

TEM₀₀ beam profile, diode laser pumped, Q-switched solid-state laser
Wavelengths 1342 nm, 671 nm, and 447 nm



Applications

- FPD - repair
- Rapid prototyping
- Wavelength sensitive processes
- Stereo-lithography
- Grayscale-marking
- Micro-machining

Features

- Multi-wavelength output, switchable
- Diode laser pumped
- Sealed housing
- Slot mounted laser diode
- Excellent beam profile
- High pulse power
- Low pulse-to-pulse fluctuation
- RS-232
- Maintenance-free thermo-electrical heat management
- 19"-rack power supply and chiller

General Description

The IDOL-series are high repetition rate solid-state diode pumped Q-switched lasers with the unique fundamental wavelength of 1342 nm. This allows the frequency conversion to powerful red and blue TEM₀₀ - mode laser radiation.

All lasers deliver < 13 ns short pulses with a superior beam quality. Due to their high pulse-to-pulse stability of $\sigma < 2\%$ and their sealed housing they are well suited for continuous 24/7 industrial use. The high repetition rate of up to 50 kHz provides a high throughput.

Product Specifications

model	IDOL-Q *	IDOL-S *	IDOL-T *	IDOL-C
wavelength	1342 nm	671 nm	671nm / 447 nm	447nm / 671nm
average power	4.5 W	2.0 W	2 / 1.5 W	-
pulse duration	< 13 ns	< 13 ns	< 13 ns	< 11ns
energy per pulse	300 μ J	130 μ J	130 / 100 μ J	220 / 250 μ J
repetition rate	1-100 kHz	1-50 kHz	1-50 kHz	1-500 Hz
M ²	< 1.2	< 1.2	< 1.3	< 1.3
cooling	water	water	water	air
gantry proven	no	no	no	yes

* All data at 15 kHz pulse repetition rate. Specifications are subject to change without notice due to product improvement.

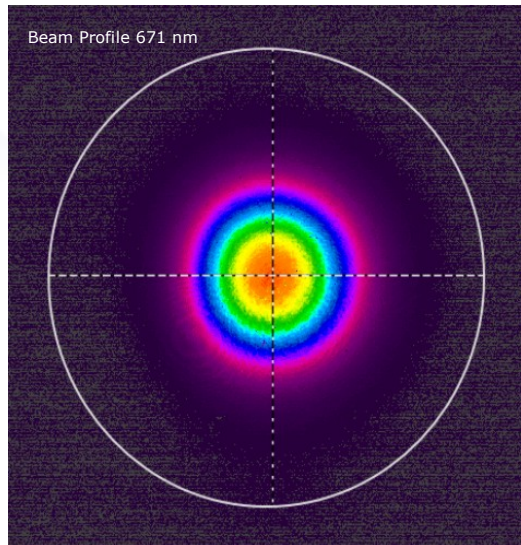
System Dimensions (L x W x H), weight

Laser	541x 220x 76 mm ³	12 kg
Power supply	446 x 440 x 134 mm ³	23.5 kg
Chiller	446 x 381 x 134 mm ³	18.4 kg

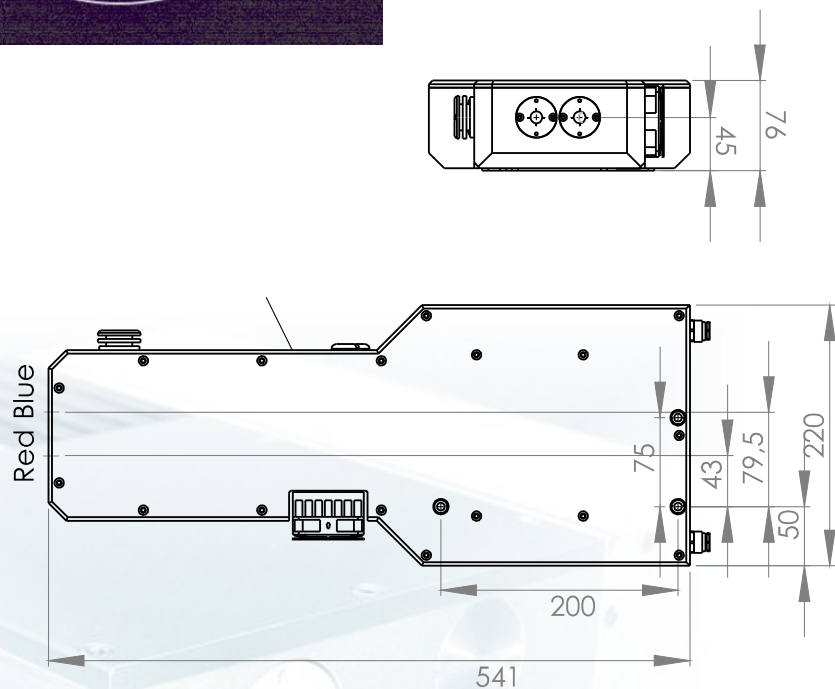
Electrical Characteristics

Operating voltage	85-264 VAC
Frequency	47 – 63 Hz
Power consumption	800 W max., 350 W typ.

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-825)



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