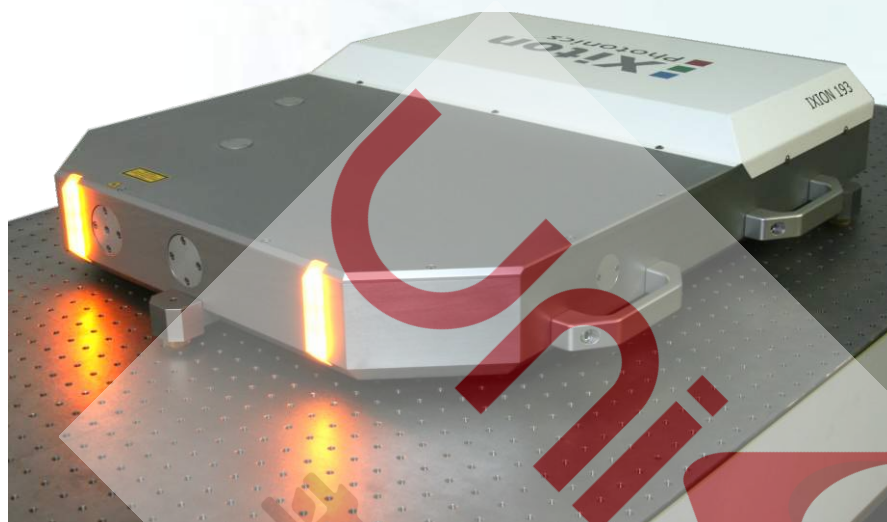


**TEM₀₀ Beam Profile, Diode Laser Pumped, Q-Switched Solid-State Laser
Single Frequency Wavelength 193 nm**



General Description

The IXION-193 is a single frequency all-solid-state laser system for applications such as optical metrology, calibration of 193 nm stepper optics or bandwidth control of high power ArF excimer lasers. The spectral bandwidth is near its theoretical Fourier limit.

The center wavelength of the system can be chosen at time of order between 190 and 194 nm with an accuracy of 0.01 nm.

As an option a high precision spectrometer with an absolute spectral accuracy of 0.001 nm is integrated into the system. This allows maximum control of the spectral tuning of the laser.

Applications

- 193 nm metrology
- Spectrometer calibration
- Interferometry
- Injection seeding of Excimer lasers

Features

- Industrial proved frequency conversion
- Diode laser pumped
- Sealed housing
- Slot mounted laser diode
- Excellent TEM₀₀ beam profile
- Low pulse-to-pulse fluctuation ($\sigma < 3\%$)
- Maintenance-free thermo-electrical heat management
- 19"-rack power supply and chiller
- LabVIEW drivers
- Integrated Spectrometer for online wavelength control (optional)

Product Specifications

model	IXION-193 SLM
wavelength	193.368 nm
average power	> 10 mW
pulse duration	< 10 ns
energy per pulse	1.6 μ J
repetition rate	6 kHz
M ²	< 1.6
spectral linewidth	< 120 MHz $\Leftrightarrow$ 0.015 pm $\Leftrightarrow$ 0.004 cm ⁻¹
spectral tunability	> 80 GHz $\Leftrightarrow$ 10 pm $\Leftrightarrow$ 2.6 cm ⁻¹
coherence length	> 1 m

Specifications are subject to change without notice due to product improvement.

System Dimensions (L x W x H), weight

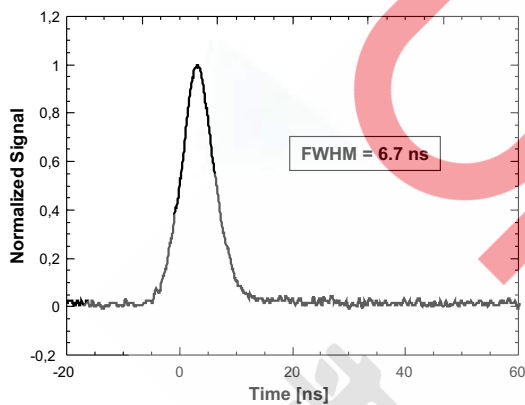
Laser head	795 x 710 x 154 mm ³	74 kg
Power supply (including Chiller)	600 x 600 x 600 mm ³	45 kg

Electrical Characteristics

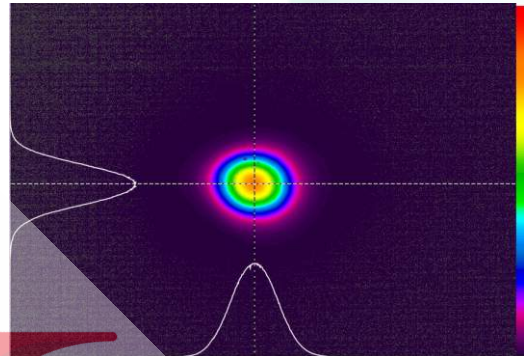
85-264 VAC
47 – 63 Hz
650 W typ.

Typical Performance

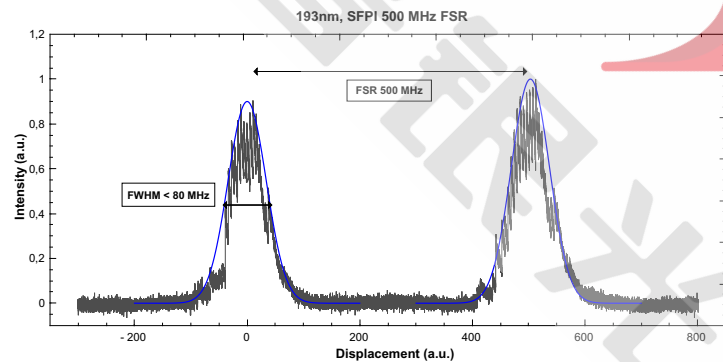
pulse duration



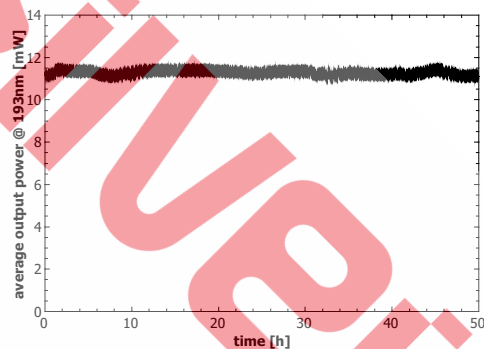
beam profile



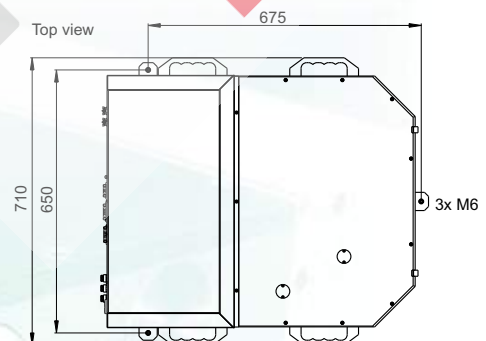
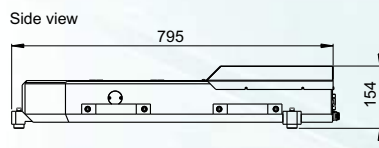
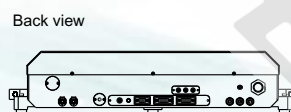
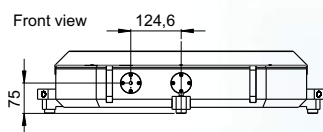
spectral bandwidth



long term stability



Dimensions Laser Head



Visible and/or invisible
laser radiation. Avoid eye
or skin exposure to direct
or scattered radiation.
Class 4 laser (IEC-825)



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