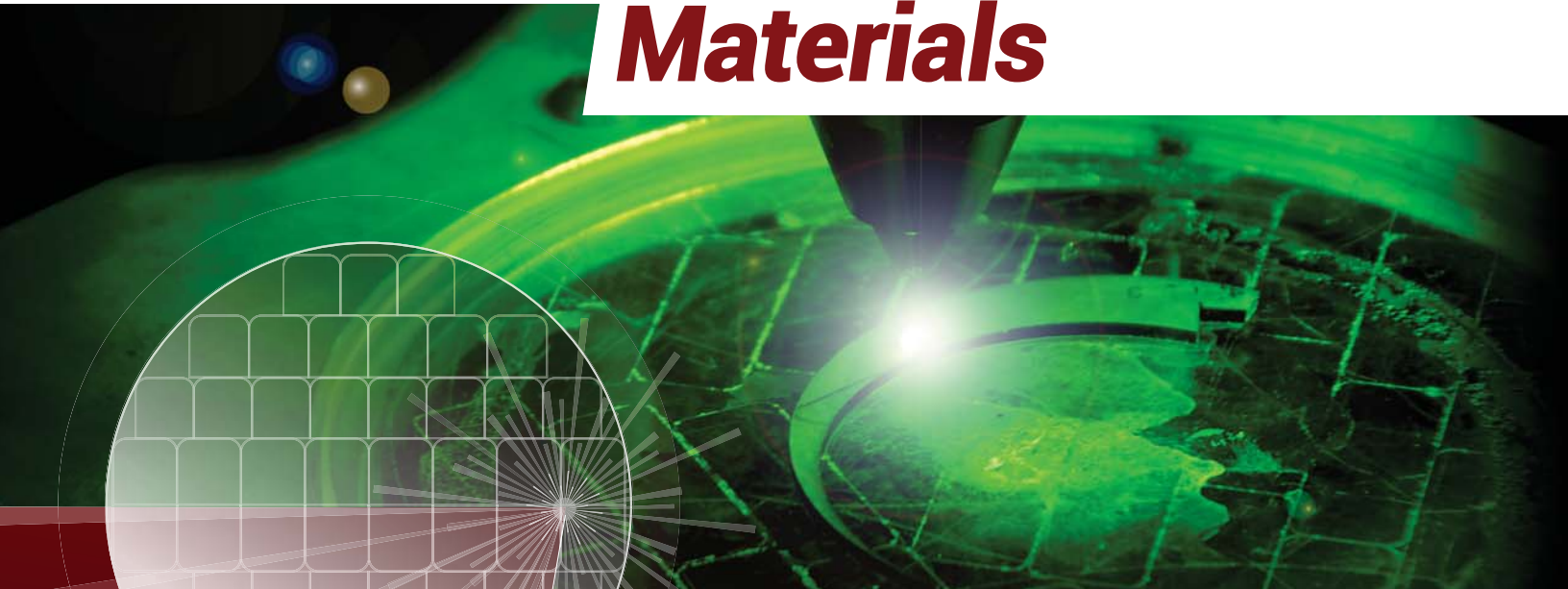
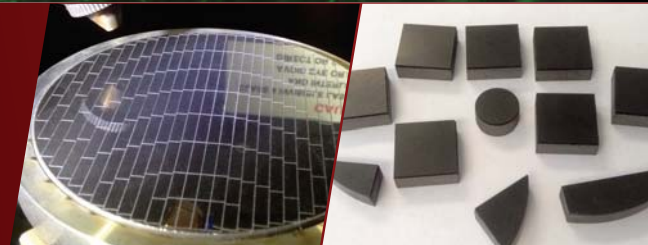


 **Laser Solutions for**  
**Ultra Hard**  
**Materials**



**CUTTING**  
**DRILLING**  
**MICROMACHINING**

PCD  
CBN  
CVD  
PCBN  
SAPPHIRE  
CHIP BREAKER  
BLANKING





II-VI LASERTECH is a subsidiary of II-VI Incorporated, located 10KM to the east of Beijing Capital International Airport. II-VI LASERTECH designs, manufactures and markets laser cutting and micromachining laser systems for processing of all kinds of super hard materials (PCD, CVD diamond, PDC, PCBN, and ceramics). II-VI LASERTECH machines meet CE and US FDA safety regulations and can run continuously without operator attendance. More industrial leaders, small and medium superhard tool makers have chosen II-VI LASERTECH machines to increase production and lower material and labor cost.

II-VI LASERTECH super hard materials laser processing system is an efficient tool to cut, drill, and groove all kinds of super hard materials such as PCD, CVD and single crystal diamonds, PDC, PCBN, ceramics, etc. Compared with traditional EDM, II-VI LASERTECH laser systems can process non-conductive materials, are easy to program, and can start cuts from any location.

## HIGH QUALITY LASER BEAM

We use YAG rods and mirrors manufactured by II-VI subsidiaries. Through continuous improvement and optimization, our beam quality enables high cutting speed and accuracy, low kerf width and straight profile.

## LASER HEAD—ACCURATE and FLEXIBLE

The laser head is the key part for delivering the laser beam to the work piece. Recent improvements have produced a rigid and easy tilt laser head.

- High resolution motion of 1um
- Precision swivel angle with 1 degree locked increments within 55° range
- High quality beam delivery
- 80X coaxial CCD video, 60mm Z axis travel range

## LINEAR MOTOR STAGES—FAST and PRECISE

We use modern linear motor stages with a 0.1um resolution encoder. The motion is closed loop controlled, which guarantees 1um repeatability. Unlike step motor stages, the linear motor stage does not have lead screws, so there is no backlash.

- High precision, high jog speed up to 3000mm/min or more.
- No lead screw, no wear and no backlash

## FIXTURES—HIGH CONSISTENCY and PRODUCTIVITY

Our holding fixtures for cutting, drilling and chamfering help users to achieve high productivity. Two major kinds of fixtures can hold various sizes of round disks, die blanks, or preassembled parts in a flat plate.



## eCut—LASER CUTTING SOFTWARE

- Runs under Windows XP/Windows 7. Can read dxf and standard gcode files.
- **USER FRIENDLY.** Easy manipulation of X-Y stage and Z (focus) axis. Quickly pan and zoom the cutting pattern in the view window. Click on a point in the pattern and the stage jogs to the target location. Pause and resume program functions. Easily select delay and dwell parameters for different materials and thickness. Automatic standby and shutdown.
- **WYSIWYG.** What You See Is What You Get. Eighty times optical magnification with a high speed USB camera. The cutting path is overlaid onto the work piece video. Clicking a point on the image moves the point to the crosshair center. This feature maximizes usable area of the disk.
- **SAFE.** All laser paths are double shielded. Laser and processing doors are equipped with safety locks. Shutters have both opened and closed feedback signals which prevents overcutting or undercutting and improves delay and dwell period accuracy.
- Can drive up to six (6) axes in coordinated motion. Linear motor, step motor, servo motor or in any combination. Can perform 3D processing with appropriate gcodes.
- Clear indication of process conditions for cooling, water leak detection, chiller water level, coolant flow, door and cover status and stage limits. Laser cavity temperature, humidity, and lamp working hours are all displayed. Warning and shut down limits can be set for applicable parameters.

## ePath—LASER PATH EDIT SOFTWARE (WORLD FIRST!)

- Edit cutting priority, direction, speed, and multiple passes for each entity/segment from dxf or gcode files.
- One click to apply horizontal first, vertical first, shortest path, and S path sorting options.
- Can draw lines, arcs, and circles.
- Quick and flexible preview of the cutting pattern.
- Rotation and offset patterns to match work pieces

## NEW!

**Machine 3D features  
on PCBN, PCD  
By Lasertech!  
The process takes  
only 3-5 minutes.**

## MAJOR APPLICATIONS:

**SUPERHARD TOOLS**

**DIE BLANKS**

**DRILL BITS**

**TOOL and ELECTRONIC CERAMICS**