

## LME-501-#

pyroelectric detector

### Description:

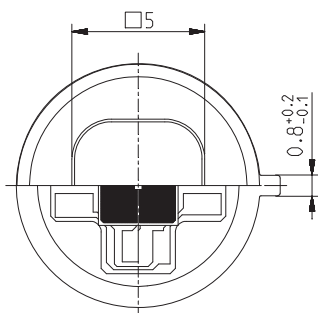
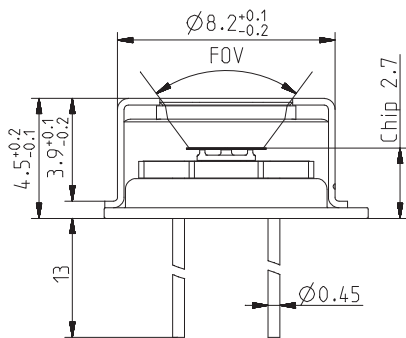
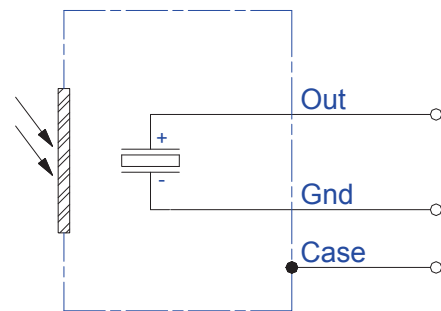
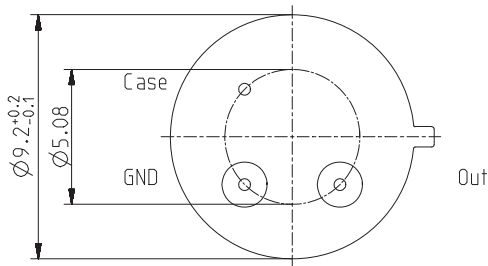
single channel; TO39 housing; large chip size; low Micro; current mode;



### HOUSING:

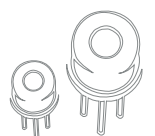
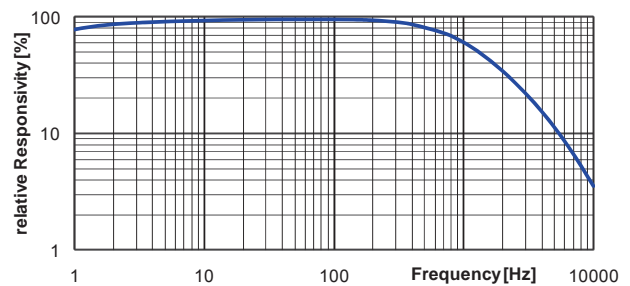
### PIN ASSIGNMENT:

TO39 3Pin  
Bottom view



Top view

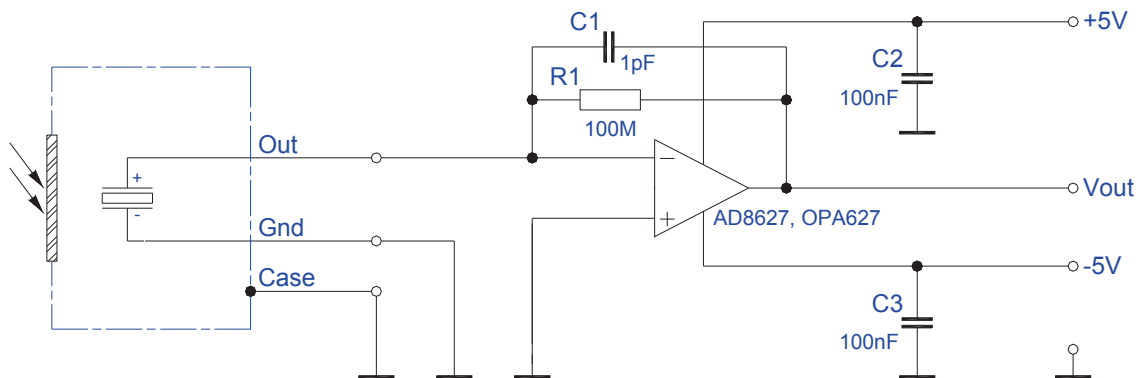
### FREQUENCY RESPONSE:



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### TEST CIRCUIT:



### PARAMETERS:

Aperture size	nom	5.0 mm sq.
Element size / type	nom	3.0x3.0 mm <sup>2</sup> lithium-tantalate with black layer
Thermal time constant	typ	200 ms
Polarity	nom	positive signal by positive IR flux change
Current responsivity (rms) {500 K, 10 Hz, 25 °C, without filter/window}	min	1.2 $\mu$ A/W
Element capacitance {1 kHz, 1 V, 25 °C}	typ	120 pF
Element dielectric loss {1 kHz, 1 V, 25 °C}	max	0.001
Potential of detector case	nom	selectable potential between -24 ... +24V to Ground {EMC requires low-impedance coupling}
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 x 5.25) mm +0/-0.05 mm circular filters: $\varnothing$ 6.5 mm $\pm$ 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	CaF <sub>2</sub> or BaF <sub>2</sub> ; 0.4 mm thick: 60° Silicon substrate; 0.5 mm thick: 70°

