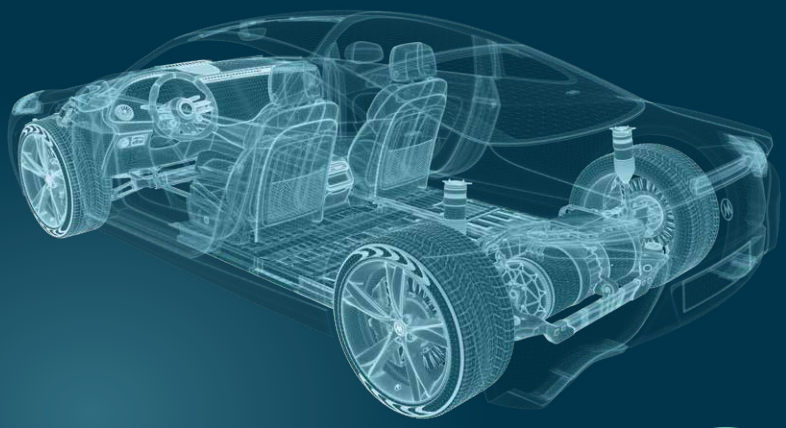
Temperature Sensor ICs



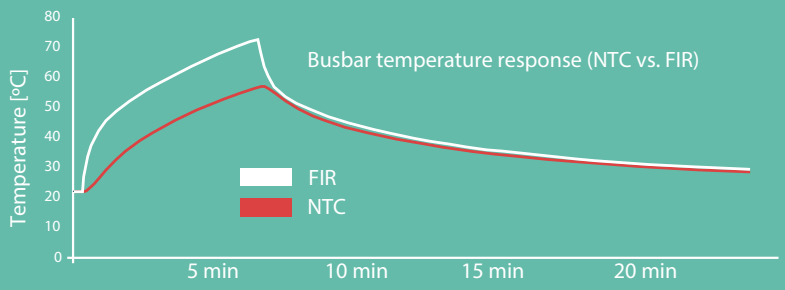
Accurate contactless temperature sensing in the electric vehicle (EV) powertrain is key for safety applications such as power transistors, bus bar or coolant temperature monitoring.

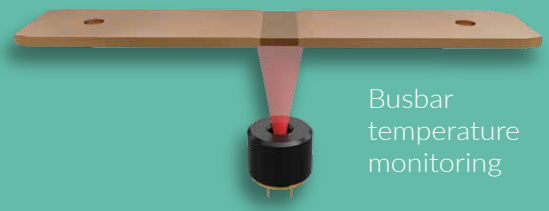
It is also playing a crucial role as input parameter for (multizone) HVAC systems, allowing the optimum compromise between the comfort of the occupants and battery power drain

FIR single pixel

- Fast temperature response
- Single point - average temperature
- Safety - intrinsic galvanic isolation
- Quality - no contact degradation
- Cost-effective - ease of assembly with sensor placement, cabling...

Coolant temperature monitoring





Busbar temperature monitoring

FIR array

- Thermal picture (16 x 12 pixel)
- HVAC control
  - Thermal comfort per area (efficiency)
  - Distinguish skin temperature from the background
- Driver/passenger monitoring

A.I.

Far InfraRed (FIR) : accurate contact-less temperature sensor

- Contact-less temperature measurement
- Immediate response (versus contact e.g. NTC)
- Broad portfolio of FIR temperature sensor ICs
- Factory calibrated
- Automotive-qualified (AEC-Q100)
- Ambient temerature up to 125 °C
- I2C (raw data) interface (driver available)
- Experienced application support

www.melexis.com/temperature-sensor-ICs

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