

# Ultra-Thin Ultra-Flat SuperPolish

Lapping  
Polishing  
Edge Polishing  
Dicing  
Grinding  
Shaping  
Wafering



valley  
design  
corp.  
[www.valleydesign.com](http://www.valleydesign.com)

Windows • Wedges • Lenses  
Polarizers • Mirrors •  
Etalons • Laser Diodes • DWDM  
Filters • Glass Rods & Spacers •  
Waveguides • Beamsplitters • Bandpass Filters •  
V-Grooves/Slots • Fiber Arrays/Bundles •  
Telecom Glass Blocks/Spacers • Patterned Optics •  
Angle & Edge Polishing • Optical Coatings

**Fused Silica:** 1" x 1" and 1" x 2" x .006" thick, polished b/s  
**Aluminum Nitride:** 1" sq. and 2" sq. x .025" thick, polished b/s  
**96% Alumina:** 1" sq.-4" sq. x .004" thick, fine lapped b/s  
**R-Plane Sapphire:** 100 mm dia. X .5 mm thick, polished 1 side

**In Stock  
NOW**

## Now Serving Silicon Valley Flat Optics • Dicing • Wafers

### Materials

Fused Silica • Aluminum Nitride • Glass  
Quartz • Pyrex • 99.6% & 96% Alumina  
Sapphire • Float Glass • Lithium Niobate  
BK7 • B270 • 1737 • 7070 • UV&IR Materials  
Ceramics • Filter Glass • Metals • Silicon  
Crystals • Borosilicates • PZT • PLZT  
Soda Lime • Ferrites • GaP, GaAs, GaN  
**PLUS MANY OTHER MATERIALS**

### Services & Capabilities

**EDGE & ANGLE  
POLISHING**  
Optically polished  
flat edges and  
angled edges  
Minimal edge  
chipping < 1 micron  
Edge faces/lengths  
Single side or  
opposing edges  
LiN, SiO<sub>2</sub>, Si, LiTaO<sub>3</sub>  
Sapphire

<10/5 scratch/dig or 1 Ang  
Chips less than 1 micron  
Precision lapping up to 48"  
Dicing as small as .005" sq  
Thickness tol.  $\pm$  .1 micron  
Parallelism to .1 micron  
1/20 Wave flatness  
Precision Machining  
Low kerf wafering

### WEST

151-D Harvey West Boulevard  
Santa Cruz, CA 95060

Tel: 831.420.0595 ■ FAX: 831.420.0592

[west@valleydesign.com](mailto:west@valleydesign.com)

### Sales & Customer Service

831.420.0595

[sales@valleydesign.com](mailto:sales@valleydesign.com)

### EAST

63 Power Road  
Westford, MA 01886

Tel: 978.692.1971 ■ FAX: 978.692.9549

[east@valleydesign.com](mailto:east@valleydesign.com)

# Custom Dicing Service

[www.customdicing.com](http://www.customdicing.com)

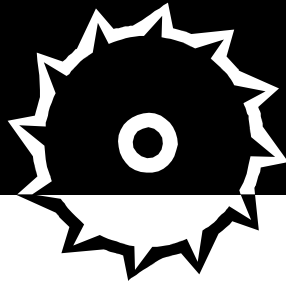
Valley Design, offers increased capacity in advanced high-speed CNC dicing, cutting and sawing, enabling us to provide a complete spectrum of shapes and materials to suit any application.

**Precision Dicing Services** are provided by Valley Design from the R&D phase through to high volume production requirements. Our dicing saws are fully programmable and are equipped with microscope and video for precision alignment.

Over the past **25 years**, we have routinely processed customer or Valley supplied materials up to **8" (200 mm) diameter**, and even larger by special request. Valley dices not only standard types of materials, but will also develop dicing/cutting procedures for untried materials. We have worked with all types of **Glass, Fused Silica, Crystals, Quartz, Aluminas, Silicon, Aluminum Nitride, Lithium Niobate, Ferrites and Ceramics**, as well as delicate compound semiconductors such as GaN and InP.

Depending on the material, the dicing **kerf** may be as small as **20 microns**, and **die size** as small as **.005" (125 microns)**.

We also have extensive experience in working with **coated/patterned/circuited substrates** and **wafers**, taking special care in protecting these surfaces.



**We Have  
GANG SAW  
Capabilities**



Multiple Blades  
per pass for  
Production Dicing

**Call Us With Your  
Specifications  
831.420.0595**

**THICK**

**WAFERS &  
SUBSTRATES**

**Minimal Chipping**

>.250" Thick Fused Silica, Glass

>.120" Thick Sapphire,  
Ceramics

Photolithography Plates

**Patterned Wafers**  
**Circuited Substrates**  
**Patterned Optics**  
**Optically Coated Wafers**  
**Slotted Heat Sinks**  
**Step and Repeat**  
**Slots/Steps**  
**V-Grooves**