

QUESTECH

Beryllium Oxide (BeO) & Aluminum Nitride (ALN) Parts

Applications

General

Excellent thermal management materials.

After laser machining and cleaning, BeO dust hazard is minimal but safe BeO handling practices must be observed. ALN does not require special handling practices.

ALN is rapidly attacked by contact with caustic cleaning or etching solutions that are of basic PH.

Types

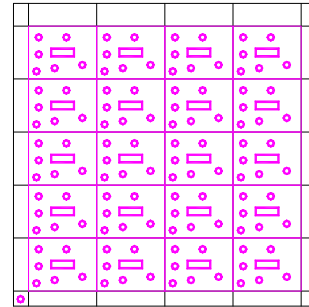
Thick Film Circuits

Thin Film Circuits

Uses

Heat Spreaders

Heat Sinking substrates



Typical Cuts In BeO & ALN

Design Guidelines

Property	BeO Nom.	ALN Nom.	Units
Maximum Thickness	.040 cut/.060 scribe	.040 cut/.060 scribe	Inches
Minimum Radius	.003	.003	Inches
Smallest Feature	.006	0.006	Inches
Taper Front to Back	10 to 15	10 to 15	%
Feature Size Tolerance	+/- 0.002* +/- .001**	+/- 0.002* +/- .001**	Inches
Feature to Feature Proximity	.010 min.	.025 min.	Inches
Feature to Edge Proximity	1 X material	2 X material	Thickness
Maximum Scribe Depth	.030	.007	Inches
Scribed Edge Break Flare	.003 max.	.003 max.	Inches
Scribe Cone (Pulse) Spacing	.0065	0.0065	Inches
Metallic Aluminum Formation	None	None at front side	As viewed at 3x
Aluminum Oxide Formation	None	Spotty but visible	As viewed at 3x

* As measured at both front and back Side

** As measured at either front or back side

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