



# THE DATASHEET OF MLX90247ESF-DSA



# Product Information

## Thermopile Infrared Sensor

### MLX90247

The MLX90247 Thermopile Infrared Sensor uses a thermopile to sense the temperature difference between object and detector, and a thermistor for measurement of the detector's own temperature. Calculation of the absolute object temperature is possible through the combination of both outputs. The MLX90247 is supplied uncalibrated.

### Features and Benefits

- Contact-less temperature measurement based on infrared emission by the object.
- High reliability fully CMOS-compatible process.
- Thermistor integrated in the thermopile sensor chip for optimal tracking of sensor temperature.
- Nitrogen-filled hermetic TO-39 package.
- Coated silicon window for >75% infrared transmission in the wavelength interval 5.5  $\mu\text{m}$  to 14.5  $\mu\text{m}$ .
- The silicon window blocks visible light and short-wavelength infrared light emitted by infrared communication devices.
- Automotive qualified.
- ESD sensitivity: up 8 kV

### Applications

- Automotive climate control and windshield anti-fog sensing
- Residential / Industrial climate control
- Medical and bio-instrumentation
- Industrial process control
- Consumer applications: microwave oven, hair dryer
- Detection of occupancy or movement
- High speed temperature change detection

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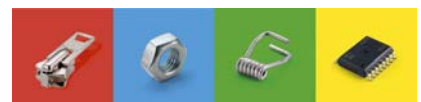
IR Temperature

Hall ICs

CMOS Imaging

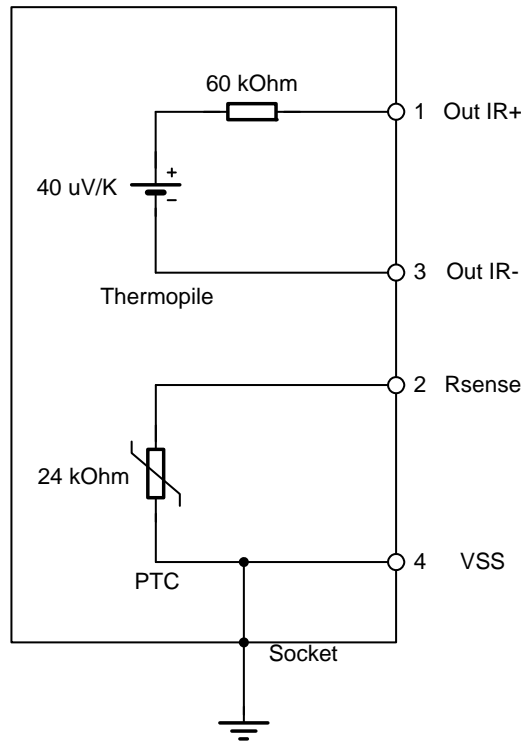
Silicon MEMS

BUS ICs

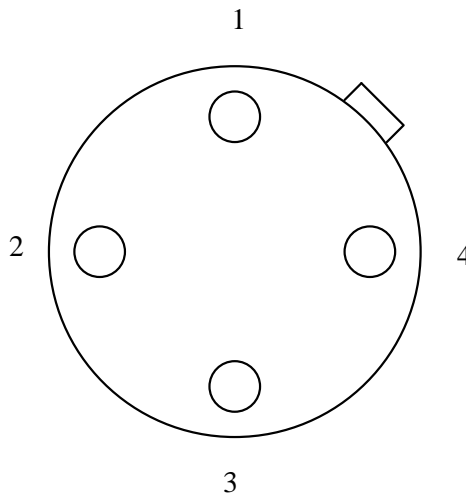


Small things make a big difference.

# Block Diagram



TO-39 package - connections



Top view = pins down

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Email Europe and rest of the world:  
sales\_europe@melexis.com

Email USA :  
sales\_usa@melexis.com

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