



Micromachining and precision processing of optics and semiconductors by Valley Design

4 Axis CNC Micromachining, Precision Lapping, Polishing, Dicing, and Optical Coatings for parts as small as .005" (.127mm) to as large as 450mm diameter

Visit us at next week's Photonics West, February 5-7, at the Moscone Center, San Francisco, California. We will be exhibiting in the South Hall, Booth #2043, displaying a wide variety of wafers, substrates, shims and spacers, chucks, and other lapped, polished and machined parts of all types of materials.



Valley processes many materials from Ceramics including Aluminum Nitride, 96% - 99.8% Alumina, Macor, Glass of all types, Fused Silica and Quartz, Silicon and Sapphire, Metals and many others to micron level tolerances. We can machine intricately formed parts from these materials including extremely small shapes, rounds, squares, rectangles, and with features such as thru-holes and pockets, corner chamfers and radii, edge chamfers and steps, complex geometries with tight tolerances. Parts may then be lapped, polished and diced all within Valley's facilities. Working closely with local coating houses, we can also provide various types of AR and optical coatings. Valley also machines, laps and polishes customer supplied materials.

Recent projects include:

- Large 450mm diameter ceramic lapping, polishing and hole drilling
- Annealing 450mm diameter as-fired 99.6% Alumina to as flat as .0005" / inch (typical as fired Alumina is flat to .003" / inch)
- Machining, polishing and coating complex ultra-flat Aluminum mirrors
- Fabricating elliptical shaped washers in Copper
- Machining complex shapes and features in Macor
- Drilling holes .020" diameter into 3mm thick Alumina assemblies
- Thinning and polishing Fused Silica to 10um thick
- Machining shapes and chamfers in Glass wafers
- ID polishing of alloy wind tunnels to a mirror finish



With our 4 Axis CNC equipment, 64" lapping and polishing machines, and over 100 other types of lapping, polishing and dicing equipment, Valley Design can make your parts from start to finish.

To learn more about our diverse technical capabilities, visit www.valleydesign.com