

## DATASHEET

# SMTIR9902SIL INFRARED SENSOR WITH SILICON LENS

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## Typical Applications

- Contactless measurement of surface temperatures
- Temperature measurement of moving objects
- Remote measurement due to small angle of view
- Climate control
- Medical instruments



## Introduction

The Smartec infrared sensor type SMTIR9902SIL is a standard Smartec SMTIR9902 sensor equipped with a silicon lens for measuring radiation temperatures within a small angle of view ( $7.27^\circ$ ). The SMTIR9902SIL contains a NI1000 temperature sensor for measuring the temperature of the sensor itself. The temperature range of this internal sensor is  $-20$  to  $100$   $^\circ\text{C}$ . The sensor is mounted in a modified TO-05 encapsulation.

## Specifications

For parameters not specified here, the specifications of the SMTIR9902 are applicable.

Parameters	Typical	units
Number of thermojunctions	100	
Active area	0.50	$\text{mm}^2$
Resistance of thermopile	$50 \pm 15$	$\text{k}\Omega$
Time Constant	$50 \pm 10$	$\text{ms (63\%)}$
Temperature range (sensor)	$-20 - 100$	$^\circ\text{C}$
Storage temperature	$-40 - 100$	$^\circ\text{C}$

### Reference Thermistor

Resistance	$1.000 \pm 0.004$	$\text{k}\Omega$ (@ $0^\circ\text{C}$ )
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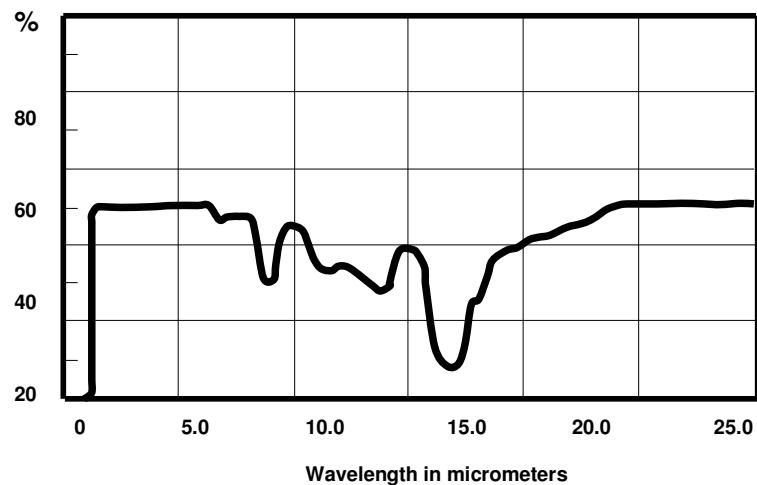


## SMTIR9902 INFRARED SENSORS

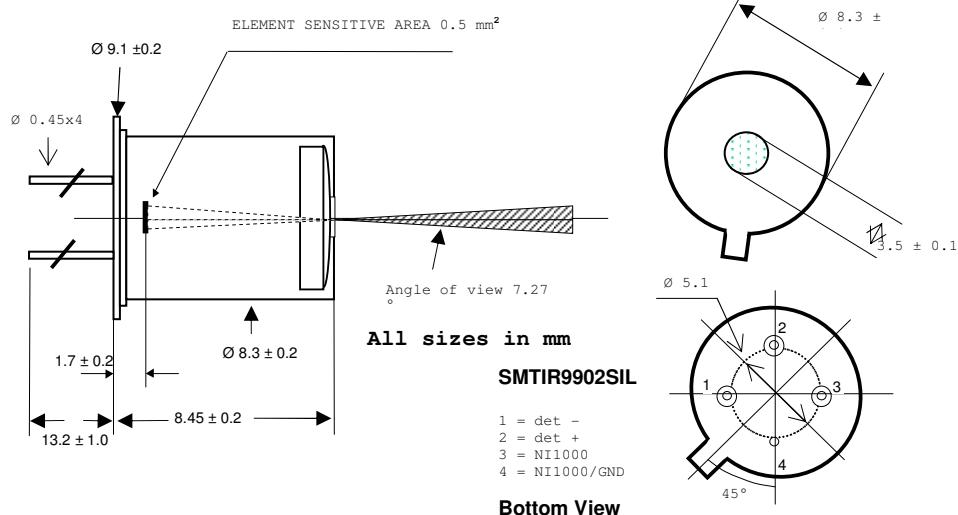
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### FILTER (characteristic)



### Dimensions



### Ordering code:

**SMTIR9902sil** Infrared sensor with Ni sensor and silicon lens

