

## LIM-102-# NEW

pyroelectric multispectral detector, small

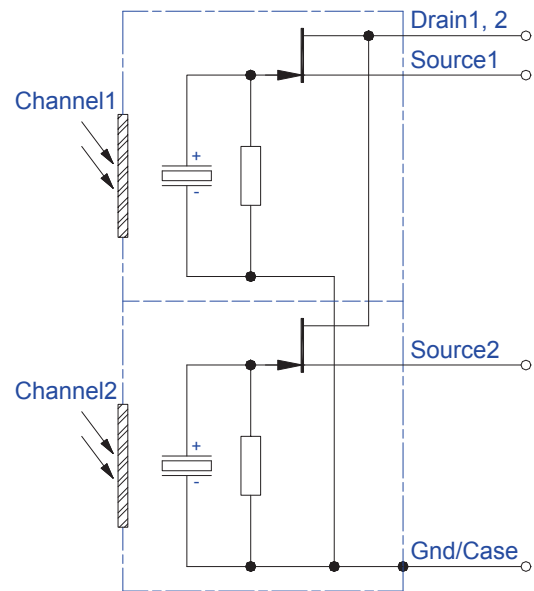
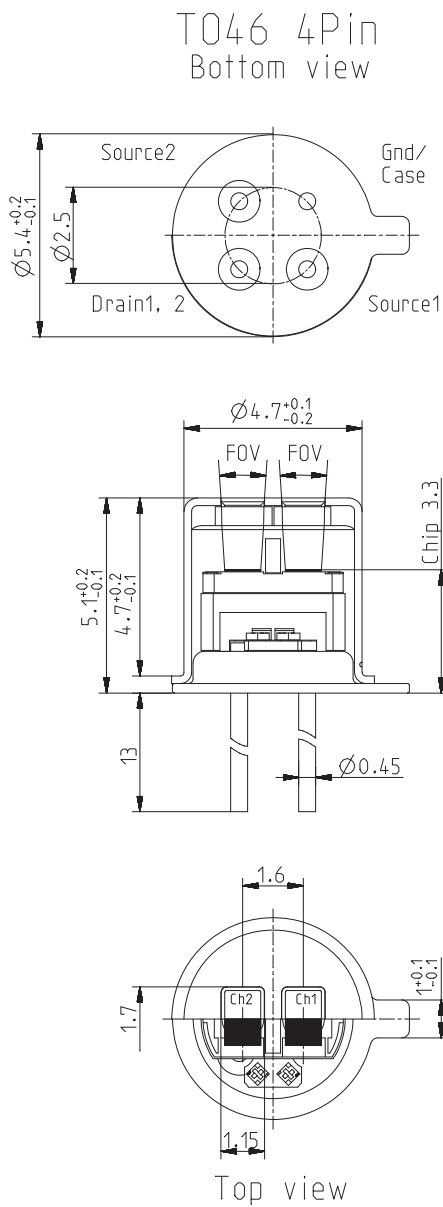
### Description:

dual channel; TO46 housing; small chip size; JFET; voltage mode;

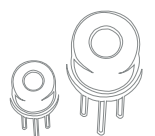
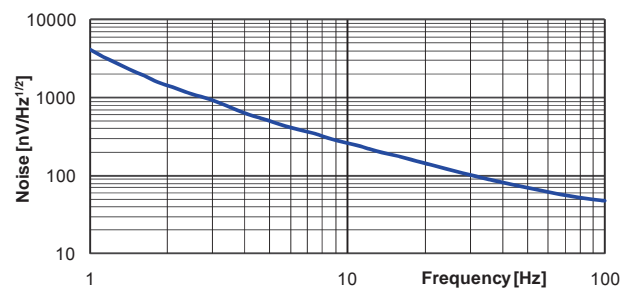
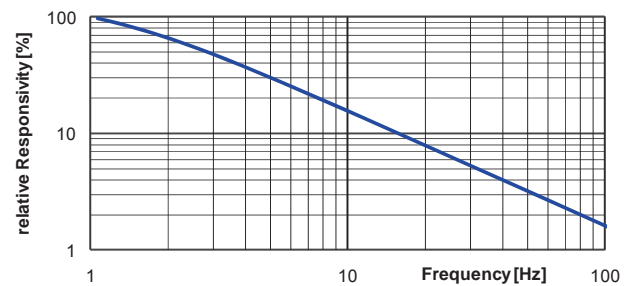


### HOUSING:

### PIN ASSIGNMENT:



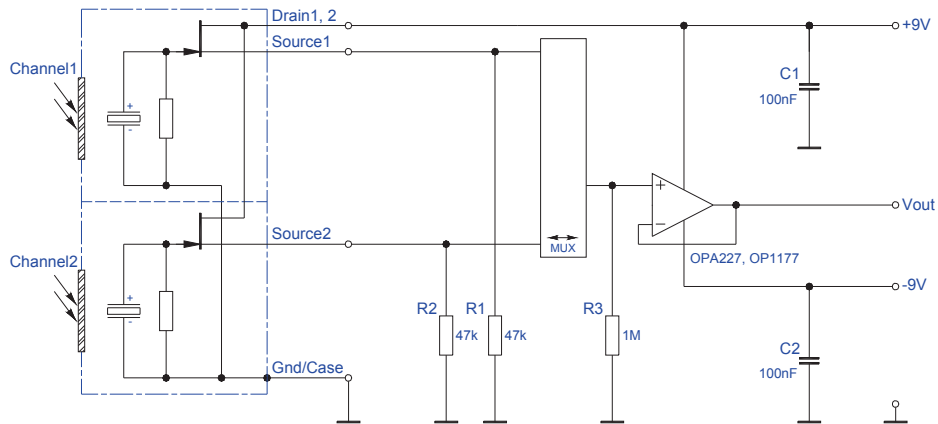
### FREQUENCY RESPONSE:



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### TEST CIRCUIT:



### PARAMETERS:

|  |     |  |
|--|-----|--|
| Aperture size  | nom | ø3.3 mm, single channel 1.7x1.15 mm <sup>2</sup>   |
| Element size / type  | nom | 1.4x1.0 mm <sup>2</sup> lithium-tantalate with black layer   |
| Thermal time constant  | typ | 150 ms   |
| Electrical time constant   | typ | 2 s  |
| Polarity   | nom | positive signal by positive IR flux change   |
| Voltage responsivity (rms)<br>{500 K, 10 Hz, 25 °C, without filter/window} | min | 600 V/W  |
| Noise density (rms)<br>{10 Hz, BW 1 Hz, 25 °C}                             | max | 450 nV/(sqrt[Hz])  |
| Detectivity<br>{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 all InfraTec standard narrow band pass filters are available. Customized filters upon request.               |
| Filter sizes   | nom | rectangular filters: (2.0 x 1.5) +0/-0.05 mm<br>circular filters: not applicable<br>standard thickness: 0.50 mm +0.2/-0.1 mm |
| Field of View  | min | Silicon substrate; 0.5 mm thick: 8°  |

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.

