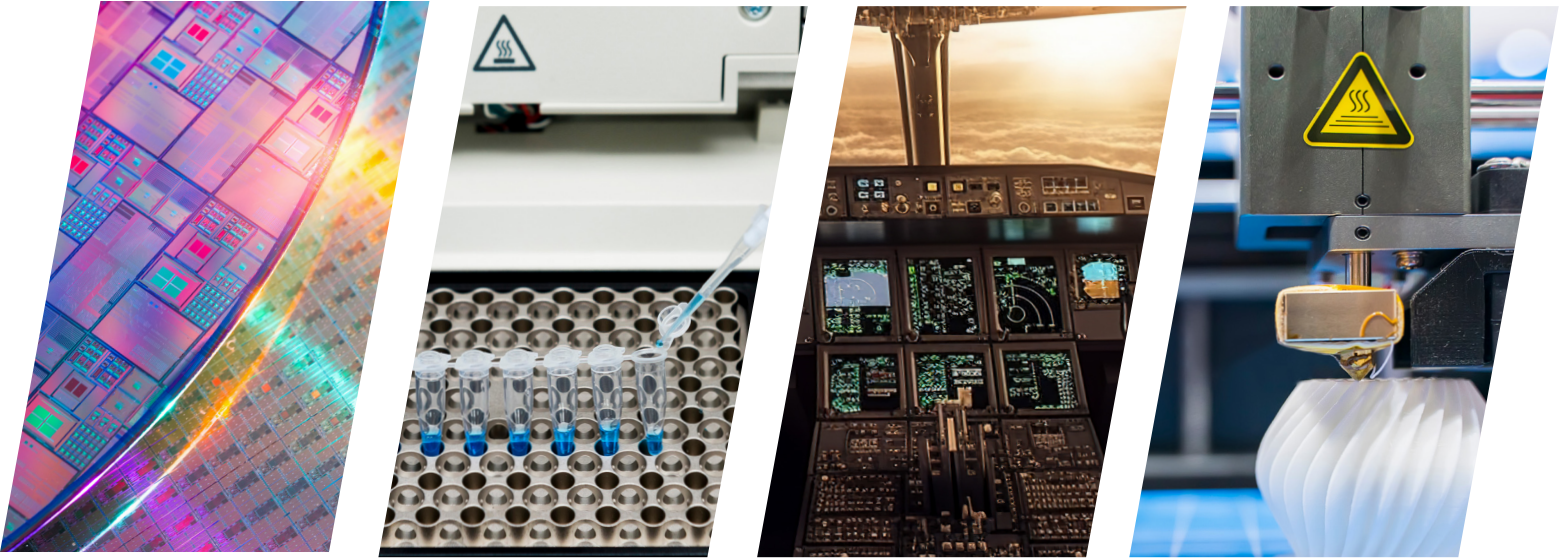
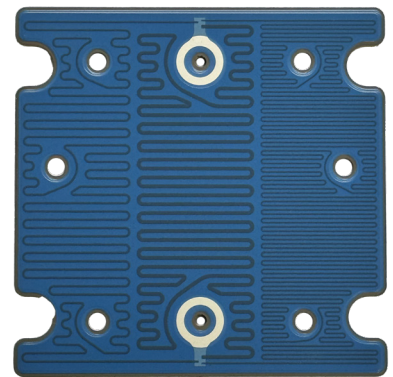


Superior structural properties for high watt density applications.



Fast and reliable, these low-profile heaters can be found in 3D printers, hand-held devices, and other applications where tight tolerances and tighter form factors drive design. Thick Film Stainless Steel heaters are a compact, lightweight solution that maximize operating efficiency. Stainless Steel is ideal where voltage and wattage combination precludes other types of resistive heaters.

- For high temperature applications up to 650 °C.
- Steel can be flexed, bent, laser-cut or machined.
- Power densities greater than 31 W/cm² (200 W/in²).
- Low mass: fast temperature ramp up and cool down.
- Low leakage current at low temperatures.
- No out-gassing with inorganic systems.
- Low coefficient of thermal expansion.
- Solid insulation properties due to glass encapsulation.

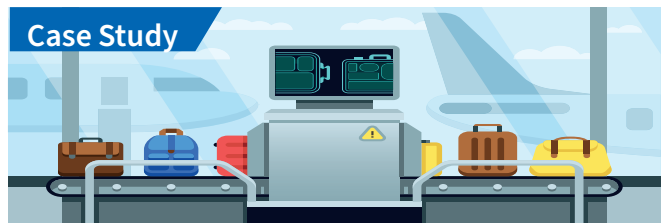


SPECIFICATIONS	
Maximum Temperature	650 °C 1202 °F
Max Watt Density	31 W/cm ² 200 W/in ²
Thermal Conductivity	15 W/mK
Ramp Up Rate	150 °C/second 302 °F/second
Coefficient of Thermal Expansion	5.8 x 10 ⁻⁶ /°C
Heat Capacity	0.50J/g°C between 0°C to 100°C
Dielectric Strength	Up to 4000 VAC
UL Double Insulation	Yes (with secondary dielectric)
Density	7.80 g/cm ³ 483.84 lb./ft ³
Substrate Thickness Range	0.10 mm x 3.05 mm 0.004 in. to 0.12 in.
Max Size	305 mm x 607 mm 12 in. x 24 in.



Cold Temperature EV Battery Conditioning

Stainless steel Thick Film heaters are integral components in EV battery conditioning systems. Robust construction and high watt densities are perfect for reliable performance in all climates.



Explosive Detection

A small, thin-profile heater with fast ramp-up for high throughput. Stainless Steel's structural properties ensure long life and lower total costs of ownership for a hand-held field explosive detector.



Additive Manufacturing

Fast ramp-up speeds and tight temperature controls for each heating application in 3D Printers.



Other Industries

Thick Film printed circuits and heating elements are found in hand-held devices, machinery and equipment applications in foodservice, security, and industrial applications.



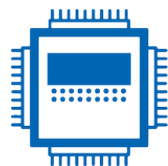
Medical and Life Sciences

Emission-free heaters with tight tolerances and the highest performance standards are ideal for medical applications.



Aerospace & Defense

Aerospace manufacturers rely on Heatron's thick film heaters for pitot tubes and other aerospace applications.



Semiconductor

Operating temperatures up to 1000°C and minimal out-gassing are ideal for wafer and gas line applications.

HEATRON

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