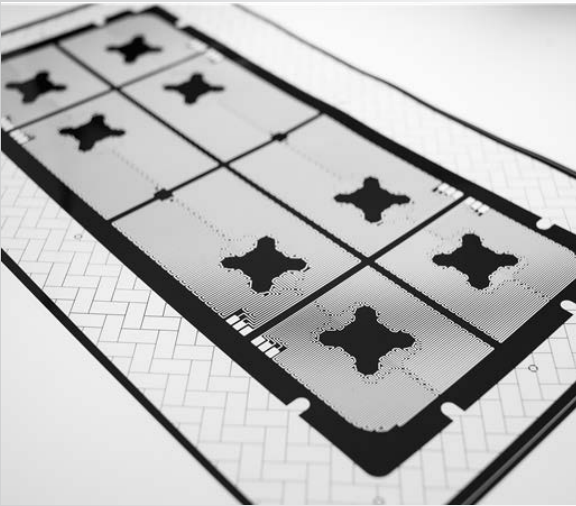




## Circuit Design



- **Shaded Watt Density**  
Offering different heat intensities in the same circuit to compensate for cool edges, heat sinks and provide a very even heat across the entire heated area.
- **Dual Voltage Circuits**  
A single heater can be designed to operate on more than one voltage by including dual circuits with three leads.
- **Resistance Taps**  
Since the heater circuit is a resistor, taps can be taken anywhere along that circuit to provide a given voltage to an LED or other component that requires other than line voltage.

Birk Manufacturing designs thousands of wire and etched foil circuits each year to meet the specific needs of the customer. Birk can offer the customer many features such as:

- **Accommodate Holes and Cutouts**  
Many times heaters need to fit around holes and cutouts. This can be designed in either etched foil or wire circuits to provide heating of the entire surface area.
- **Multi-layer Circuits**  
Many times we need to maximize surface area to spread the watt density. Multi-layer circuits can be used to fit a high resistance in a small area by putting two circuits in series. The multi-layer circuit also allows Birk to put a sensor flex circuit on top of the heater circuit to maximize the heated area.
- **Sensors and Fuses within a circuit**  
To control heat and temperature limits properly, thermostats, RTDs, thermocouples, thermistors, solid state sensors and fuses are strategically placed within a circuit to achieve the best operating thermal system.
- **Various Terminations**  
Birk can offer many different terminations such as: leads from 36 gauge to 10 gauge, soldered terminals, connectors, pins and zero insertion force connections.
- **Flex Circuits for Sensors**  
Sensors are generally located within a heated area. Non-heated flex circuits can be built into the circuit design to carry the signal to the instruments.

### 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)