Corning Laser Technologies

Rely on Corning® for Your Laser Glass Cutting

Corning’s technology is on the forefront of laser innovation, offering distinct advantages over conventional cutting processes. Using ultra-short laser pulses to cut the glass it generates low surface roughness, increased as-cut bend strength and faster throughput. In high volume glass cutting it improves the cut quality and increases yields.

Technology Benefits

Corning’s material science and optic capabilities add unique advantages to the laser glass cutting process. The material is cut by material disassociation rather than ablation. It cuts fully strengthened Gorilla® Glass, un-strengthened glass, as well as other transparent glass and crystalline materials.

The laser cutting technology offers a number of unique benefits:

- Cuts curves and straight lines, perpendicular and angled
- Cuts extremely fast to maximize throughput
- Dramatically reduces micro-cracks
- Reduces steps for cover glass processing
- Reduces debris (clean room compatible processing)
- Cuts functional multi-layer stacks
- Cuts glass from <50µm up to 3.5mm thickness
- Eliminates fluids and tooling required in traditional processing methods

Smooth Edges
The ‘as cut’ edge roughness may eliminate or reduce post-processing time and cost.

High Break Strength
The ‘as-cut’ edge demonstrates superior break strength over other laser and conventional glass cutting processes as measured by 3pt and 4pt bend tests.

Multi-Layer Stacks
This technology can cut assembled stacks with and without air gaps. Cutting depth can be adjusted.

Applications
Advanced laser machining systems for glass processing:

Cutting of Glass Substrates
- Display technologies
- Coated substrates
- Sandwich applications
- Cutting at an angle
- Cutting “thin” substrates

Cuts circles or slots, closed-form and radius form factors and via drilling with no taper.
Drilling of Through Holes in Glass Substrates
- Mobile Devices (camera aperture, home button, loudspeaker, etc.)
- Electronic components
- Tablet PC’s and computers

Separation of Strengthened Glass
- Cover glasses of mobile phone’s
- Cover glasses of tablet PC’s
- Camera protection glasses

Laser Machines
The machine solutions are 24/7 proven and fully automated, offering high machine uptime.

The CLT 45G Platform is designed for fully automated production up to GEN 4.5 size.

The CLT 60G is a dedicated production machine up to GEN 6 size. Optional automation can be customized for optimum throughput. All machines are engineered, manufactured and tested in Germany.

Your Solution
Our application lab will work with you to provide a complete solution tailored to your specific requirements. An extensive base of state of the art tools includes a wide variety of laser sources and extensive optical, electrical, and mechanical metrology equipment for application development.