NWR193HE

HIGH ENERGY

LASER ABLATION FOR ICPMS

THE MOST ADVANCED EXCIMER SYSTEM

High energy excimer-based laser ablation system ideal for opaque and highly transmissive materials alike

Features

COMPex Pro 102 laser source	High energy 193 nm readily couples with even the most transparent sample types Energy densities > 50 Jcm^{-2} measured during sample ablation
Flexible beam delivery options	Infinitely Variable Aperture (IVA) and dual magnification factors enable 2-300 µm spot sizes in 1 µm increments
TwoVol2 ablation cell	Unmatched spatial reproducibility provides accuracy and precision
ActiveView2 Software	Developed with emphasis on efficient workflow and throughput

Elemental Scientific LASERS

INNOVATION TO ILLUMINATE

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Specifications summary

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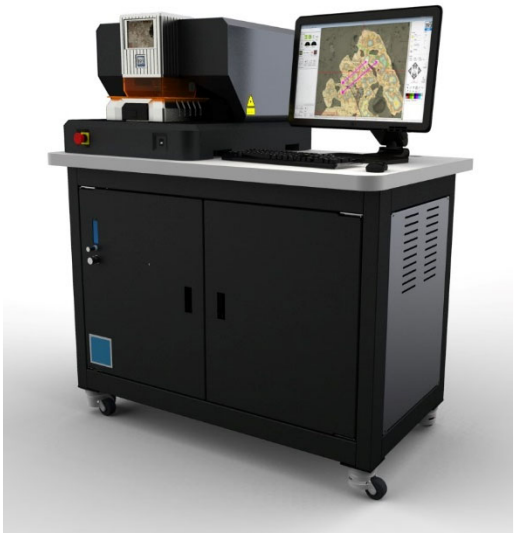

Performance Specifications

Laser	193 nm ComPexPro 102@193 nm < 20 ns pulse width
Repetition rate	1-20 Hz
Fluence	> 50 J/cm^2 at the sample surface measured during sample ablation
Spot sizes	Infinitely variable between 2 µm and 300 µm – multiple magnification factors
Ablation chamber	100 mm x 100 mm, TwoVol2
Beam profile	Externally homogenized
XY Stage	High Precision, 100 mm x 100 mm, < 0.16 µm resolution and < 1 µm stage accuracy using ImageLock
Mass flow controllers	Standard: 0-1 L/min He MFC
ICPMS triggering	Bi-directional for full automation
Primary viewing system	True, high resolution digital camera with 15 x-60 x (objective to camera mag.) < 2 µm optical resolution
Secondary viewing system	25 mm field of view navigational optics with touch screen technology
Lighting	3 high-intensity, LED based and software controlled Options: ring, coaxial and transmitted
Polarizer	Software-controlled rotating cross polarizer
Software	Class leading ActiveView2 software

General Specifications

Safety classification	Fully interlocked Class 1 system
Warranty	12 months
Dimensions	81 cm x 130 cm x 148 cm (D x W x H)
Weight	273 kg (600 lb)
Cooling	Air Cooled laser source
Platform	Completely stable "bridge" design and solid steel frame
Gas handling	Onboard gas storage and handling

Site Requirements

Temperature	21°C ±3°C (70°F ±10°F)
Relative humidity	20% - 65% non-condensing
Power requirements	100-110V (AC), 3A, 50/60 Hz 220-240V (AC), 3A, 50/60 Hz

Additional Options

Additional software-controlled mass flow controllers	N_2 addition
Alternative ablation cell technology	150 mm x 150 mm TwoVol2 SelfSeal with NWRauto Cryocell
Higher frequency	100 Hz with water cooling
Rotating XY shutter	X and Y rotation aperture – gives square and rectangular ablations, independently adjustable in 1 µm steps in X and Y, plus rotational adjustment in 1° increments
Service contract models	Flexible
Ablation chamber inserts	Range of application specific inserts from pucks to thin sections (floating tray option for everything else). Customizable inserts available upon request.

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