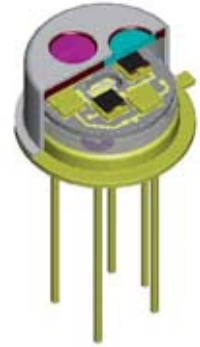


## LIM-253-# NEW

pyroelectric multispectral detector, small

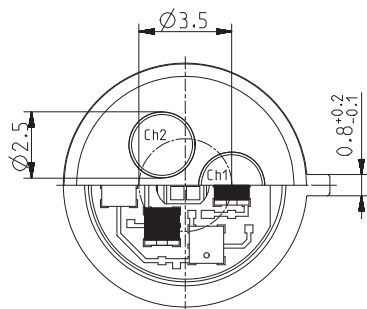
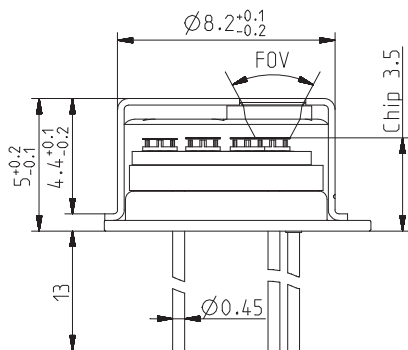
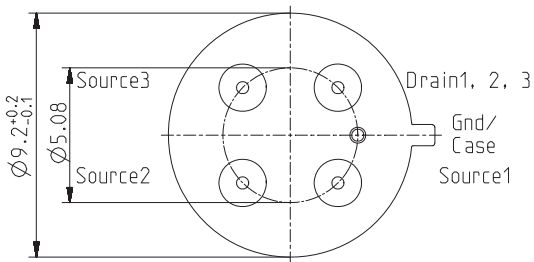
### Description:

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



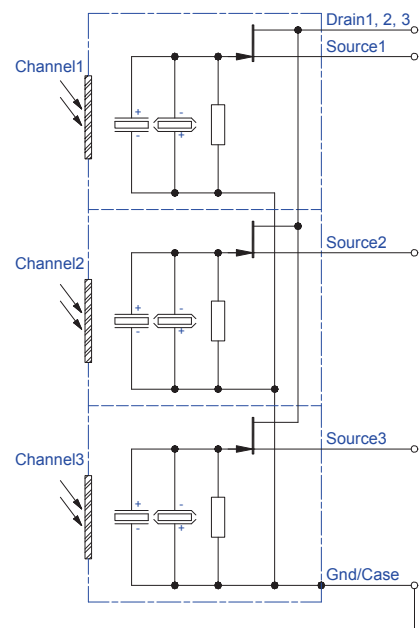
### HOUSING:

TO39 4+1Pin  
Bottom view

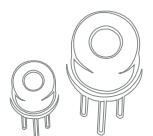
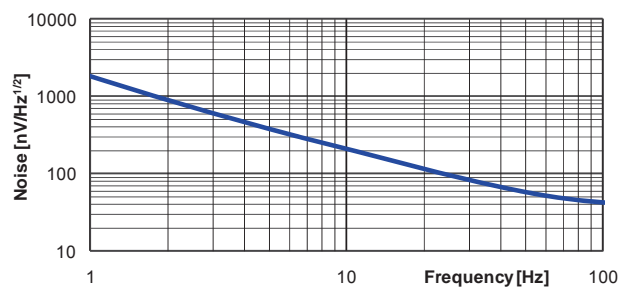
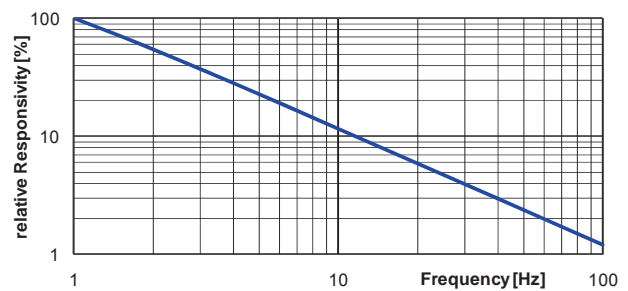


Top view

### PIN ASSIGNMENT:



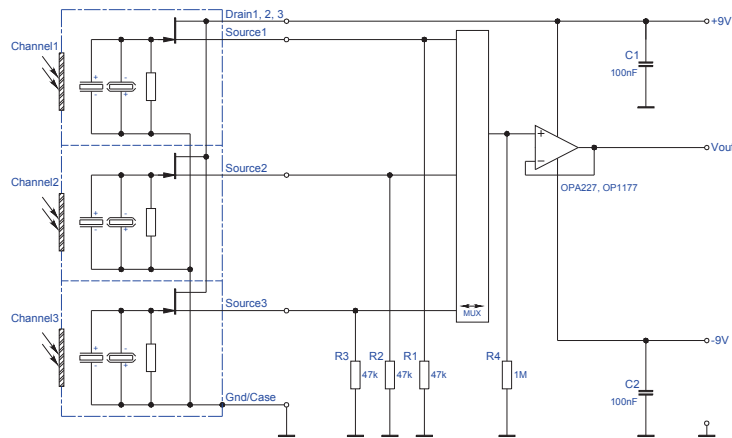
### FREQUENCY RESPONSE:



## LIM-253-#

pyroelectric multispectral detector, small

### TEST CIRCUIT:



### PARAMETERS:

Aperture size	nom	ø6.0 mm, single channel ø2.5 mm
Element size / type	nom	1.3x1.3 mm <sup>2</sup> lithium-tantalate with black layer
Thermal time constant	typ	350 ms
Electrical time constant	typ	2.5 s
Polarity	nom	positive signal by positive IR flux change
Voltage responsivity (rms) {500 K, 10 Hz, 25 °C, without filter/window}	min	340 V/W
Noise density (rms) {10 Hz, BW 1 Hz, 25 °C}	max	270 nV/(sqrt[Hz])
Detectivity {500 K, 10 Hz, 1 Hz, 25 °C, without filter/window}	typ	3.5E+08 cm(sqrt[Hz])/W
Offset voltage {opt. Drain current = 10 ... 100 µA}	nom	0.4 ... 1.5 V
Drain source voltage	max	18 V
Operating / Storage temperature	nom	-25 ... +85 °C
IR window		Combinations of 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
Field of View	min	Silicon substrate; 0.5 mm thick: 55°

Note: If visible light can penetrate the glass-metal seal in the detector socket, a small signal caused by light leakage may occur. InfraTec reserves the right to change these specifications at any time without notification!

