BIRK MANUFACTURING IS AN
ISO 9001:2000 CERTIFIED COMPANY

PRODUCT INFORMATION :

# Kapton® Heaters

Kapton® is a DuPont polyimide film used in conjunction with etched foil circuits to produce very thin flexible heaters. Kapton® has excellent dielectric qualities to provide 5000 volts dielectric per .001 inch (.025mm) thickness.

Birk uses many types of Kapton® with two bonding systems. An FEP Teflon® which is a thermo flow polymer and a thermo flow acrylic. The FEP bonded Kapton® has a continuous temperature capability of 500˚F (260˚C), the acrylic bonded Kapton® has a continuous temperature capability of 250˚F (120˚C).

Birk can manufacture Kapton® heaters up to 6 inches (300mm) wide by 65 inches (1651mm) long, the largest in the Industry, and heaters in thickness for .003 inches (.07mm) to .010 inches (.254mm) thick.

Using a proprietary process, Birk bonds foil to Kapton® prior to etching, and after etching, bonds a top insulation ply to the assembly. Birk can also bond these heaters to metal surfaces with a bond line as thin as .0005 inch (.0127mm) providing excellent bond strength and good heat transfer.

Etched foil circuits can be very accurately produced on Kapton® with line widths down to .010 inches (.254 mm) thick. Various patterns can be etched into circuits such as holes, cut outs and flex circuits.

Birk builds Kapton® heaters into assemblies which include sensors, heat sinks, fuses, probes and electronics. Many of these products are completely assembled and tested at Birk and shipped directly to our customer inventory.

Termination of Kapton® heaters can be in many forms, leads, connectors, solder terminal pads or card edge ready.

## Birk's Kapton® heaters are used in many applications such as:

- Instrumentation
- Blood Testing
- Fiber Optics Equipment
- Spectrographs
- Aircraft Instruments
- Sensors
- Gyro Heaters
- Drug and Explosive Detection
- CT Scanners
- Surveillance Cameras
- Surgical Instruments
- Battery Heaters