

Proprietary low-stress process



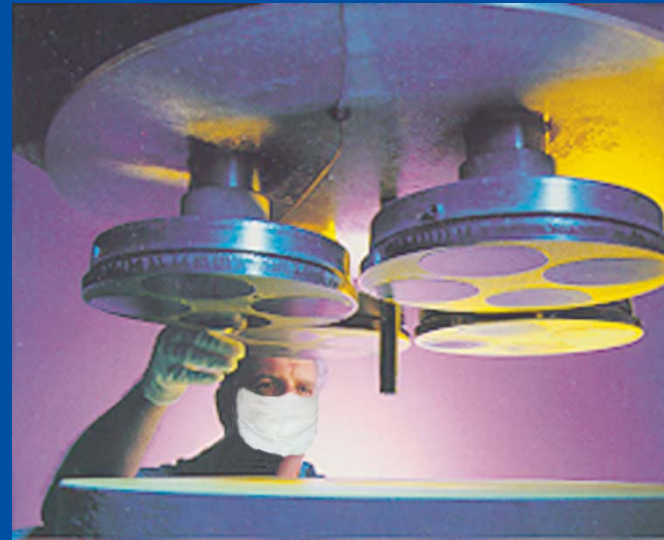
Aptek's proprietary hot wax process induces less stress in the wafer during grinding, resulting in far higher yields. Chipping is reduced and wafers are better able to withstand subsequent handling.

Aptek's proprietary and patented hot wax processing induces less stress in the wafer during grinding, resulting in far lower breakage rates and wafers that are better able to withstand further handling and processing. Aptek employs a patented, unique "hot wax" process to secure wafers during the grinding and polishing processes. This method is extremely gentle; no photoresist or even passivation is required to protect the surface of the wafers, and it involves less wafer handling than tape systems.

A major manufacturer of testing equipment stated, "wafers processed by Aptek exhibit less regional stress by a factor of 10" than other methods. The process easily tolerates high bump materials and high ink-dots very well. Under Aptek's senior management, the company continues to introduce new procedures and materials that allow it to respond to the need for ever thinner wafers. Today, Aptek holds the leading-edge technology in its field, and customer records demonstrate that we consistently provide extremely high yields.

# APTEK

LEADING-EDGE TECHNOLOGY  
RAPID CUSTOMER RESPONSE



### Dedicated to Quality

Aptek Industries, Inc. was founded in 1983 to meet the semiconductor industry's need for outside wafer backgrinding, and grinding and polishing services (CMP). Our goal since inception has been to provide the highest quality in the industry, both in wafer processing and in customer service. We have over 90 satisfied customers in Silicon Valley and throughout the United States, Canada and Europe. Many of the largest, most advanced integrated circuit manufacturers bring their wafers to Aptek for backgrinding and polishing.

### Exacting Specifications

Aptek's processes are ideal for removing the diode from the wafer's backside and for thinning the wafers to fit flatpac packaging. With our proprietary processes, we can grind wafers from two to twelve inches (50-300 mm) in diameter, to thicknesses down to 50 microns (2 mils), with a tolerance of +/-0.5 mils (12 microns) guaranteed. Our polishing services allow us to thin wafers down to 25-30 microns. We provide backside gold removal and grinding of ceramic substrates, germanium, sapphire, gallium arsenide, and other materials.

### Stringent Cleanliness

Our cleanroom is certified at better than Class 100. Initial inspections, final inspections and packaging are performed under laminar-flow hoods in an environment certified better than Class 10. Our DI water cleaning system completely eliminates any chemicals in the cleaning process.

### Highest Throughput in the Industry

Aptek's proprietary processes handle multiple wafers per pass. This unique capability enables us to provide our customers with the highest throughput of any backgrinding/polishing process. Our standard turn-around time is 24 hours, with Same Day Service of one to three hours available- even on evenings and weekends.



Our superior throughput capabilities also allow us to provide our customers with substantial cost savings over other methods. Research shows that in many instances our charges are 30-60% lower than industry averages for the same services.

**Customer Service Focus**  
Aptek was built around the philosophy of supplying superior customer service. Aptek's goal is to provide excellence in all of our services; we specialize in catering to smaller "legacy fabs", a critical service not provided by overseas facilities. Our experienced staff can help solve your specific production problems and meet your tightest turn-around requirements.

Ultra-Fine Grind Finish for up to 300mm Wafers



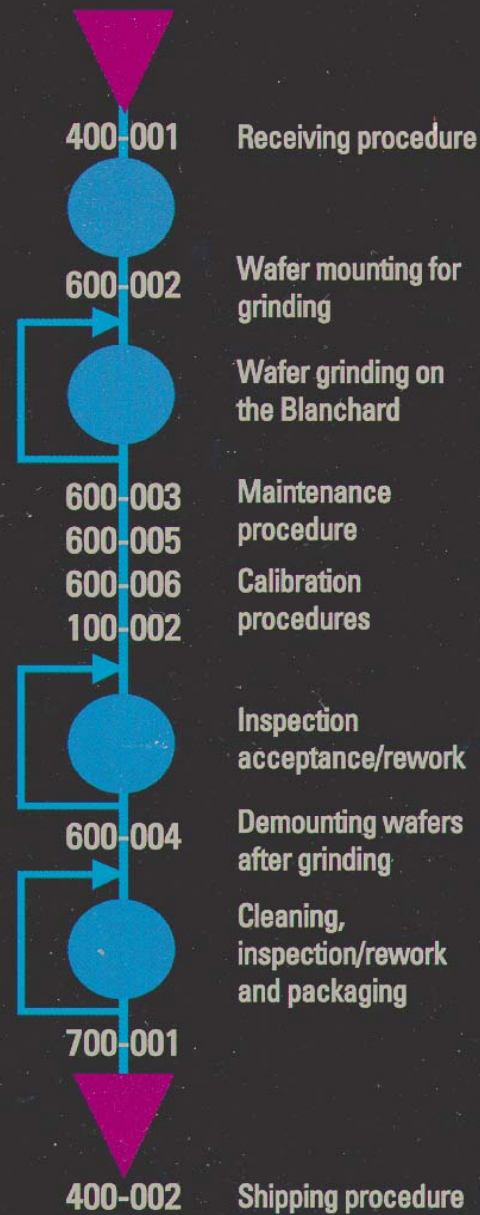
- Up to 4000 Grit for Ultra-Fine Finish
- Low Cost Option for Ultra Smooth Finish
- Production Process for 300mm Wafers

Aptek's new 4000 Grit Backgrind service for 300mm wafers successfully thins wafers down to 10 mils (250 microns). The service is primarily a grind process, so wafers can be thinned at considerably less cost than with a true polish, while offering many of the advantages of a polished wafer.

Aptek is the company that originated the picture of a hand flexing a thinned wafer. This not only shows the thinness specifications, but also the reduced stress in the wafer which provides better dicing characteristics and improved survivability of parts after assembly.

Over the years, the company has introduced technology and procedures that have contributed to increased yields, improved wafer survivability and allowed the company to thin smaller diameter, high quality silicon wafers to the range of 25-30 microns. Aptek currently thins 300 mm wafers with the grind and polish process to 120 microns with excellent results using our proprietary production process.

Every Procedure Documented to  
ISO 9000 standards



Our processes are conducted in a RoHS Directive compliant, CFC-free, non-ODS environment. ESD procedures are observed throughout the grinding, polishing, cleaning and inspection processes. Aptek maintains written specifications for all in-house procedures. Computerized systems are used to track procedures, quality parameters, graph and chart results, publish customer quality reports and track scrap and nonconforming materials.

*Our low stress process allows us to achieve ultrathin wafers that perform well in leading-edge applications such as MEMS, PhotoVoltaics (PV), Smart Cards and ultrathin Flatpacs.*



#### Highly Experienced Staff

Aptek's founder had over 20 years experience in wafer backgrind and polish (CMP) technology before founding the company. His philosophy then, and our policy now, is to hire the most experienced people to process your wafers. Together, the present team has over 100 years of wafer processing, grinding and CMP polish experience. This stability and experience results in highly dependable wafer processing

#### The Logical Choice

Whom should you trust with your valuable wafers? A company with low-stress, leading-edge processes for all wafer sizes. A company with the highest throughput available, exceptionally fast turn-around and dramatic cost savings over the competition. A company that offers a responsive customer-service attitude, and the expertise of a seasoned team. Aptek is the logical choice to handle all your wafer grinding and polishing needs.

Call us today to discuss your grinding and polishing requirements.

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

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# APTEK



## QUALITY

## WAFER BACKGRINDING AND POLISHING FOR THE SEMICONDUCTOR INDUSTRY

