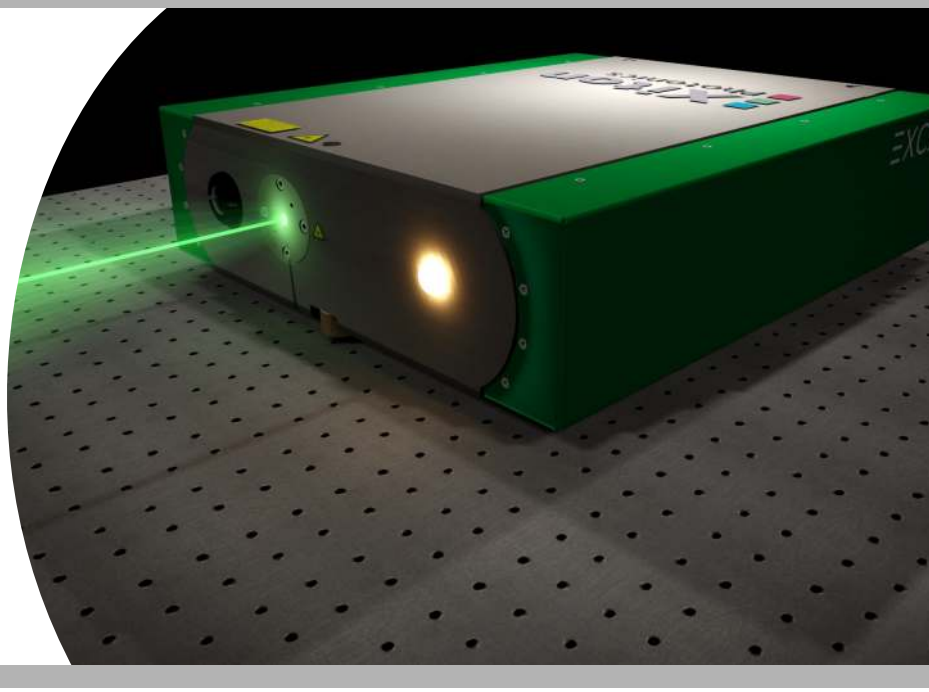
Xiton Photonics



EXCITE Series

TEM_{00} beam profile
Long coherence length
Q-switched solid-state lasers
Tailored to match your needs

General description

The EXCITE is a single frequency all-solid-state laser system for applications in the UV such as wafer inspection, calibration of spectrometers and interferometric applications. The spectral bandwidth of less than 50 MHz is near its theoretical Fourier limit.

The laser provides short pulses in a diffraction-limited beam with $M^2 < 1.6$ at repetition rates between 1 and 30 kHz. The average output power is more than 150 mW at 266 nm, or 400 mW at 355 nm, with ultra-stable pulse traces and a long coherence length of more than 3.0 m in a rugged industrial design.

Applications

Raman spectroscopy
Interferometry
Lithography
Fiber Bragg grating (FBG) production
Spectrometer calibration
Metrology
Holography

Optional

Graphical user interface
LabVIEW libraries
CDRH complience shutter

Product specifications

Model	EXCITE 266	EXCITE 355	EXCITE 532	EXCITE 1064
Wavelength	266 nm	355 nm	532 nm	1064 nm
Average power	150 mW	400 mW	2.5 W	6 W
Pulse duration	10-15 ns	14-18 ns	15-20 ns	20-30 ns
Energy per pulse	7.5 µJ	20 µJ	125 µJ	300 µJ
Repetition rate	1-30 kHz	1-30 kHz	1-30 kHz	1-30 kHz
M^2	< 1.7	< 1.3	< 1.2	< 1.2
Spectral bandwidth	< 60 MHz	< 50 MHz	< 50 MHz	< 30 MHz
Coherence length [1)]	> 2.5 m	> 3.0 m	> 3.0 m	> 5 m

1) 50% contrast

* Data at 20 kHz pulse repetition rate. Specifications are subject to change without notice due to product improvement.

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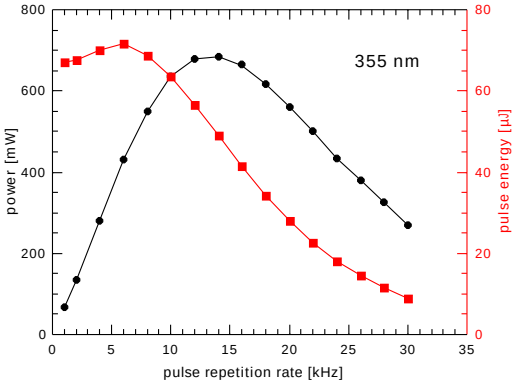
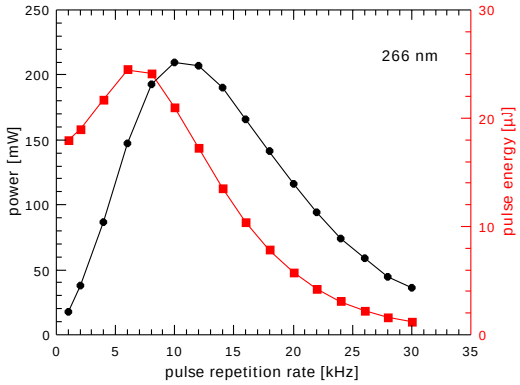
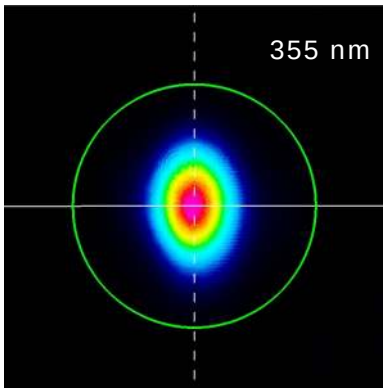
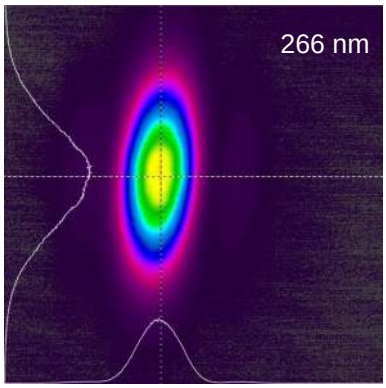
Typical performance



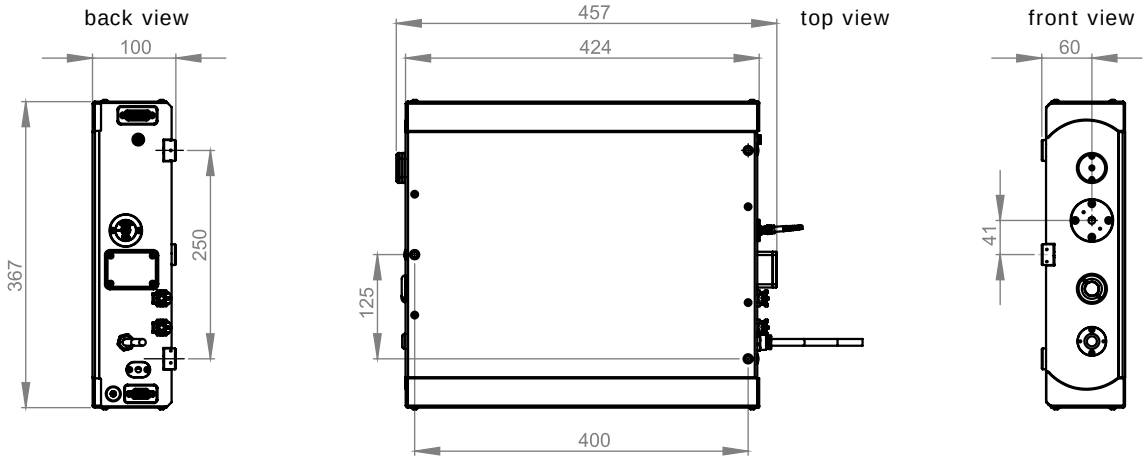


Typical beam profile





Dimensions laser head



System dimensions (L x W x H), weight

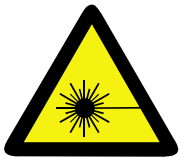
Laser head	541 x 220 x 76 mm³	24.6 kg
Power supply	447 x 440 x 134 mm³	18.5 kg
Chiller	447 x 440 x 134 mm³	12.0 kg

Electrical characteristics

Operating voltage	85-264 VAC
Frequency	47-63 Hz
Power consumption	350 W typ.

Visible and/or invisible laser radiation. Avoid eye or skin exposure to direct or scattered radiation.

Class 4 laser (IEC 60825-1)



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