



Cercom® Heaters Ensure Consistent Heat Distribution & Durable, Reliable Performance

Semiconductor Equipment Components Specialists

Since the advent of the semiconductor industry, CoorsTek has served as a reliable and trusted advanced materials components partner. Our wide variety of ultra-pure ceramic materials ensure consistent yields and exceptionally long life – even in high-heat and caustic environments.



Materials Designed Specifically for High-Performance Heaters

CoorsTek Cercom aluminum nitride materials ensure superior performance for:

- Chemical Vapor Deposition (CVD)
- Plasma-Enhanced Chemical Vapor Deposition (PECVD)
- Atomic Layer Deposition (ALD)
- Halogen gas processes (chlorine, fluorine)

Multiple Configurations Available

- Plates
- Pedestals (plate hermetically bonded to shaft)
- Rings
- Custom applications

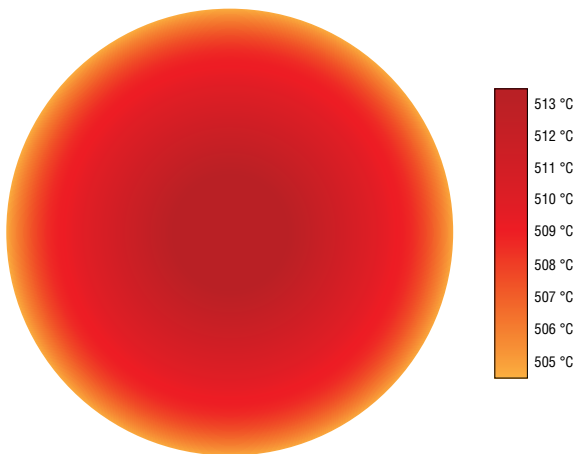
Various Heater Sizes Supported

- 150 mm
- 200 mm
- 300 mm
- 450 mm

Options and Specifications

- Operating temperature up to 750 °C
- Single or multiple heating zones
- Embedded RF antenna or ground plane available
- Temperature uniformity deviation $\pm 0.5\%$ (2 zone), $\pm 1\%$ (1 zone)
- Ramp rate 10-15 °C/minute
- Patented hot pressed, unibody technology

With in over 50 manufacturing locations across four continents, CoorsTek is the international partner of choice for high-performance semiconductor components. For more information, contact a CoorsTek semiconductor equipment specialist today at +1 800 821 6110.



Exceptionally Consistent Heating Surface

CoorsTek AlN ceramics ensure a consistent heat signature across the wafer face.

MATERIAL PROPERTY	UNITS	TEST METHOD	ALN S-1 DIRECT SINTERED HIGH RESISTANCE	ALN HP HOT PRESSED
Density	gm/cc	ASTM-D792	3.29	3.25
Grain Size, average	µm	ASTM-E112	4-6	2-5
Flexural Strength (4-PT. MOR)	MPa	ASTM-C1161	375	420
Characteristic Strength	MPa	ASTM-C1161	400	440
Weibull Modulus	m	ASTM-C1161	12	12
Elastic Modulus	GPa	ASTM-E494-10	330	330
Poisson's Ratio	n	ASTM-E494-10	0.23	0.23
Hardness	GPa (Kg/mm ²)	ASTM-C1326	1100	1150
Fracture Toughness	MPa m ^{1/2}	Chevron Notch	2.9	2.9
Thermal Expansion RT - 1000° C	1X 10 ⁻⁶ /°C	ASTM-C372	5.4	5.5
Thermal Conductivity	W/(m ² K)	ASTM E1461	100	80
Dielectric Constant, 1 MHz	@25° C	ASTM-D150	9	8.5
Loss Tangent, 1 MHz	@25° C	ASTM-D150	0.0004	0.0001

The chart is intended to illustrate typical properties. Property values vary with method of manufacture, size, and shape of part. Data contained herein is not to be construed as absolute and does not constitute a representation or warranty for which CoorsTek assumes legal responsibility. CoorsTek, Amazing Solutions, Cercom, and OpX are registered trademarks of CoorsTek, Inc.



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