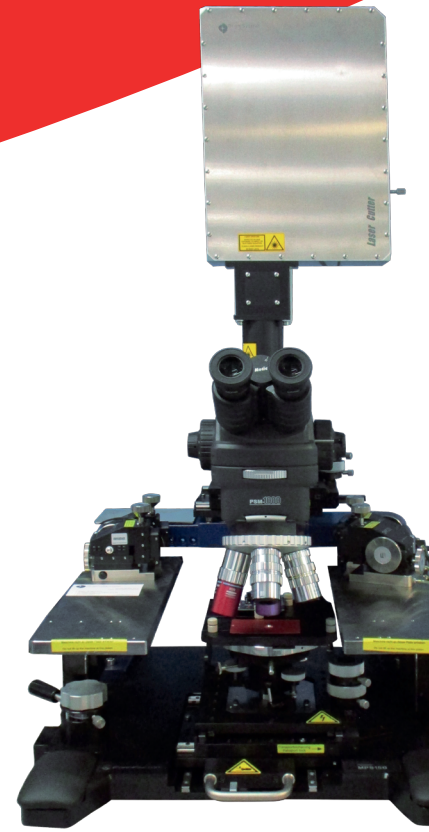
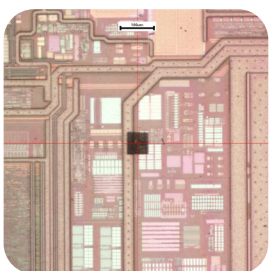
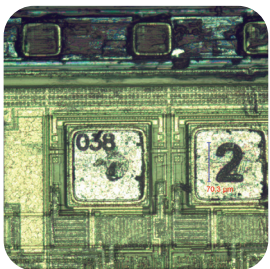
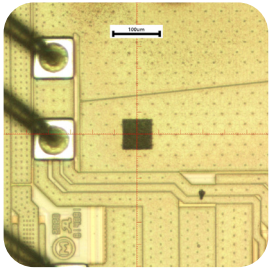


# Laser MicroCutter

Laser Tool for Integrated Circuit Diagnostics

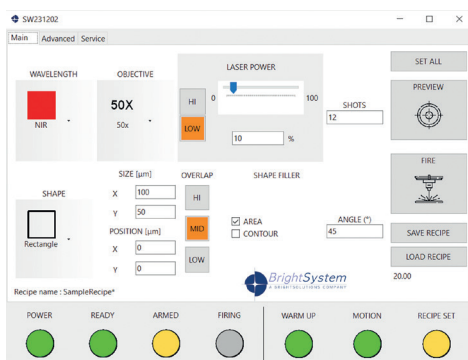
## Features

- Laser ablation and cutting of programmable arbitrary shapes
- Modular design for independent wavelength selection
- 1064/532/355/266 nm wavelength ns lasers available
- Compatible with most of commercial microscopes
- Intuitive software interface for process control
- Selective material removal of IC stack layers
- Aiming beam for cutting preview
- Vision camera port



## Applications

- Precise IC microsurgery
- Photomask and LCD repair
- Exposure of buried lower layers
- Peeling off thin passivation layers
- Semiconductor die failure analysis
- Micro-coding, patterning and scribing
- Isolation of single electronic components
- Trimming and interruption of conductive lines



## Laser MicroCutter from Bright System

is a compact laser tool designed for the integration with commercial optical microscopes used in probe stations for Integrated Circuits (ICs) failure analysis. Such laser system allows for precise semiconductor die microsurgery in case of IC production defects or faults.

The choice of the most appropriate laser wavelength leads to an efficient and selective material controlled removal via direct laser ablation. Laser micromachining can target metal lines, passivation layers, polysilicon conductors. Laser wavelength, process parameters and cutting geometrical properties are controlled via an intuitive software interface. The innovative modular design allows selecting the available wavelengths combination with no restrictions: up to 3 wavelength options can be included. In addition, any arbitrary shape can be generated thanks to the scanning approach for advanced applications going beyond the conventional material removal.



## Options available

Different objective lenses

Digital camera with software

Arbitrary cutting shapes – standard rectangles and ellipses included

Possibility to generate text and import vector files

Wavelength option	NIR 1064 nm	VIS 532 nm	NUV 355 nm	DUV 266 nm
Lens magnification	50X *	50X *	20X *	20X *
Spatial resolution	4 µm	2 µm	1.5 µm	1 µm
Maximum peak power (before microscope)	>10 kW	>5 kW	>1 kW	>0.4 kW
Frequency	10 kHz	10 kHz	5 kHz	5 kHz
Typical process time for 20x20 µm <sup>2</sup> area cut	0.05 s	0.2 s	0.6 s	1.4 s
Suitable for (example processed materials)	aluminium, ITO, chrome	aluminium, gold, copper, tungsten, polysilicon, silicon oxide, nitride	polysilicon, silicon oxide, nitride, polyimide, SOG, teflon, kapton, silicon	
Attenuation range	0 - 100% (with included High/Low mode selector)			
Cooling	Air-cooled			
Overall mechanical dimensions	44x22x15 cm <sup>3</sup>			
Weight	<6.5 kg			

\* Standard version. Other options are available on request.

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