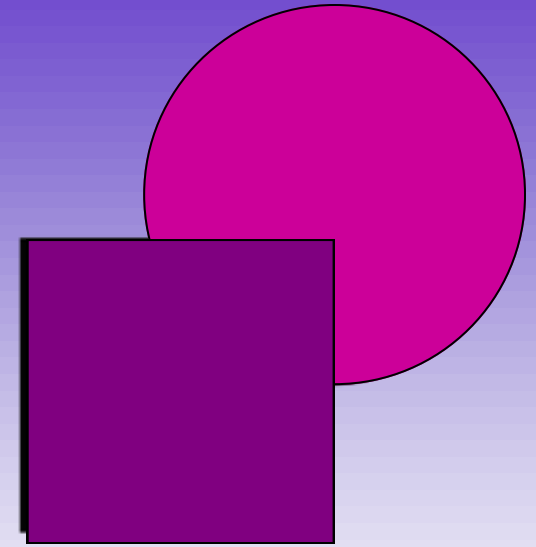




valley  
design  
corp.



Valley Design Corp.  
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ISO 9001:2008  
Certified

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World of Precision  
and Innovation

## Our Company

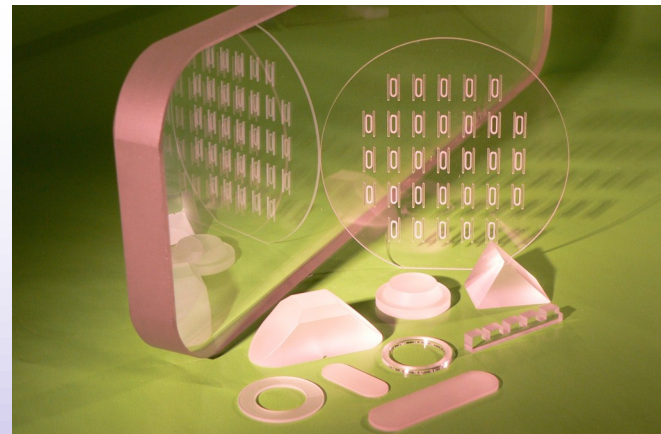
Valley Design was founded in 1975, and over the past four decades has become a recognized world leader in advanced materials processing. Valley offers one-stop shopping for complex parts and components requiring 4 axis CNC micromachining, lapping, polishing, optical coating, dicing, and other machining requirements. We can fabricate intricate shapes and features in materials ranging from Fused Silica and Quartz to Optical Glass of all types, 96% - 99.8% Alumina, Aluminum Nitride, Macor, Silicon Carbide, metals and more.

### Special Capabilities:

- Ultra-thin: < 20 $\mu$ m
- Ultra-flat: 1/10 wave
- Super Polishing: 1 Angstrom / 10/5 scratch/dig
- Tight Tolerances:  $\pm$  0.5 $\mu$ m
- TTV: < 0.5 $\mu$ m

Parts from as small as 0.127mm square up to 48" diameter are handled by Valley Design. We process materials to ultra-thin thicknesses as thin as 20-25 $\mu$ m. We work with micron level tolerances, difficult surface finish, parallelism and flatness specifications, and provide some of the quickest lead times in the industry. Many raw materials and thousands of finished wafers and substrates are in stock from our extensive inventory.

Make Valley Design your one-stop shop for components and optics requiring precision lapping and polishing, complex CNC machining, hole drilling, coatings and any other precision machining requirements you may have. Come to Valley Design's World of Precision and Innovation.



## Products / Applications

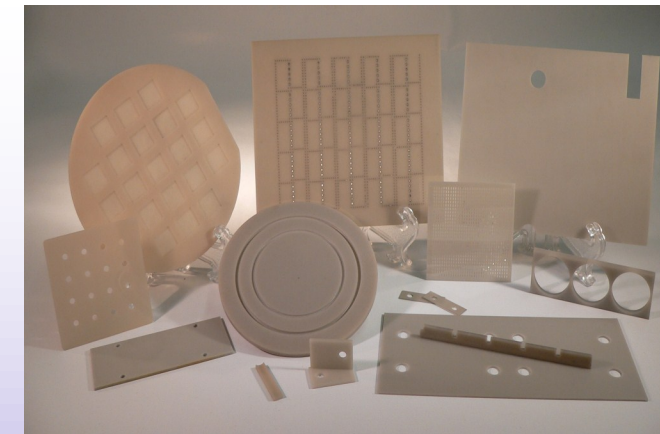
- Standard and custom sized substrates, wafers, discs, windows and flat optics of all materials, many from stock
- Precision shims, spacers, sub-mounts, washers and rings. Can be sequentially spaced to < 1/4 micron, flat to 1/10 wave, lapped or polished
- Large geometry ceramics up to 450mm
- SEMI standard dummy wafers up to 450mm
- Standard and custom color glass filters
- Wafer and vacuum chucks
- Flat lenses, filters and etalons
- Polished and optically coated Aluminum mirrors
- Prisms and wedges
- Substrates for capacitors and thin film circuits
- Large wind tunnels, slides and plates for NASA
- Components for microfluidics
- Photonic and optical devices
- MEMS and Nanotechnology

## Materials Processed

- Fused Silica and Fused Quartz
- Single Crystal Quartz
- Glass of all types
- Aluminum Nitride
- 96% - 99.8% Alumina
- Silicon Carbide
- Macor
- Sapphire
- Silicon
- Aluminum
- Stainless Steel
- Copper and Titanium
- Molybdenum
- Germanium
- Color Filter Glasses
- PEEK and Teflon
- Lithium Fluoride
- Many other exotic materials

Many materials in stock:

[www.valleydesign.com/stockpage.htm](http://www.valleydesign.com/stockpage.htm)



## Why Valley Design?

- Nearly 40 years of experience in precision lapping, polishing and machining of all materials
- One stop shop for 4 axis CNC micromachining and shaping, lapping, polishing, optical coatings
- Excellent reputation for precision, innovation, quality and customer service
- Flexibility to work with our customers from prototypes and R&D to full production
- Wide variety of equipment to process all materials from soft PEEK to hard Sapphire
- Large in stock inventory of materials including Fused Silica, Glass, Ceramics, Sapphire and more
- Comprehensive process, fixturing, equipment and tooling knowledge
- Advanced R&D and metrology capabilities
- Highly experienced and skilled process technicians
- 30,000 square feet manufacturing facilities—ISO 9001:2008 certified
- Worldwide customer base with direct sales representation in Germany, France and Scandinavia

## Precision Machining Services

- 4 Axis Haas CNC Micromachining: Complex shapes and features include through-holes and pockets, corner chamfers and radii, steps, slots, edge chamfers
- Single and Double Side Lapping and Polishing: Over 100 machines from 12" up to 64" for small to large geometry lapping and polishing to process parts from 0.127mm square up to 48" diameter
- Production Dicing: Programmable DISCO and K&S saws
- Backgrinding: DISCO backgrinders
- Ultrasonic Hole Drilling
- Optical Edge / Angle Polishing
- OD / ID Polishing
- Wafering and Slicing
- Module, Die and Bonded Wafer Thinning