



# BACKMOLD® HEATER

Revolutionize Your Heating Solutions with **BackMold®** - The Printed Heater Integrated into Hard Plastic Parts



Introducing our **BackMold®** Heater, a revolutionary solution in the world of heating technology. Our heater utilizes state-of-the-art printed electronics technology and is seamlessly integrated into hard plastic parts through back-injection molding. By utilizing different adhesion promoters and proprietary techniques, we are able to offer solutions for printed heaters to be integrated into a wide range of plastic materials. Our **BackMold®** Heater comes in two variants - the first features a printed silver-based heater and the second combines printed silver electrodes with a printed carbon ink layer that features a strong PTC effect, making the product incredibly safe as it can no longer overheat on its own.

With our **BackMold®** Heater, you can enjoy the benefits of advanced heating technology in even more applications and settings, from automotive components to consumer electronics and beyond.

## SPECIFICATIONS

- Voltage Range: 9 VDC up to 70 VDC
- Power density: up to 10.000 W/m<sup>2</sup>
- Temperature Range: -40 °C to 140°C
- Short Time Temperature: up to 280°C
- Ingress Protection: IP69
- NTC Sensor Precision: +/- 1 K

## 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.

## BENEFITS

- Seamless integration into hard plastic parts through back-injection molding process
- Incredibly safe with the printed carbon ink layer featuring a strong PTC effect
- Connector for power supply can be integrated into the same back-injection molding process as the heater, saving time and effort
- Optional printed NTC sensors for reliable temperature detection and control

## CUTTING EDGE TECHNOLOGY

- In addition, we have developed a unique process for integrating the required connector for plugging in a power supply directly into the back-injection molding process. This means that once the finished part is ejected from the mold, it has the heating function and connector integrated in one go, making installation and use even more convenient. This process is protected by our patented **BackConnect®** technology.
- As with our **SoftSurface®** Heater, optional printed NTC sensors based on our patented **NTCSense®** technology can be integrated into both variants of our **BackMold®** Heater, providing reliable temperature detection and control over the entire surface of the heater.

## MARKET



Mobility



Healthcare



Traditional Electronics



Furniture & Building



IoT Antennas



Industry



Consumer Goods

## FURTHER READING:

<https://www.thermaltech.at/vehicle-cabin-heating/>