

## **Polishing**

Centerline Technologies is dedicated to providing the polishing of advanced materials to surface finishes and supplier quality levels that consistently meet or exceed our customer's expectations.

Advanced level polishing requires that appropriate abrasive and pre-lapping conditions be used to significantly reduce sub surface damage. Centerline will use both mechanical and CMP (chemical mechanical process) depending on the customer's requirements. We will constantly be looking for ways to enhance the processes that we have already have established, while maintaining careful process controls and qualifications.

Centerline Technologies' polishing process controls the surface finish and, combined with our lapping process, assures thickness identity and parallelism, as well as flatness of substrates. Our lapping and polishing processes are custom designed for each type of material and the physical dimensions required.

Material	Surface Finish (u-inches)	Thickness Tolerance	Applications
As fired 99.6%	< 4	+/-10% or	Use for low to medium power DC
		+/-5%	& RF circuits
Polished 99.6%	< 1	+/0005"	Use for low to medium power RF,
Alumina			Microwave, and Optical
			interconnects
Polished 99.5%	< 2	+/0005"	Use for high power
Beryllium Oxide			DC/RF/Microwave & Optical
			applications
Polished Aluminum	< 3	+/0005"	Use for higher power
Nitride			DC/RF/Microwave & Optical
			applications
Polished Fused Silica	< .1	+/0005"	Use for Optical or High
			Frequency interconnects
			requiring extremely low loss
			transmission performance
Polished Titanates	< 3	+/0005"	RF & Microwave devices
			requiring high Q performance

Centerline Technologies takes great pride in producing a superior product consistently and repeatedly. Please review our capabilities and polishing and lapping information. Talk to us. Ask questions. Find out why Centerline Technologies should be your preferred source for high quality polished and lapped substrate materials.