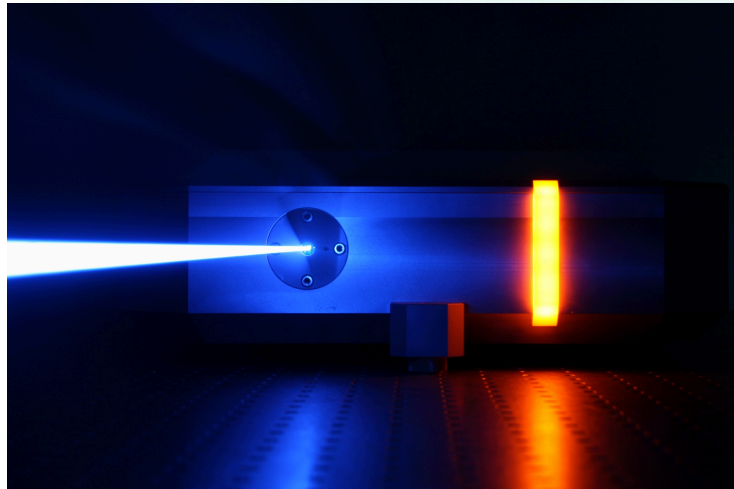


**Single Longitudinal Mode, TEM₀₀ beam profile, Q-switched solid-state laser
Wavelength 266 nm**



Due to a cw single-frequency seed the consecutive laser pulses remain in phase to allow stable interference patterns, e.g. for exposing directly lithographic films. In addition the 500 mW average output power promise short exposure times for a high throughput. This combination out of short 266 nm wavelength, 500 mW high average output power and single frequency emission is a unique feature combination for a solid state laser.

General Description

The SLM-266 is a single-frequency all-solid-state laser system for applications in the UV such as wafer inspection, calibration of spectrometers and holographic applications. The spectral bandwidth of less than 80 MHz is near its theoretical Fourier limit.

The laser provides short output pulses with a duration of $\Delta t < 10$ ns in a diffraction-limited beam with $M^2 < 1.7$ at repetition rates between 1 and 20 kHz. The average output power is more than 500 mW at 266 nm with ultra-stable pulse traces and a high coherence length of more than 1 m not presentable with conventional lasers.

Applications

- **Wafer Inspection**
- **Photoluminescence**
- **Interferometry**
- **Raman Spectroscopy**
- **Holography**
- **Spectrometer Calibration**
- **Metrology**

Product Specifications

wavelength	266 nm
spectral bandwidth	< 80 MHz
coherence length	> 1 m
average power	> 500 mW
pulse duration	< 10 ns
energy per pulse	> 80 μ J
repetition rate	1 – 20 kHz
M ²	< 1.7
pulse-to-pulse stab.	$\sigma < 2.0$ %

Features

- **Single-frequency emission**
- **Diode laser pumped**
- **Sealed housing**
- **Slot mounted laser diode**
- **Excellent beam profile**
- **High pulse power**
- **Low pulse-to-pulse fluctuation**
- **Maintenance-free thermo-electrical heat management**
- **19"-rack power supply and chiller**

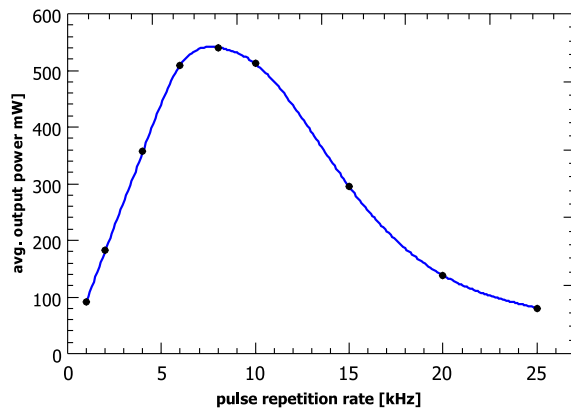
System Dimensions (L x W x H), weight

Laser head	635 x 536 x 154 mm ³	43 kg
Power supply (2x)	447 x 440 x 134 mm ³	16.8 kg
Controller	447 x 440 x 134 mm ³	8.8 kg
Chiller	447 x 381 x 134 mm ³	18.7 kg

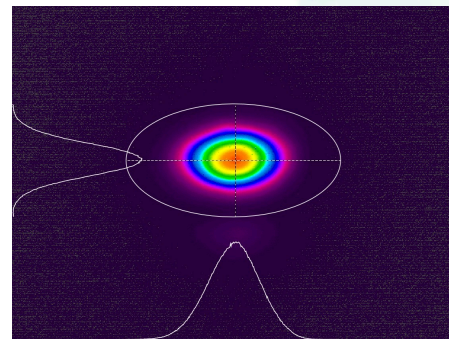
Electrical Characteristics

Operating Voltage	85 - 264 VAC
Frequency	47 - 63 Hz
Power Consumption	typ. 800 W

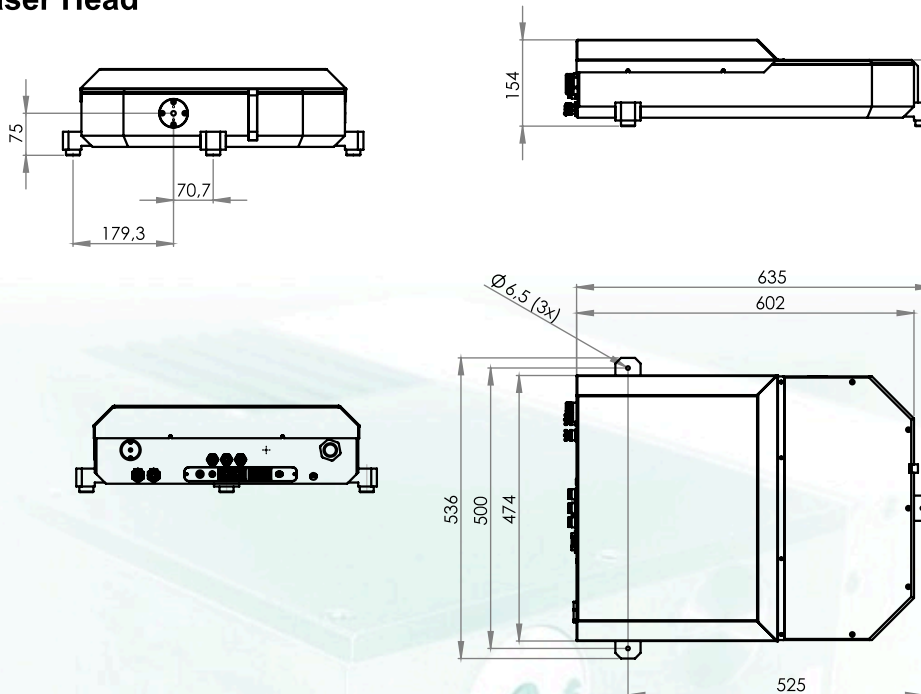
Typical Performance



Beam Profile



Dimensions Laser Head



Visible and/or invisible laser radiation. Avoid eye or skin exposure to direct or scattered radiation.
Class 4 laser (IEC 60825-1)



Xiton Photonics GmbH
Kohlenhofstrasse 10
D-67663 Kaiserslautern
Germany

Tel.: +49 (0)631 414 9944-0
Fax: +49 (0)631 414 9944-9
sales@xiton-photonics.com
www.xiton-photonics.com