Description:
quad channel; TO8 housing; medium chip size; thermal compensation; OpAmp; current mode; feedback 100 GOhm;

Housing:

Pin Assignment:

Frequency Response:

Relative responsivity / %

Noise / µV/√Hz
Test Circuit:

Parameters:

Aperture size  nom  □ 8.5 mm
Element size / type  nom  2.0 × 2.0 mm² lithium-tantalate with black layer
Thermal time constant  typ  150 ms
Feedback resistor  nom  100 GΩ ±20 %
Feedback capacitor  nom  0.2 pF ±0.1 pF
Polarity  nom  Negative signal by positive IR flux change
Voltage responsivity (rms)  (500 K, 10 Hz, 25 °C, without filter/window)  min  80,000 V/W
Noise density (rms)  (10 Hz, BW 1 Hz, 25 °C)  max  55 µV/√Hz
Detectivity  (500 K, 10 Hz, BW 1 Hz, 25 °C, without filter/window)  typ  6.0E+08 cm√Hz/W
CMOS operational amplifier  nom  OpAmp2
Supply voltage V+ - V-  max  16 V
Operating supply voltage V+ / V-  +2.2 ... 8.0 V / -2.2 ... -8.0 V
Recommended supply voltage V+ / V-  nom  V+ = +5 V; V- = -5 V
Supply current (output load 1 MQ)  max  150 µA
Offset voltage (25 °C; output load 1 MQ)  -5 mV ... +5 mV
Optimal output load  nom  470 kΩ
Absolute output current  max  ±0.4 mA
Operating / Storage temperature  nom  -25 ... +85 °C

IR filter
Combinations of all InfraTec standard narrow band pass filters are available.
Customized filters upon request.

Filter sizes
Rectangular filters: (2.85 × 2.85) mm ±0.1 mm
Circular filters: not applicable
Standard thickness: 0.50 mm ±0.2/-0.1 mm
Thickness range 0.70 ... 1.10 mm on request

Aperture window
Selected by InfraTec for best channel filter matching

Aperture window sizes
Rectangular filters: (9.00 × 9.00) mm ±0.05 mm
Circular filters: not applicable
Standard thickness: 0.50 mm ±0.1 mm

Field of View
110° (with filter: silicon substrate; 0.5 mm thick and aperture: Si ARC; 0.5 mm thick)

This preliminary datasheet contains information regarding a product InfraTec is considering for production release. Due to this state all data are for information only. InfraTec reserves the right to change these specifications at any time without notification.