

SLM 266

Single longitudinal mode
TEM₀₀ beam profile
Q-switched solid-state laser
Wavelength 266 nm

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 8 - 10 ns in a diffraction-limited beam with $M^2 < 1.7$ at repetition rates between 1 and 15 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 1.8 m not presentable with conventional lasers.

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.

Product specifications

Model	SLM 266
Wavelength	266 nm
Average power	500 mW
Pulse duration (typ)	8-10 ns
Energy per pulse	50 μ J
Repetition rate	1-15 kHz
M^2	< 1.7
Spectral bandwidth	< 80 MHz
Coherence length	> 1.8 m

* Data at 10 kHz pulse repetition rate.
Specifications are subject to change
without notice due to product improvement.

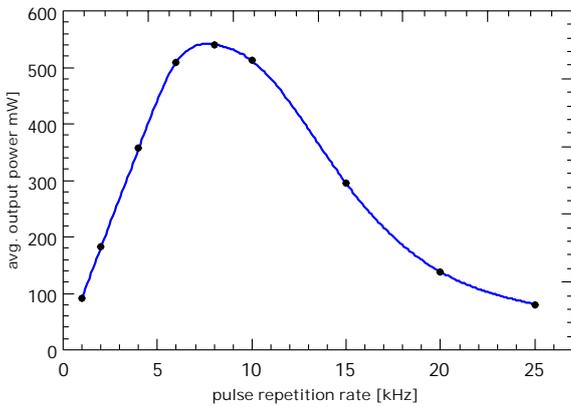
Applications

Spectrometer calibration
Lithography
Interferometry
Wafer inspection
Holography
Photoluminescence
Raman spectroscopy
Metrology

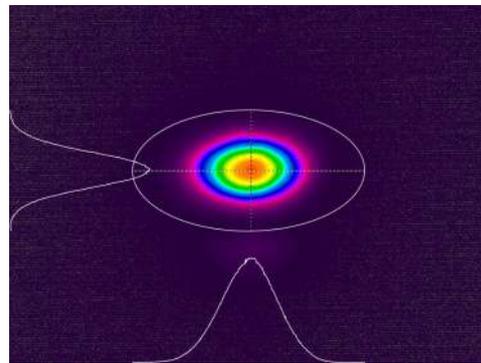
Optional

Graphical user interface
LabVIEW libraries
CDRH compliance shutter

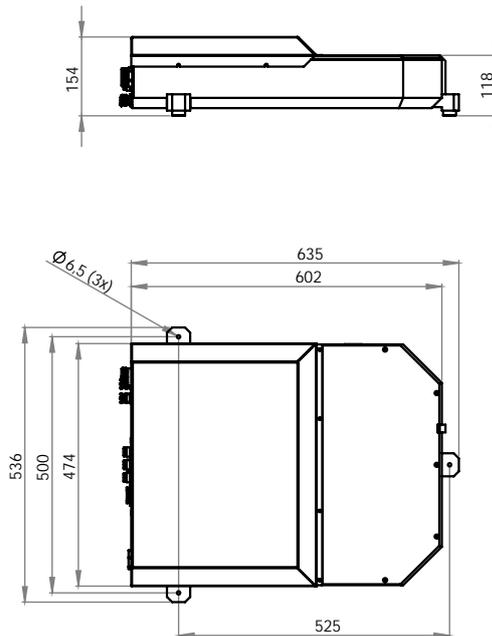
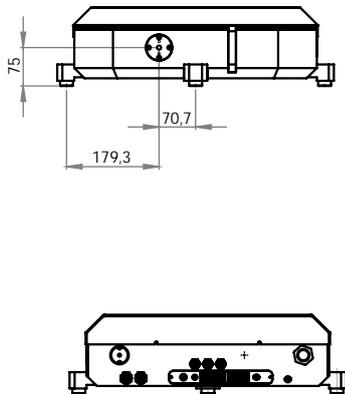
Typical performance



Typical beam profile



Dimensions laser head

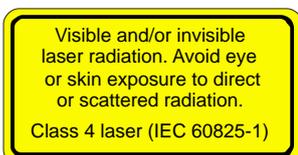


System dimensions (L x W x H), weight

Laser head	635 x 536 x 154 mm ³	54 kg
Power supply (including chiller)	600 x 600 x 600 mm ³	78 kg

Electrical characteristics

Operating voltage	85-264 VAC
Frequency	47-63 Hz
Power consumption	650 W typ



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