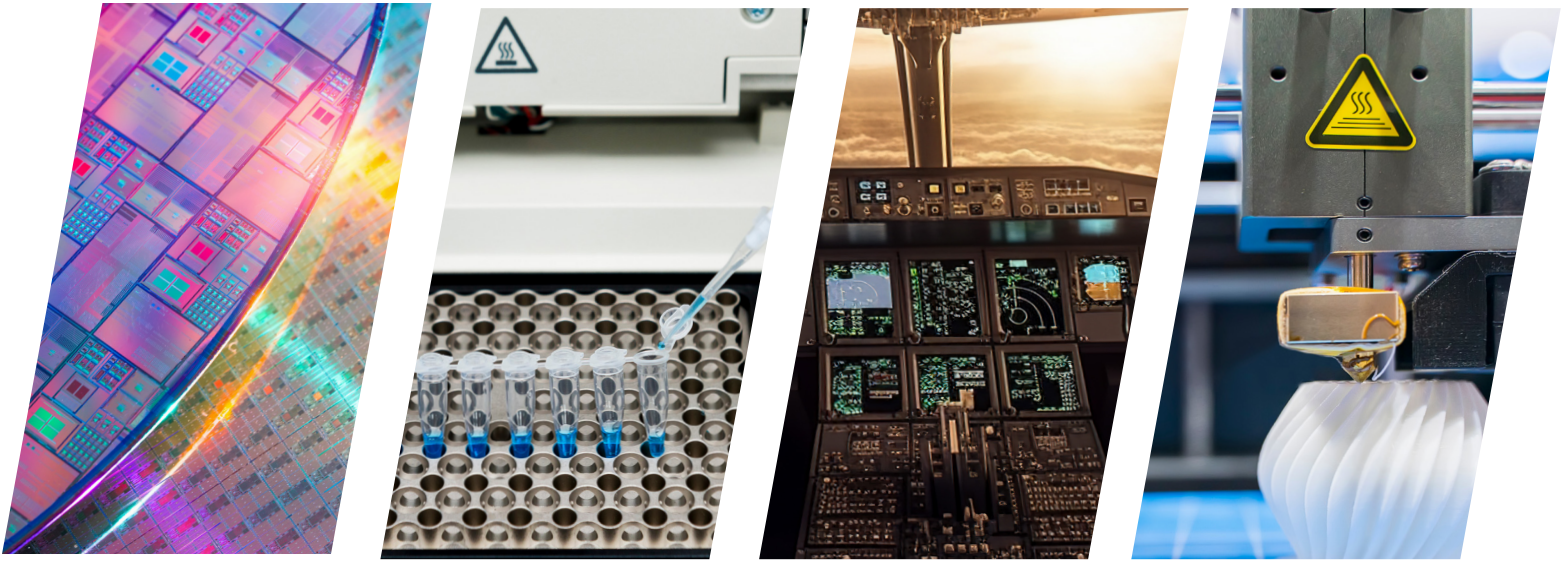


High compressive strength and wear resistance with superior bond strength



ALUMINA (Al_2O_3)

About Ceramic Core Alumina

Featuring precise, controlled heat for high-temperature applications up to 1000°C, Thick Film Alumina heaters offer low mass, low leakage current, and excellent dielectric properties. This configuration is best where uniform surface temperatures, high heat resistance and high thermal conductivity are required. Alumina provides the highest insulation standoff per unit thickness.

- For high temperature applications between 350 °C and 1000 °C.
- High temperature uniformity.
- Excellent dielectric properties.
- Low mass: fast temperature ramp up and cool down.
- Low leakage current.
- No out-gassing with inorganic systems.
- Resistant to moisture and many chemicals.



SPECIFICATIONS	
Maximum Temperature	1000 °C 1832 °F
Max Watt Density	11.6 W/cm ² 75 W/in ²
Thermal Conductivity	35 W/mK
Ramp Up Rate	50 °C/second 122 °F/second
Coefficient of Thermal Expansion	6.7 x 10 ⁻⁶ /°C
Heat Capacity	0.88 J/g-K
Dielectric Strength	Greater than 5000 VAC
Dielectric Constant	9.8
UL Double Insulation	Yes at 1.0 mm or more
Density	3.75g/cm ³ 237.23 lb./ft ³
Substrate Thickness Range	0.64 mm x 12.70 mm 0.025 in. to 0.50 in..
Max Size	152 mm x 152 mm 6 in. x 6 in.



Breathalyzer Test

The Thick Film Alumina heater Heatron designed for this application delivers fast, precise heat with fast ramp-up and cool down for in-the-field breathalyzer results in all weather conditions.



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.



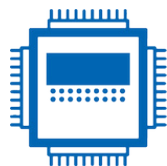
Medical and Life Sciences

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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