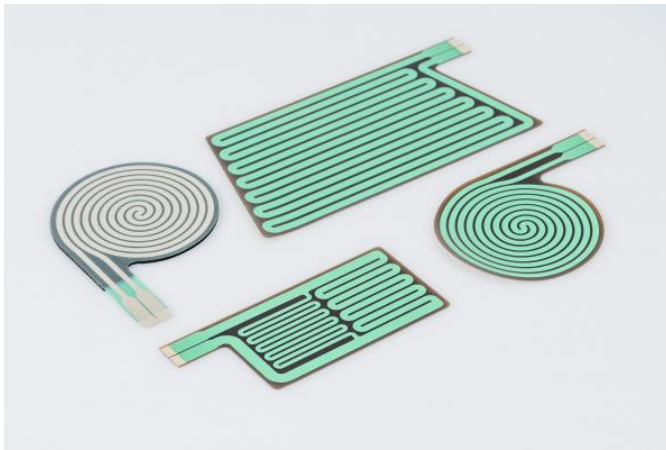


ADAS system sensors—cameras, radar and lidar units, etc—have to accurately function under all weather conditions. Especially at freezing temperatures, sensors must be thawed quickly and kept ice-free while the vehicle is on the road.



To ensure reliable and permanent deicing of these sensors, Schreiner ProTech of Munich, Germany, have developed film heaters based on printed electronics.

The functional films are lightweight, flat and flexible so that they can be applied close or directly to the sensor with minimal space requirements, which makes them ideally suited for this specific type of application. The flexibility of the films and the variable design of the conductive tracks allow for customisation of the film heater in terms of shape and size, and adaption to any geometry and curvature of the component. Due to state-of-the-art die cutting, laser and printing technologies, complex contours with tight tolerances can be achieved. The planar surface of the printed heating structures avoids the conductive tracks potentially being visible in installed condition. The heating solution is also available as a self-adhesive version, which reduces installation requirements.