MicroMake
Laser Micromachining System

Features
Ablation and cutting of programmable arbitrary shapes
Live imaging of the processed samples
Suitable for a vast range of materials
1 mm standard processing area
Optional XYZ translation stage
Embedded illumination unit
532/266 nm ns and ps lasers
Down to 2 µm spot size

Applications
3D direct microstructuring
Precision surface texturing
Track interruption on PCBs
Micro-coding, Anti-counterfeiting
Thin film removal on hard substrates
Selective metal removal on ceramic substrates
Microcorrection on wafers, masks and displays
Microdrilling on metal alloys and transparent dielectrics
MicroMake from Bright System is an integrated and compact laser micromachining unit for high precision and resolution applications. The system includes all the needed devices for direct laser micro-processing in a single monolithic element. Live microscope imaging of the sample is offered during all process phases for alignment and immediate quality check. Typical applications of this compact system include controlled ablation, microdrilling, precision cutting, selective removal and direct 3D microfabrication. All these features suit perfectly a large variety of materials utilized in the fields of microelectronic circuits and displays fabrication and correction, biomedical devices machining, optical substrates microprocessing.

**Options available**

High resolution version (HR)
Circular polarization on the workpiece
High speed/high resolution USB camera
Z manual or motorized stage - 50 mm Z travel
XY manual or motorized stage - 150 mm XY travel
OEM version: single unit with integrated low-voltage PSU
Table-Top version: external mount and stages with external AC PSU

<table>
<thead>
<tr>
<th>Model</th>
<th>MicroMake 532</th>
<th>MicroMake Plus 532</th>
<th>MicroMake 266</th>
<th>MicroMake Plus 266</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wavelength</td>
<td>532 nm</td>
<td>532 nm</td>
<td>266 nm</td>
<td>266 nm</td>
</tr>
<tr>
<td>Lens Magnification</td>
<td>10X</td>
<td>10X</td>
<td>10X</td>
<td>10X</td>
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<tr>
<td>Working Distance</td>
<td>39 mm</td>
<td>39 mm</td>
<td>20 mm</td>
<td>20 mm</td>
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<tr>
<td>Spatial Resolution</td>
<td>4.5 µm</td>
<td>5 µm</td>
<td>2.2 µm</td>
<td>2.5 µm</td>
</tr>
<tr>
<td>Processing Area</td>
<td>0.8x0.8 mm²</td>
<td>0.8x0.8 mm²</td>
<td>0.8x0.8 mm²</td>
<td>0.8x0.8 mm²</td>
</tr>
<tr>
<td>Frequency</td>
<td>1 kHz</td>
<td>10-100 kHz</td>
<td>0.8 kHz</td>
<td>10-100 kHz</td>
</tr>
<tr>
<td>Max Peak Power</td>
<td>10 kW</td>
<td>35 kW</td>
<td>0.8 kW</td>
<td>5 kW</td>
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<tr>
<td>Typical processing linear speed</td>
<td>up to 5 mm/s</td>
<td>up to 100 mm/s</td>
<td>up to 1 mm/s</td>
<td>up to 40 mm/s</td>
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<tr>
<td>Cooling</td>
<td>Air-Cooled</td>
<td>Air-Cooled</td>
<td>Air-Cooled</td>
<td>Air-Cooled</td>
</tr>
<tr>
<td>Overall mechanical dimensions</td>
<td>35x16x9 cm³</td>
<td>35x24x11 cm³</td>
<td>37x16x9 cm³</td>
<td>37x24x11 cm³</td>
</tr>
</tbody>
</table>