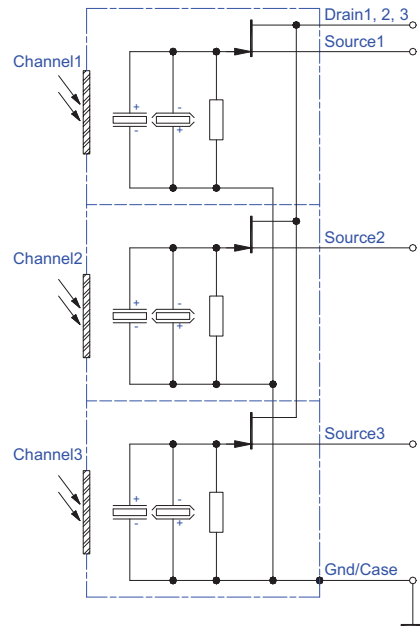
HOUSING:

PIN ASSIGNMENT:

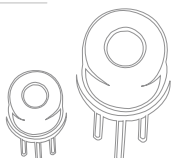
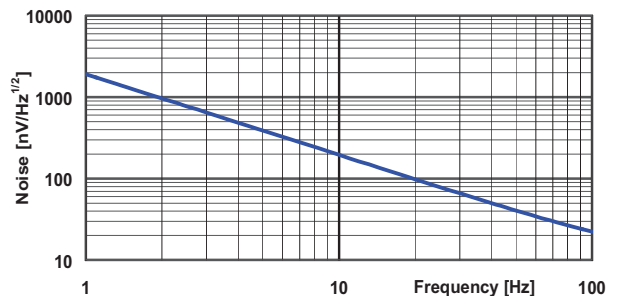
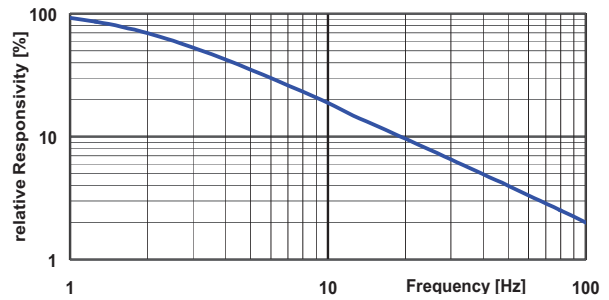
TO39 4+1Pin
Bottom view



Top view



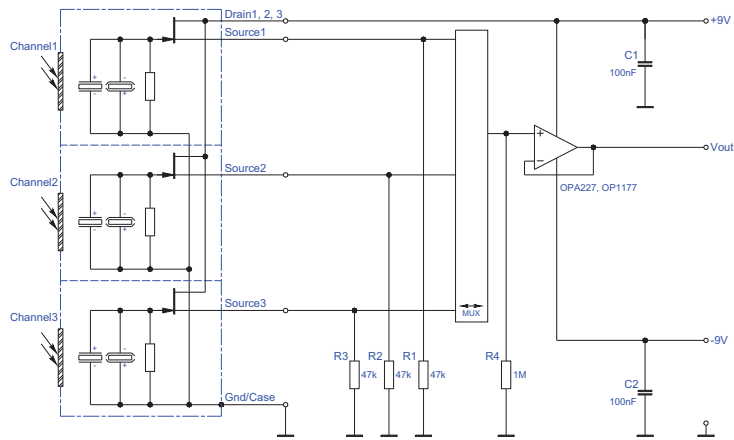
FREQUENCY RESPONSE:



LIM-253-#

pyroelectric multispectral detector

TEST CIRCUIT:



PARAMETERS:

Aperture size	nom	ø6.0 mm, single channel ø2.5 mm
Element size / type	nom	1.3x1.3 mm ² lithium-tantalate with black layer
Thermal time constant	typ	100 ms
Electrical time constant	typ	2.5 s
Polarity	nom	positive signal by positive IR flux change
Voltage responsivity (rms) {500K, 10 Hz, 25 °C, without window}	min	345 V/W
Noise density (rms) {10 Hz, BW 1 Hz, 25 °C}	max	240 nV/(sqrt[Hz])
Detectivity {500K, 10 Hz, 1 Hz, 25 °C, without window}	min	1.8E+08 cm(sqrt[Hz])/W
Offset voltage {opt. Drain current = 10 ... 100µA}	nom	0.4 ... 1.5 V
Drain source voltage	max	18 V
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	Filter chips will be cut by InfraTec standard thickness: 0.50 mm +0.2/-0.1 mm thickness range 0.70 ... 1.10 mm on request
Field of View	min	Silicon substrate; 0.5 mm thick: 55°