

SLM-671

TEM₀₀ beam profile
Diode laser pumped
Q-Switched solid-state laser
Single-frequency wavelength 671 nm



General description

The SLM-671 system is a high repetition rate solid-state diode pumped Q-switched laser with an emission wavelength around 671 nm and an average power of 1 W.

The laser provides short pulses in a diffraction limited beam with $M^2 < 1.2$ at a repetition rate of 10 kHz.

It offers an almost fourier limited spectral linewidth of less than 80 MHz and can be tuned to the D-Absorption Lines of Lithium. With it's high spectral stability it is well suited for selective excitation of ^6Li or ^7Li isotopes.

Product specifications

Model	SLM-671-1
Average power	1 W
Pulse duration	10-15 ns
Energy per pulse	100 μJ
Repetition rate	10 kHz
Beam quality M^2	< 1.2
Spectral bandwidth	$< 80 \text{ MHz}$
Spectral Stability (longterm)	$< 300 \text{ MHz (stdev)}$
Spectral tunability	670.96 - 671.10 nm

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

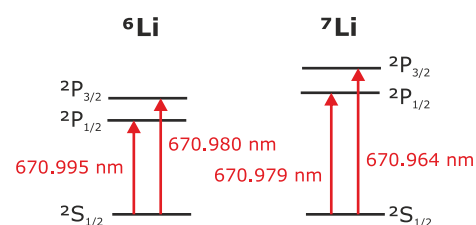
Applications

Spectrometer calibration

Interferometry

Lithium Excitation (Isotope selective)

Lithium D- Lines



Features

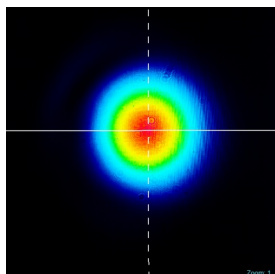
Graphical user interface

LabVIEW libraries

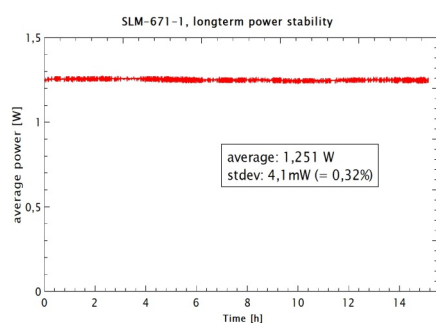
CDRH compliance

Typical performance

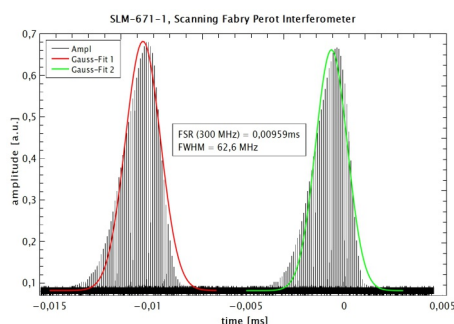
Beam profile



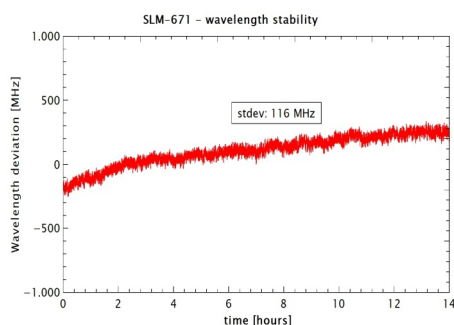
Long term power stability



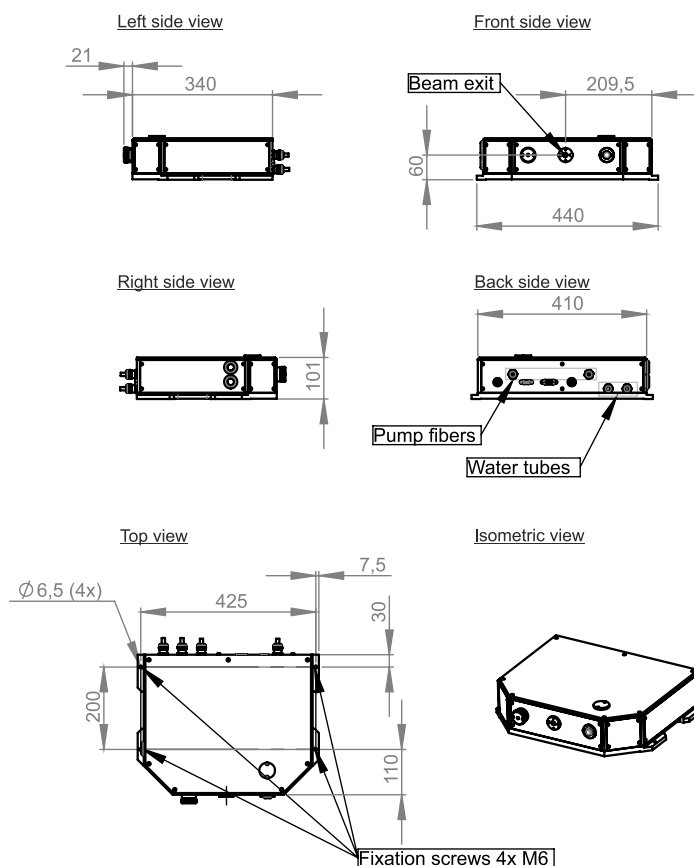
Spectral characterization



Long term wavelength stability



Dimensions laser head



System dimensions (L x W x H), weight

Laser head	340 x 440 x 101 mm ³	18 kg
Power supply	447 x 440 x 134 mm ³	18 kg
Chiller	381 x 440 x 134 mm ³	12 kg

Electrical characteristics

Operating voltage	85-264 VAC
Frequency	47-63 Hz
Power consumption	250 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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