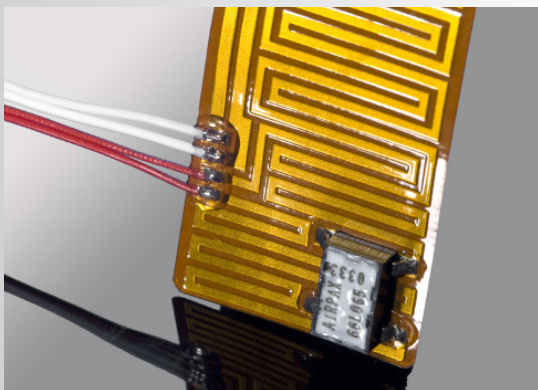
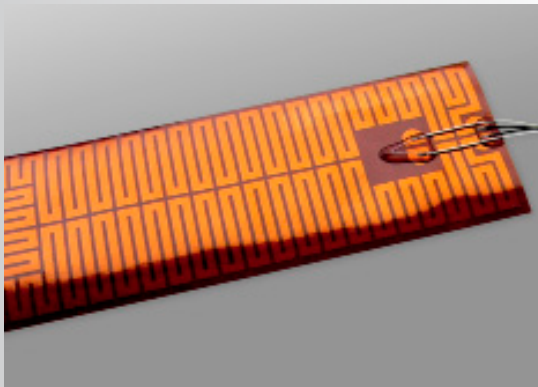
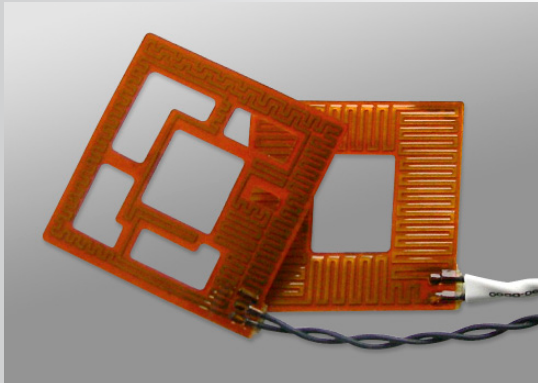


# Thermal Systems for the Defense Industry



## **Birk Heaters are Designed to Provide:**

- Heat at operating temperatures to  $-40^{\circ}\text{C}$
- Very low out-gassing
- Very even heat distribution
- Integrated sensors and flex circuits

## **Innovating to Support Defense Industry Leaders**

Birk supplies heaters to the military and defense industry leaders. These heating systems keep components within operating temperature specification when ambient is below operating specification. Birk heaters are typically made of Kapton® polyimide film and optimized for each application using Birk proprietary design and fabrication methods.

We provide complete assemblies, using a process that is completely managed in-house, in order to give our customers plug-in capability. Wiring harnesses are also available to support single or multiple heater systems. We provide mechanical attachment to machined parts, and Gold/Nickel plating is available to resist corrosion or oxidation. Some proven applications include:

### — **Ruggedized Laptops & Memory Storage**

Birk makes custom polyimide film heaters to fit display, memory and processing components. We use standard sensors and custom thin film sensors to fit the unique parameters of control systems.

### — **Acquisition Systems**

Birk develops innovative polyimide film heaters to fit small surface areas with close heater contact around multiple openings. Sensors are specified to customers' end needs.

### — **Heated Air Handlers**

Birk creates innovative designs to fit filters and air handlers. Polyimide film and silicone heaters are both available for these designs. Low out-gassing heaters are available up to 60 inches in length.

### — **Vehicle and Vessel Lighting**

We develop heaters to fit to the unique requirements of military vehicle lighting systems.

## **Custom Designs. Prototypes. Fast.**

Birk specializes in "engineered solutions", not ordinary products you can get elsewhere. Our design team thrives on developing innovative approaches to complex problems. Our continuing implementation of Lean Processes allows us to deliver prototypes in days or weeks, where others quote months. Each thermal system is custom designed to meet the specific requirements of each integrated circuit under test.

## **What Can Birk Do For You?**

**For more information visit [www.birkmfg.com](http://www.birkmfg.com), call 860.739.4170 or email [sales@birkmfg.com](mailto:sales@birkmfg.com)**