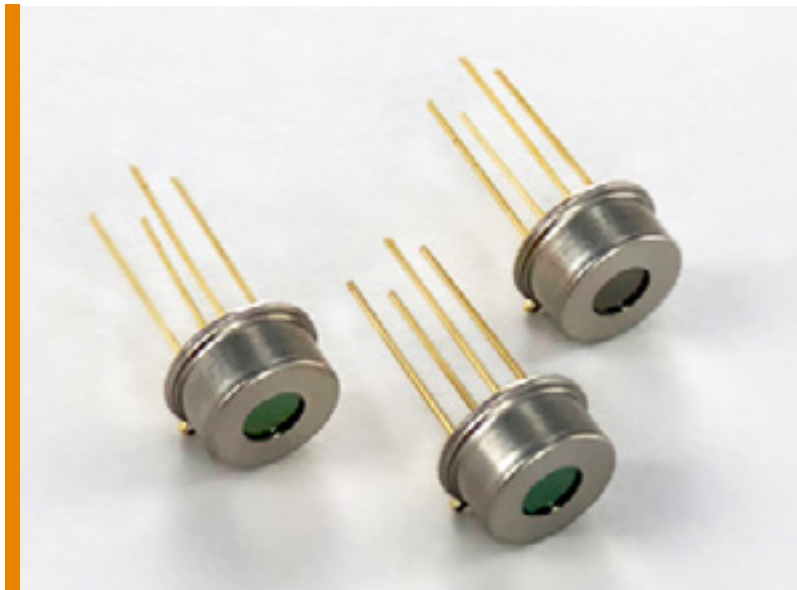


INTRODUCING DIGITAL THERMOPILE SENSORS

- **Measure temperature without physical contact**
- **Support greater design flexibility with improved EMI resistance and the need for fewer components**



TE Connectivity (TE) introduces the Digital Thermopile Sensor (TSD) contactless temperature measurement system which addresses a full range of critical design and performance demands: accuracy, speed, low power/energy efficiency, and limited space requirements. The TSD sensors include an infrared sensor (thermopile) and a sensor signal conditioner, and can be interfaced to any microcontroller by an I²C interface.

TSD sensors provide a cost-effective alternative to competitor offerings, as well as, analog sensors which require additional components to deliver similar functionality and results. TE Connectivity is a global leader in developing sensor solutions for harsh and complex environments and TSD is an example of our ability to work with clients across a wide range of industries to provide the type of smart, cost-effective solutions they require.

APPLICATIONS

- Contactless temperature measurement
- Environmental monitoring
- Industrial process measurement and control
- Motion and occupancy sensing
- NDIR gas sensing

KEY BENEFITS

- Measure temperature without physical contact and low current consumption
- Support greater design flexibility with improved EMI resistance and the need for fewer components like low offset/low noise amplifier and associated filters
- Fit into limited spaces with a small, TO5 package
- Streamline integration with an I²C interface
- Deliver high accuracy $\pm 1^{\circ}\text{C}$ at temperature ranges from 10°C to $+85^{\circ}\text{C}$ with a factory calibrated sensor
- Help eliminate problems with dust, dirt, and debris with a sealed sensor housing
- Enable accurate measurement with 10° or 88° field of view options
- Deliver superior price to performance while delivering the same measurements

ABSOLUTE MAXIMUM RATINGS

- Supply voltage: -0.3 to $+3.63\text{V}$
- Storage temperature: -20 to $+85^{\circ}\text{C}$
- Voltage at supply and IO pins: -0.5 to $V_{\text{DD}} + 0.5\text{V}$
- Current into supply and IO pins: -100 to 100mA
- ESD rating: -2 to $+2\text{kV}$
- Humidity: Non Condensing

TARGET MARKET

- Aerospace
- Industrial
- Medical
- Appliance
- Smart home
- Mobile devices

LEARN MORE

[Digital Thermopile Sensor Infographic](#)

[Digital Thermopile Sensors Application Note](#)

[Thermopile Sensors for Contactless Temperature Application Note](#)

[TSD 305 Digital Temperature Sensors Datasheet](#)

[Digital Thermopile Part List](#)