

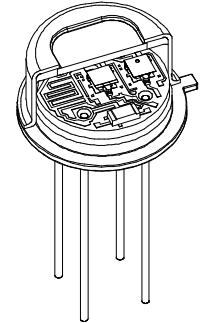
LIE-245-#

1.3 x 1.3 mm² pyroelectric IR detector
thermal compensated, CMOS preamplifier

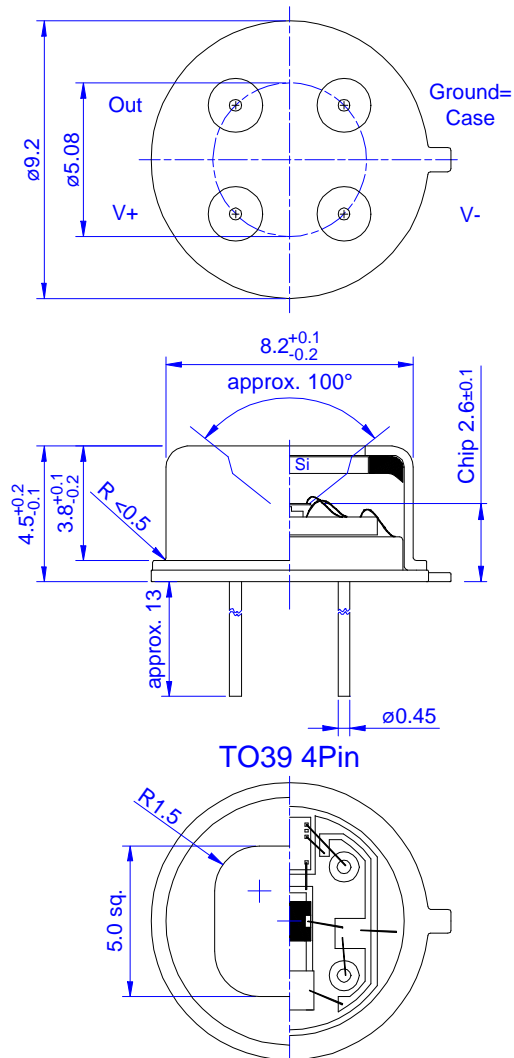
Description: LIE-245-#

[# = extension code]

single element, area 1.3x1.3mm², thermal compensation;
for current mode, with micro power OpAmp; feedback R 24GOhm ±10% // C 0.68±0.1pF; high gain

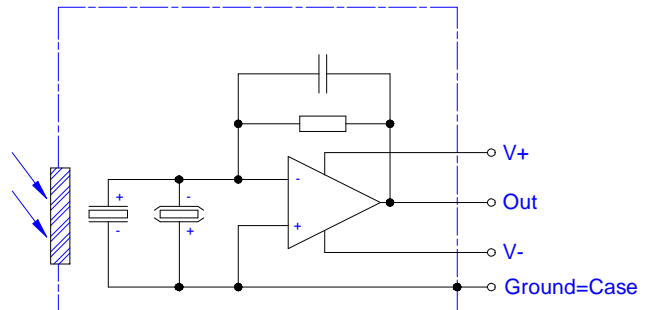


Housing:



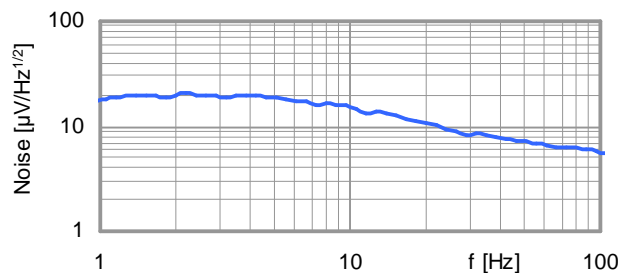
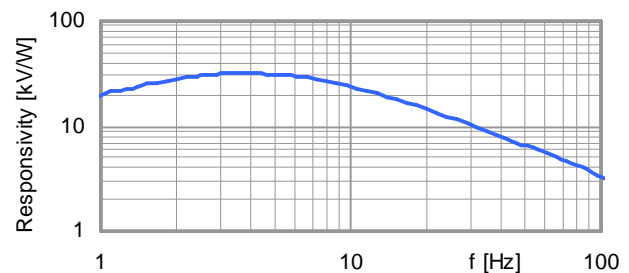
Maximum current between case and the "case"-pin 10 mA!

Pin assignment:



Standard Products

Frequency response:



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.
5460 Skylane Blvd.
Santa Rosa, California 95403

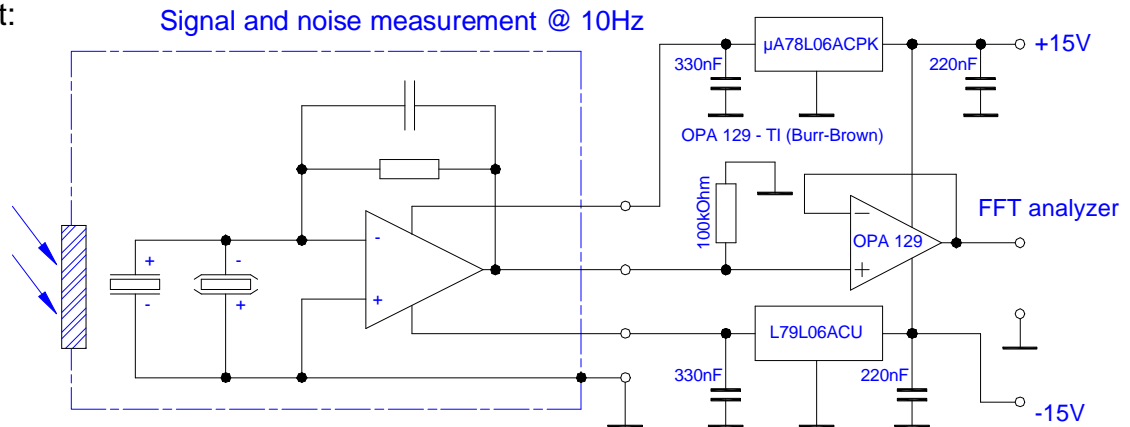


Tel: 707-568-1642
Fax: 707-568-1652
E-Mail: info@eoc-inc.com
http://www.eoc-inc.com

LIE-245-#

1.3 x 1.3 mm² pyroelectric IR detector
thermal compensated, 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 | 24 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 | 22,000 V/W |
| Noise density {10Hz, BW 1Hz, 25°C} | max | 20 μV/Hz ^{1/2} |
| Detectivity {500K, 10Hz, 1Hz, 25°C, without window} | min | 1.4*10 ⁸ 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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