



NWR193

FOR ALL THE MOST
CHALLENGING
APPLICATIONS

Features

Reliable Coherent ExciStar XS laser

Rugged frame design

Infinitely Variable Aperture (IVA)

Rotating XY Shutter (XYR)

ActiveView2 Software

 **Elemental Scientific**
LASERS
INNOVATION TO ILLUMINATE

Accurate and precise results on even
the most challenging sample types

Guaranteed for 1 billion shots

Optimum stability and mobility

Spot size selection in 1 μm increments and
rotating rectangular craters for greater
flexibility

Intuitive, feature rich laser ablation control
software designed around your workflows
with improved ICP-MS compatibility

Multi-layered viewing for outstanding sample
navigation and quick experimental setup

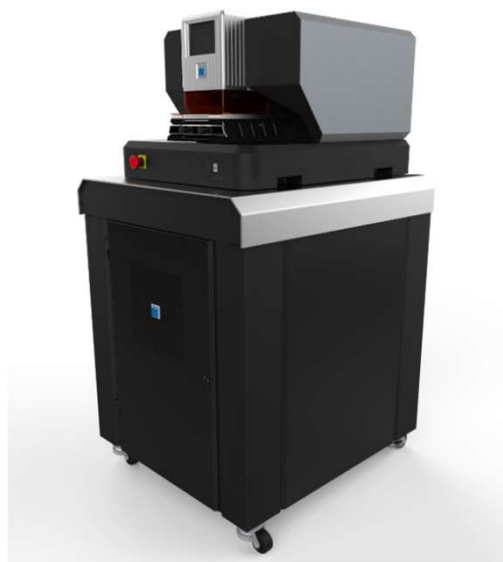
NWR193

Specifications summary



Performance Specifications

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|--------------------------|--|
| Laser | Coherent ExciStar XS excimer laser @193 nm |
| Beam profile | Flat-top beam profile from proprietary diffuser technology |
| Repetition rate | 1-200 Hz (500 Hz optional) |
| Laser attenuation | Closed-loop, high resolution attenuation of beam energy at the fundamental wavelength with ~1000 positions |
| Fluence | >15 J/cm ² at the sample surface measured during sample ablation <i>(High Energy (HE) mode enables fluence of 20 J/cm²)</i> |
| Spot sizes | Aperture Imaged: 13 circular spots 1-150 µm |
| Ablation chamber | Two Volume ablation chamber - TwoVol1 <i>(Custom ablation cell and stage options available)</i> |
| XY Stage | 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 |
| Triggering | Bi-directional hard triggering Software plug-ins with ICP-MS systems for greater control and automation |
| Primary viewing system | Full HD 1080p digital camera with 15x to 60x objective-to-camera magnification |
| Secondary viewing system | 25 mm field of view for macro navigation |
| Lighting | 3 high-intensity, LED light sources (coaxial, ring and transmitted) Fully software controlled |
| Polarizer | Software-controlled rotating cross polarizer |
| Software | Class leading ActiveView2 software |



General Specifications

| | |
|-----------------------|---|
| Safety classification | Fully interlocked Class 1 system |
| Warranty | 12 months |
| Dimensions | 89 cm x 79 cm x 150 cm (35" x 31" x 59") DxWxH |
| Weight | 270 kg (600 lb) |
| Cooling | Air Cooled |
| Platform | Ultra-stable bridge design on Ultra Compact cart |
| Gas handling | Onboard gas storage and handling |

Site Requirements

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|--------------------|--|
| Temperature | 21°C ±3°C (70°F ±10°F) |
| Relative humidity | 20% - 65% non-condensing |
| Power requirements | 100-110V (AC), 6A, 50/60Hz 220-240V (AC), 3A, 50/60Hz |

Additional Options

| | |
|---|--|
| TwoVol2 sample chamber | Significantly higher performance in precision, accuracy, purging and washout - Available as 100mm or 150mm |
| CryoCell | Liquid N ₂ cryocell – operates down to -100°C |
| IVA | Infinitely variable aperture – gives circular spot sizes from 1µm to 150µm in 1µm steps |
| XYR | 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 |
| Mass flow controllers | Optional: 0 – 100 mL/min N ₂ MFC Optional: 0 – 1 L/min Ar MFC |
| DCI | Dual concentric injector – ultra-fast washout for single-shot and imaging analysis |
| Signal smoothers | Glass bulb signal smoother and Sentinel signal smoother |
| Warranty extension and service contract | Available on request |

