LINEPRO CONTROLS PVT. LTD.
Key Solutions in Electronics

LP5124

Printed Temperature Sensor

Description :

The Printed Temperature Sensor is developed using PTC (Positive Temperature Coefficient) resistive ink, where the electrical resistance increases with temperature.

The sensor is flexible, lightweight, and designed for low-cost, fast-response temperature sensing applications in wearable, industrial, automotive, and consumer electronic devices.

Key Feature :

- Flexible and lightweight design
- Fast temperature response
- Low power operation
- Screen-printed PTC resistive technology
- Easy integration with printed electronics
- Customizable sensor size and tail length
- Suitable for curved and flexible surfaces
- Reliable and repeatable performance
- Cost-effective alternative to conventional temperature sensors

Application :

- Automotive seat heating systems
- Battery thermal management
- Industrial heating applications
- Medical and diagnostic equipment
- Electronic enclosures and defogging systems

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Electrical Characteristics :

Parameter	Specification
Sensor Type	PTC (Positive Temperature Coefficient)
Operating Temperature Range	20°C to 60°C
Resistance @ 25°C	1 kΩ ±10% (Customizable)
Resistance @ 60°C	3 kΩ – 5 kΩ (Typical)
Temperature Coefficient	Positive (PTC Behavior)
Response Time	< 5 sec (Depending on mounting conditions)
Operating Voltage	Max. 5V DC (Recommended)

Mechanical Specifications :

Parameter	Specification
Substrate Material	PET / Polyimide
Thickness	150 µm
Sensor Area	20 × 30.5 mm (Customizable)
Tail Length	113 mm (Customizable)
Printing Method	Screen Printing
Ink Type	PTC Resistive Ink
Conductive Tracks	Silver Conductive Tracks

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Performance Characteristics :

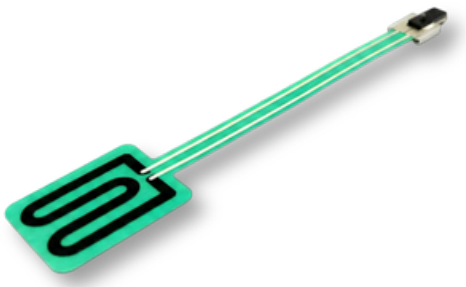
Parameter	Specification
Flexibility	High
Minimum Bend Radius	> 5 mm
Repeatability	±5%
Hysteresis	< 10%
Stability	Good under normal operating conditions

Environmental Conditions :

Parameter	Specification
Storage Temperature	10°C to 40°C
Operating Humidity	< 85% RH
Life Cycle	> 50,000 cycles (Typical)

Advantages :

- Flexible and ultra-thin construction
- Lightweight and compact design
- Low manufacturing cost
- Easy customization for various applications
- Compatible with printed electronic assemblies
- Suitable for mass production applications



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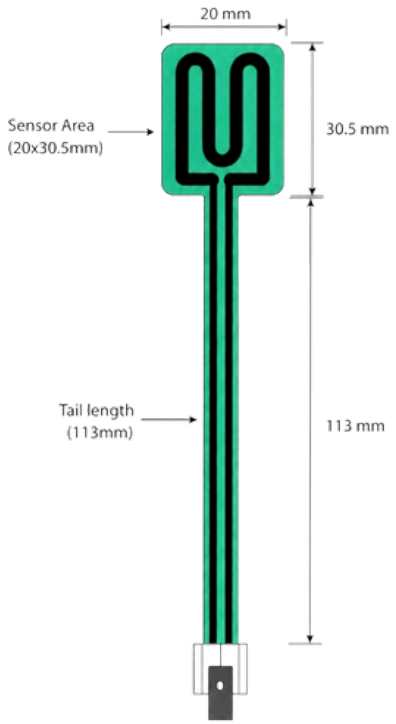
✦ Technical Diagram :



✦ Datasheet Graph :