

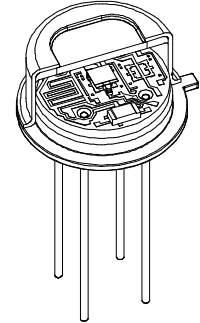
LIE-251-#

1.3 x 1.3 mm² pyroelectric IR detector
CMOS preamplifier

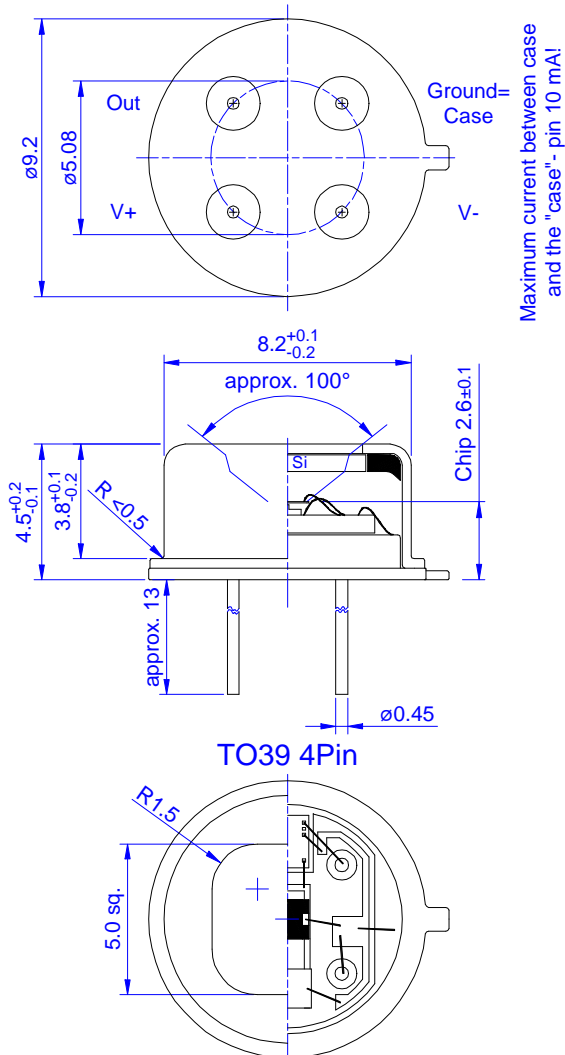
Description: LIE-251-#

[# = extension code]

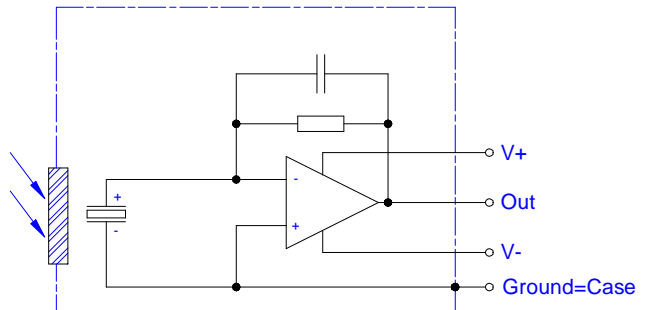
single element, area 1.3x1.3mm²;
for current mode, with micro power OpAmp; feedback R 5GOhm ±10% // C 0.20±0.1pF; medium gain



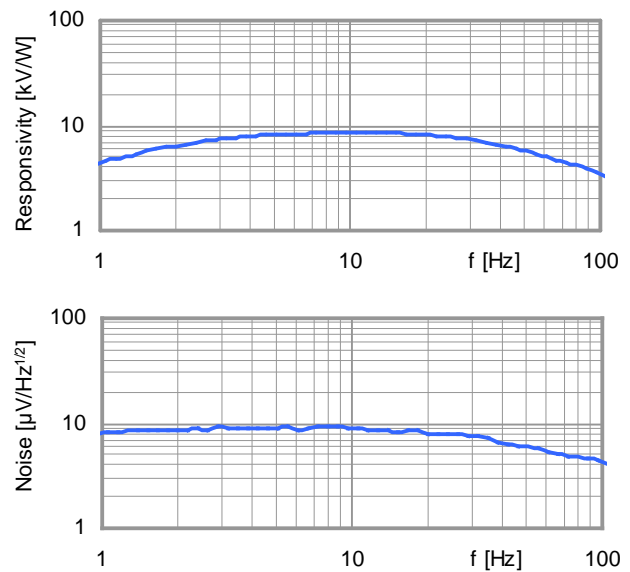
Housing:



Pin assignment:



Frequency response:



Standard Products

InfraTec GmbH
Infrarotsensorik und Messtechnik
Gostritzer Str.61-63
01217 Dresden / Germany
E-Mail: sensor@InfraTec.de
http://www.InfraTec.de

distributed by:

ELECTRO OPTICAL COMPONENTS, Inc.
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Santa Rosa, California 95403

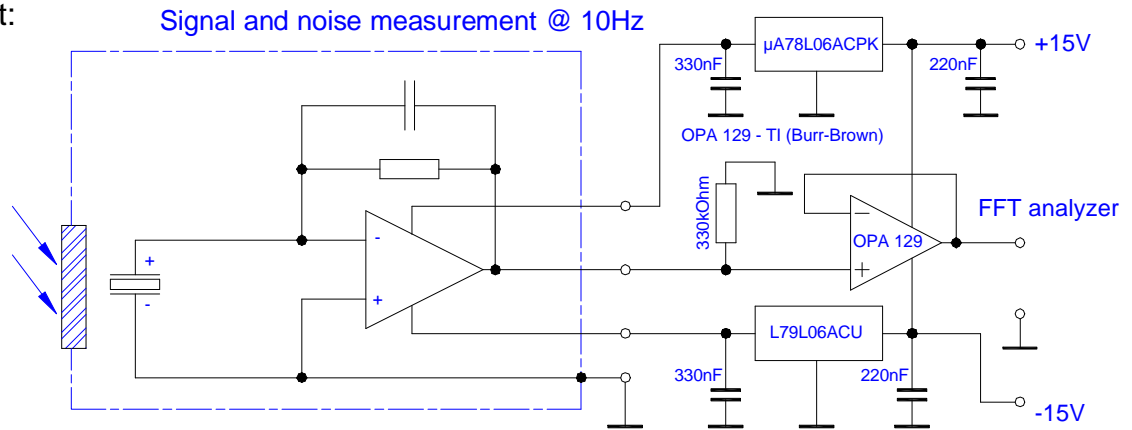


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LIE-251-#

1.3 x 1.3 mm² pyroelectric IR detector
CMOS preamplifier

Test circuit:



Parameters:

Element size / type	nom	1.3x1.3 mm ² lithium-tantalate with black layer
Aperture	nom	5.0 mm sq.
Thermal time constant	typ	150 ms
Feedback resistor	nom	5 GOhm ±10%
Feedback capacitor	nom	0.68±0.1 pF
Polarity	nom	negative signal by positive IR flux change
Voltage Responsivity {500K, 10Hz, 25°C, without window}	min	7,000 V/W
Noise density {10Hz, BW 1Hz, 25°C}	max	12 μV/Hz ^{1/2}
Detectivity {500K, 10Hz, 1Hz, 25°C, without window}	min	7.6*10 ⁷ cmHz ^{1/2} /W
CMOS operational amplifier	nom	OpAmp1 (for characteristics see application note)
Supply voltage V ⁺ - V ⁻	max	16 V
Operating supply voltage V ⁺ / V ⁻		+3.5 ... 8.0 V / -1.5 ... -8.0 V
Recommended supply voltage	nom	V ⁺ = +5 V; V ⁻ = -5 V
Supply current {output load 1MOhm}	max	50 μA
Offset voltage {25°C; output load 1MOhm}		-5 mV ... +5 mV
Optimal output load	nom	100 kOhm
Absolute output current	max	± 2 mA
Operating / Storage temperature	nom	-25 ... +85°C
Window cap		All InfraTec windows and filters are available (except KBr and CsI). Customized filters upon request.

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