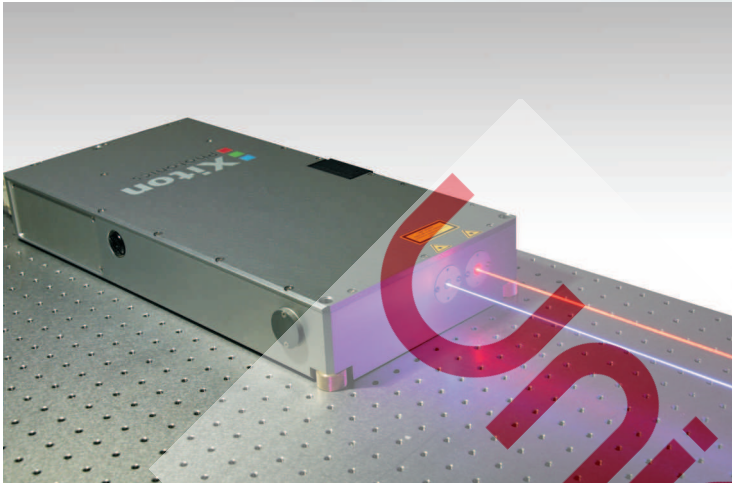


TEM₀₀ beam profile, diode laser pumped, Q-switched solid-state laser
Wavelengths 671 nm, and 447 nm



The High Rep system is watercooled and completely computer controlled via a RS-232 interface. Different trigger control modes are available.

The system operates autoranging from 90-240 VAC, 50-60 Hz.

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
- Maintenance-free thermo-electrical heat management
- 19"-rack power supply and chiller

General Description

The Impress 447-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 < 12 ns short pulses with a superior beam quality of M² < 1.2. Due to their high pulse-to-pulse stability of σ < 2% and their sealed housing they are well suited for continuous 24/7 industrial use. The high repetition rate of up to 500 Hz provides a high throughput.

The Low Rep System works air cooled without any need of cooling water. The laser system is completely computer controlled via a RS-232 interface. Different trigger control modes are available.

The system operates autoranging from 90-240 VAC, 50-60 Hz.

Product Specifications

model	IMPRESS-1.34-Q *	IMPRESS-1.34-Q-S*	IMPRESS-1.34-Q-T*	IMPRESS-HP	IMPRESS-Emax
wavelength	1342 nm	671 nm	447 nm	447nm / 671nm	447nm / 671nm
average power	4.5 W	2.0 W	2.0 W	-	-
pulse duration	< 12 ns	< 12 ns	< 12 ns	< 11 ns	< 8 ns
energy per pulse	300 μJ	130 μJ	130 μJ	250 μJ	400 μJ
repetition rate	1-100 kHz	1-100 kHz	1-100 kHz	1 – 500 Hz	1- 500 Hz
M ²	< 1.2	< 1.2	< 1.3	< 1.3	< 1.3
cooling	water	water	water	air	air
gantry proven	no	no	no	yes	yes

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

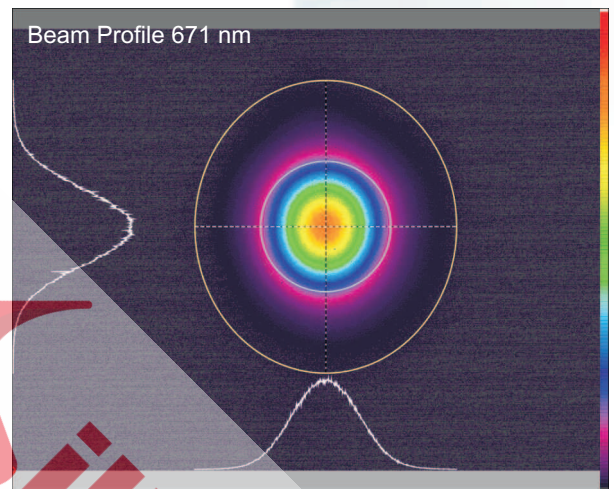
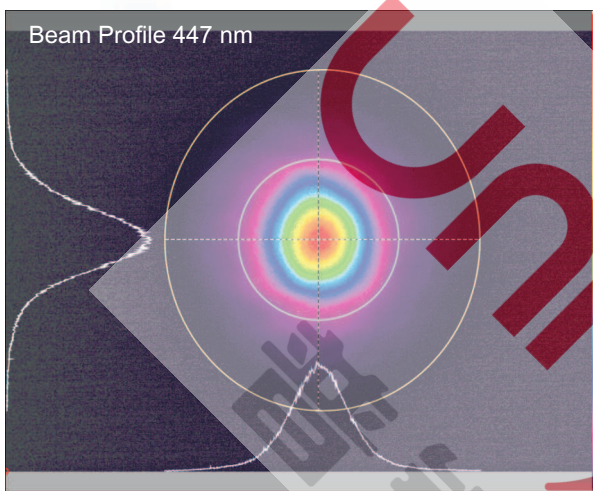
System Dimensions (L x W x H), weight

Laser head Q-S/T	514 x 260 x 77 mm ³	12.2 kg
Power supply	447 x 440 x 134 mm ³	16.8 kg
Chiller	447 x 440 x 134 mm ³	18.7 kg

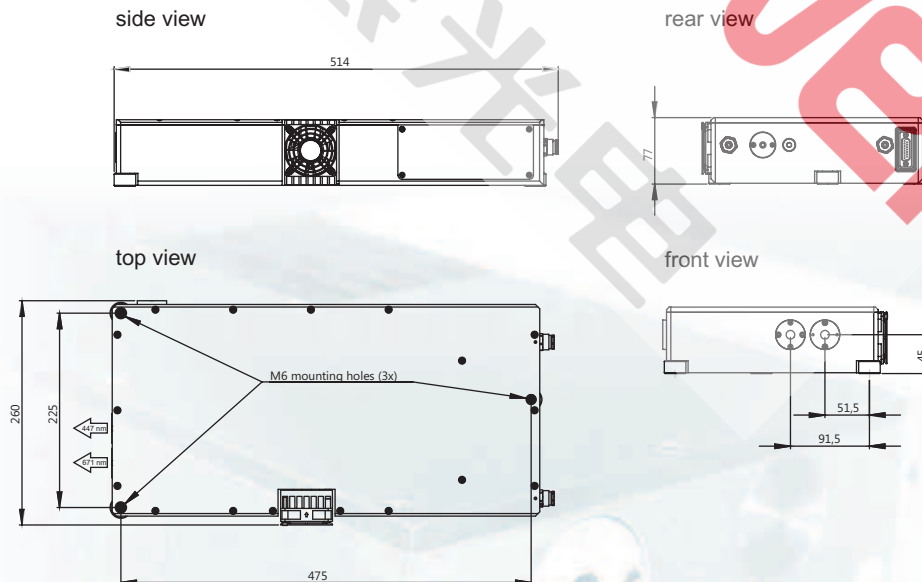
Electrical Characteristics

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

Typical Performance



Dimensions Laser Head



Visible and/or invisible laser radiation. Avoid eye or skin exposure to direct or scattered radiation.
Class 4 laser (IEC-825)



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