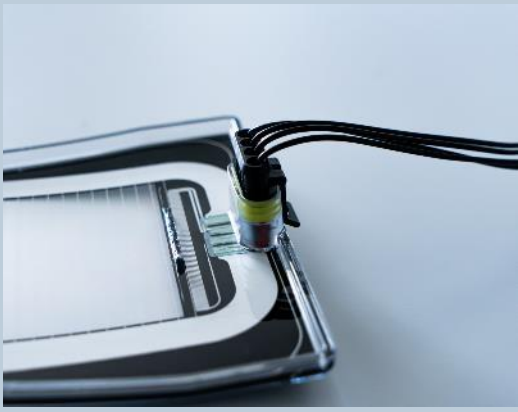
ADAS SENSOR CAMERA HEATER

Revolutionizing Anti- and De-Icing Technology for ADAS camera sensor covers: Advanced Heating Films with Intelligent Features





Our heating films based on printed silver technology are transparent, back moldable, and easy to integrate into the back injection process, significantly reducing scrap rates. With high power density and thermoformability, they offer fast de-icing times for complex geometries. The films are thin and transparent in relevant wavelength regimes, such as for RADAR, LiDAR, and visual range. Through optional capacitive sensor technology, it can be made sure that heat is only introduced when ice, snow, or fog is present on the dedicated areas. The optional PTC effect in addition prevents overheating and burning issues are eliminated.

SPECIFICATIONS

- Dimensions: up to 1m x 1.4m
- Weight: ca. 210 g/m² base film thickness
- Thickness: ca. 0,2 mm
- Operating voltage range: 12 V - 48 V
- Power density at -20 °C: up to 1,5 W/cm²
- Film temperature: ca. 90 °C
- Surface temperature: > 5 °C up to -20 °C
- De-Icing rate: up to 2 mm in 60 s at -40 °C
- Transparency: > 90 %
- Haze: < 2 %
- Attenuation (76-77 GHz): max. -0.5 dB

BENEFITS

- Thermoformable heating films based on silver, back moldable and transparent
- Patented connector technology for easy integration in back injection molding process
- Thin and transparent (starting from 175 µm), suitable for RADAR and LiDAR applications
- Capacitive sensor technology for on-demand heating
- PTC effect based on silver and carbon components for on-demand heating
- High power density (up to 1.5 W/cm2) for fast deicing times (2mm ice layer melted in <60 sec)

CUTTING EDGE TECHNOLOGY

- Thermoformable films that can heat complex geometries for ADAS camera covers
- Patented connector technology that can be integrated through back injection molding
- High power density that enables fast de-icing times, melting a 2mm ice layer in less than 60 seconds
- Transparent films in relevant wavelength regimes for RADAR, LiDAR, and the visual range
- Capacitive sensor technology integrated into the cover at defined positions to ensure heating is only turned on when needed

ABOUT ATT

ATT is a leading provider of surface heating systems utilizing thermoelectric heating polymers. With a focus on the Automotive industry, the company also offers solutions for Aerospace and Architecture applications. In addition to surface heating systems, ATT is continuously advancing their offerings with the development of advanced sensors including ultrathin real-time temperature sensors, hot-spot sensors for batteries, icing sensors for aircraft wings, and printable NTC sensors based on proprietary technologies.

MARKET

Mobility | **Healthcare** | Traditional Electronics | Furniture & Building | IoT Antennas | Industry | **Consumer Goods**

FURTHER READING:

https://www.thermaltech.at/adas-sensor-camera-heating/