



Cactus Materials
presents

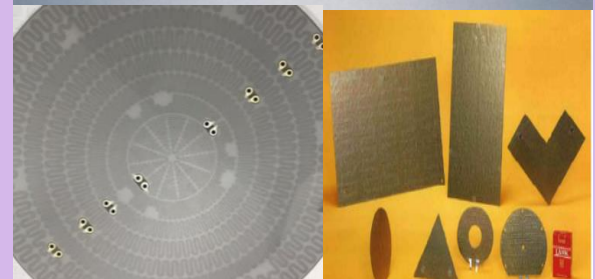
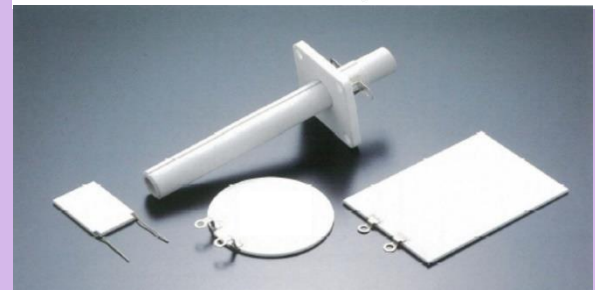
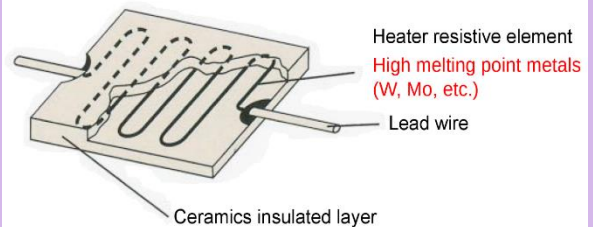
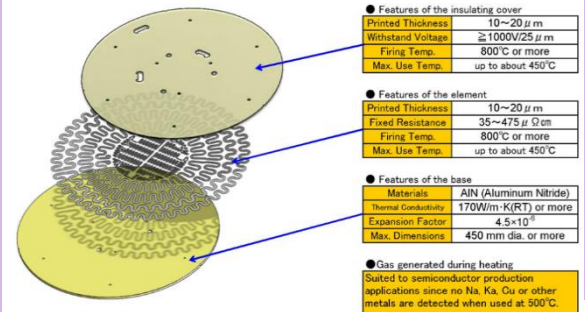
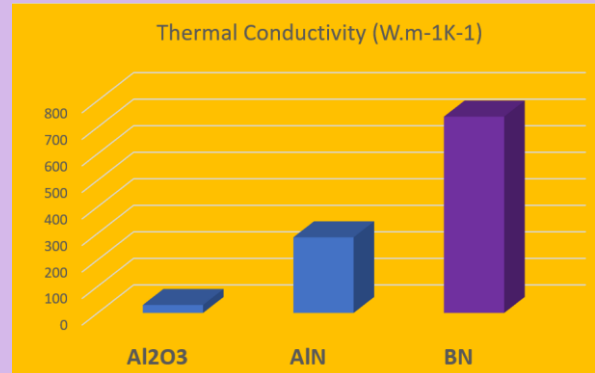
The Ultra-Ceramic Thermal Heaters

1. Ultra-Ceramic Boron Nitride (BN) Thermal Heater – Cactus designed Industry's first BN heater with the highest power density (3 W/mm^2) and faster heating/cooling ($>500^\circ\text{C/sec}$ ramp rate), up to 1600°C

2. Ultra-Ceramic Aluminum Nitride (ALN) Thermal Heater – Power density (2 W/mm^2) and faster heating/cooling ($>300^\circ\text{C/sec}$ ramp rate)

3. Ultra-Ceramic Alumina (Al_2O_3) Thermal Heater – Power density (1.5 W/mm^2) and faster heating/cooling ($>200^\circ\text{C/sec}$ ramp rate)

4. High watt density Micathermal heater and Jacket Heater – High temp up to 800°C



- Designed in USA, exclusively manufactured in Japan, the highest quality in industry!
- Patent pending manufacturing process.
- Post fire design allows for the production of prototype, small scale and high volume production at low cost!

Applications:

- Appliances: electric ranges, irons, in-floor heaters, space heaters, medical devices, etc.
- Industrial: mold heating, medical devices, semiconductor production, liquid crystal production, OLED production, solar cell

Industrial

Medical

Semiconductor

Consumers

High heat dissipation heater