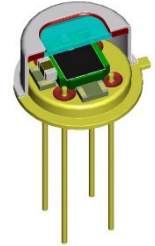


## LIE-500-#

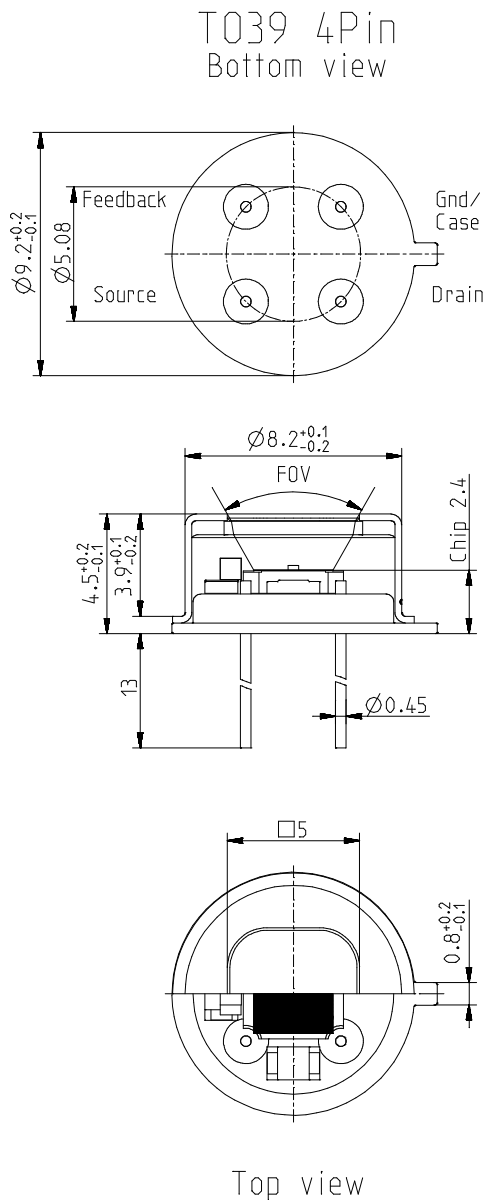
## Single channel pyroelectric detector

### Description:

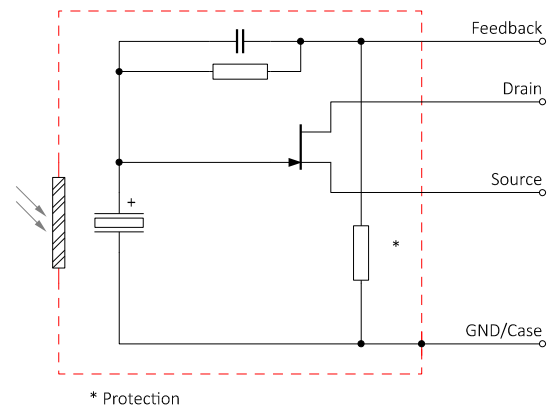
single channel; TO39 housing; large chip size;  
JFET; current mode; feedback 5 GOhm;



### Housing:

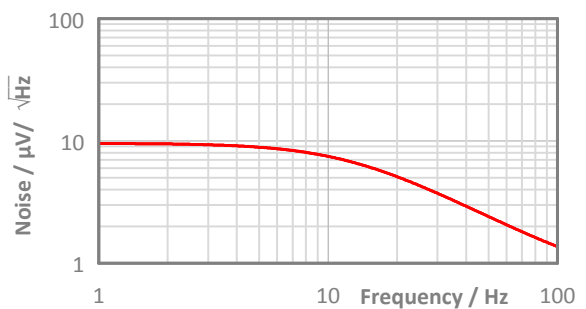
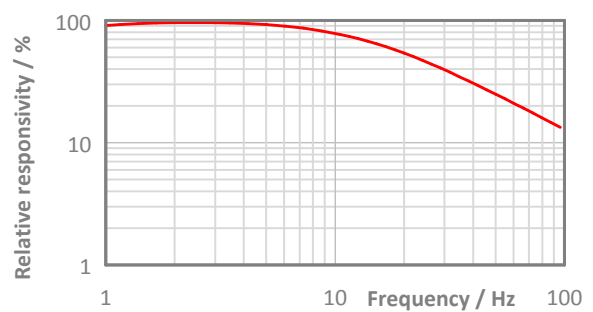


### Pin Assigment:



Maximum current between Case and the "Case"-Pin 10 mA!

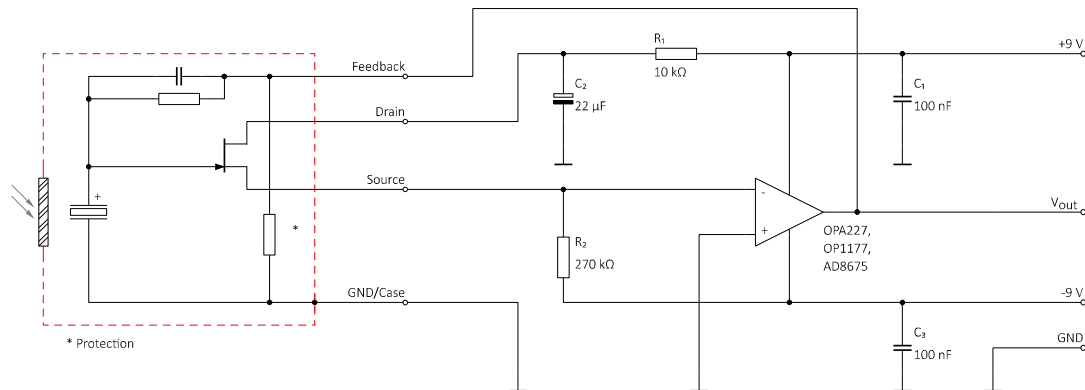
### Frequency Response:



## LIE-500-#

## Single channel pyroelectric detector

### Test Circuit:



### Parameters:

Aperture size	nom	□ 5.0 mm
Element size / type	nom	3.0 × 3.0 mm <sup>2</sup> lithium-tantalate with black layer
Thermal time constant	typ	200 ms
Feedback resistor	nom	5 GΩ ±10 %
Feedback capacitor	nom	2.20 pF ±0.25 pF
Polarity	nom	Negative signal by positive IR flux change
Voltage responsivity (rms) {500 K, 10 Hz, 25 °C, without filter/window}	min	5,500 V/W
Noise density (rms) {10 Hz, BW 1 Hz, 25 °C}	max	10 μV/√Hz
Detectivity {500 K, 10 Hz, 1 Hz, 25 °C, without filter/window}	typ	2.7E+08 cmVHz/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		All InfraTec windows and filters are available (except KBr and CsI). Customized filters upon request.
Filter sizes	nom	Rectangular filters: (5.25 × 5.25) mm +0/-0.05 mm Circular filters: ø6.5 mm ±0.1 mm Standard thickness: 0.50 mm +0.2/-0.1 mm Thickness range 0.70 ... 1.10 mm on request
Field of View	min	CaF2 or BaF2; 0.4 mm thick: 50° Silicon substrate; 0.5 mm thick: 60°

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