

EXAMPLE OF A

DOUBLE LASER MICROSCOPE STATION

Single-mode fibered lasers

	PDM+	PDM 4+	PDM-pico adjust
Pulse duration	2nsec to CW	2nsec to CW	300psec to 6nsec
Peak power	Up to 3.2W	Up to 10.5W	up to 500mW
Wavelength (nm)	980;1064	980 and 1064	980 or 1064nm
Repetition rate	From single-shot to 250MHz	From single-shot to 250MHz	From single-shot to 20MHz
Command interface	TTL/LVTTL	TTL/LVTTL	TTL/LVTTL
Beam quality	Single-mode	Single-mode	Single-mode

InGaAs IR Camera

Captor	320x256µm or 640x512µm
Dynamic range	140dB
Interface	USB (software included)

Electrical

Voltage	220V/110V
Intensity	16 A

Optical column

Transmission typ.	Up to 92% at 980 and 1064 nm
Signal type	Adapted for single-mode or multimode lasers
Compatibility	Visible and IR camera
Light system	Optimized fibered lighting system
Weight	1.8kg

Positioning system

	Laser spots positioning	Microscope positioning
Axes number	2x2	3
Travel range	The field of the objective	50mm
Resolution	<0.4µm	0.05µm
Repeatability	<0.8µm	0.1µm
Max velocity	100mm/s	25mm/s

High-transmission objectives recommended (others on-demand)

Objective	20X	5X	2.5X
Type	IR optimized	Non-IR optimized	IR optimized
Typ. spot size (µm)	3µm*	13µm	25µm
Field (µm)	360x280	1500x1500	3600x2800
Work. distance (mm)	12	36.1	28
Typical transmission (with microscope)	>80%	>80%	>80%

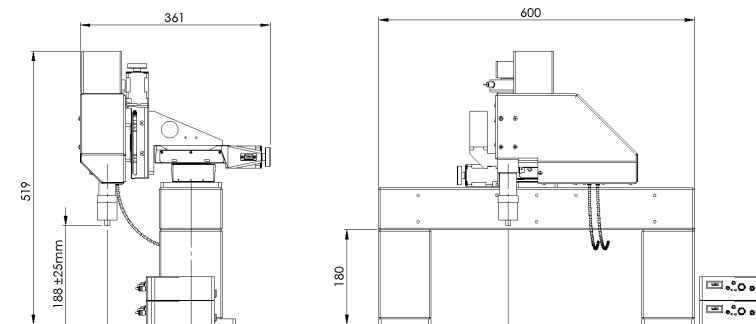
*Better performances with ALPhANOV ultra-high resolution objectives

Options:

- Certified laser protection enclosures
- Integrated PDM rack system
- Ultra high resolution objectives

Mechanical

indicated dimensions



DOUBLE LASER MICROSCOPE STATION FOR IC SECURITY EVALUATION - FAULT INJECTION

DOUBLE LASER MICROSCOPE STATION

FOR IC SECURITY EVALUATION - FAULT INJECTION

See and scan at the same time two laser spots through the microscope

Key features

- IC security evaluation double-laser station (both spot through the microscope)
- Ideal for back side laser fault injection
- Down to 2 μm single-mode laser spot sizes with ultra high resolution objectives
- Both laser spots have full & independent temporal and spatial modularity's
- IR/visible cameras to observe laser spots on IC paths through 100's μm of Silicon
- High reproducibility and high resolution laser spot displacements
- 2 famous ALPhANOV PDMs "Pulse On Demand" laser modules included
- All ALPhANOV'S PDM at 976/1064nm compatible

IR view of chip from the back side and the two laser spots injected through the microscope

