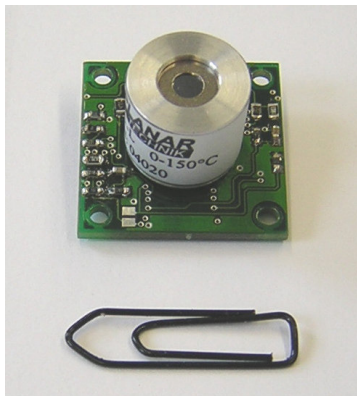


**Leider steht dieses Datenblatt zur Zeit nur in  
englischer Sprache zur Verfügung.**

## One element thermopile system with digital output

**TSEM 01- L****Function principle:**

Thermopiles transform incoming heat radiation from an object to an outgoing voltage, which is correlated to the object temperature. This IR sensor is based on a one element thermopile chip. The integrated silicon lens generates an individual FOV (field of view) to measure the temperature of the object.

The object temperature is calculated digitally by a microcontroller. The calculated temperature is transmitted by an I<sup>2</sup>C output interface. The system is calibrated and compensated for ambient temperature effects and can be adapted for different emissivity factors.

### Applications

- Home appliances (Microwave oven)
- Medical (Skin temperature)
- Automotive (Air conditioning)
- Security (Presence detection)
- Industry (Object detection)

### Advantages

- Small size
- Easy to integrate
- Low cost unit
- Low vibration sensitivity

### Specification

	Conditions	Min	Typ	Max	Unit
Object temperature range <sup>1)</sup>		0		+150	°C
Accuracy			2		°C of FS
Resolution (digital)			0.1		°C
Data output rate			10		Hz
FOV			7.3		°
Power voltage supply		4,75	5	5,25	VDC
Current consumption			6		mA
Operation temperature range		0		+85	°C
Storage temperature range		-40		+105	°C
Dimensions	W x D x H		25 x 25 x 19		mm

<sup>1)</sup> Subject to change