

### Limited by conventional tooling?

### LasX can laser cut intricate components for microfluidic devices.

Microfluidics is the science of designing, developing, and commercializing devices that deal with very small sample volumes (such as nanoliters or picoliters). Microfluidic devices themselves have dimensions ranging from millimeters down to micrometers. Common applications for these microfluidic devices are blood-cell separation equipment, biochemical assays, chemical synthesis, genetic analysis, and drug screening, where very small sample volumes increase convenience while preserving accuracy.

Laser processing is ideal for the production of microfluidic medical components and devices. Lasers help you manufacture extremely complex, multi-layer structures by processing features not possible with conventional techniques due to feature sizes and tolerances. Precision lamination joins the lasers together during processing to create multilayer laminate structures

### Precision & Speed Make Your Components a Success

Our LaserSharp® converting technology gives your components precision that cannot be matched by conventional die cutting. Our systems laser cut microfluidic channels as narrow as 125 µm (or

0.005") positioned within a tolerance of 50 µm (or 0.002") into polymers or adhesives to create microfluidic flow channels on a production basis for your MEM and assay test devices. Likewise, our system's optical registration capabilities precisely align subassembly layers during laser processing, making the roll-to-roll handling of subsequent passes a reality.

LaserSharp digital converting is over 20 times faster than other laser processes, giving you more cost-effective options for the high volume production of microfluidic devices.

- Have specific material handling requirements? Our systems process either sheet-fed or roll-fed materials with equal precision and efficiency.
- Need different laser processing solutions? Our systems easily combine through-cutting with scoring, slitting, or ablation to manufacture finished products in less steps.
- Know your product but not how to produce it? LasX has a proven track record of developing and implementing superior production solutions for your unique applications.

### Advantages of LaserSharp Digital Converting for Manufacturing Microfluidic Devices

Advantage	Benefit
Superior precision	Laser cut features as small as 100 µm or 0.004 inches
Compliance with extremely tight tolerances	Position features within tolerances as low as 50 µm or 0.002 inches.
Intricate components	Laser cut, score, perforate, or ablate in a single station.
Speed	LaserSharp digital converting is over 20 times faster than other laser processes.
Fast changeovers	Change processing patterns as easily as opening a file.