



IMPRESS 213

Real deep UV
 TEM₀₀ beam profile
 Q-switched solid-state laser
 Wavelength 213 nm

General description

The IMPRESS 213 system is a high repetition rate solid-state diode pumped Q-switched laser with an emission wavelength of 213 nm. The Gaussian TEM₀₀-mode laser beam is the well-established workhorse for fiber Bragg grating (FBG) production. Other applications are the marking of diamonds and sapphires or similar materials. Due to the very short wavelength of the laser radiation, feature sizes below 1 μm can be accomplished in direct laser writing. The new 2020 revised model includes an integrated high precision massflow regulator for N₂ purging and multi-spot deep UV optics, which insures improved lifetime. It is also fully CDRH compliant without external safety accessories.

Compared to Ar-Ion lasers, the IMPRESS 213 is a real energy saver and can be easily temperature-controlled by a closed cooling system. In combination with the space saving footprint, operation costs are kept at a minimum.

Applications

- Fiber Bragg grating fabrication
- Diamond marking
- Wavelength sensitive processes
- Stereo-lithography
- Semi-conductor inspection
- Replacement of freq. doubled Ar-Ion lasers
- Photoluminescence measurements

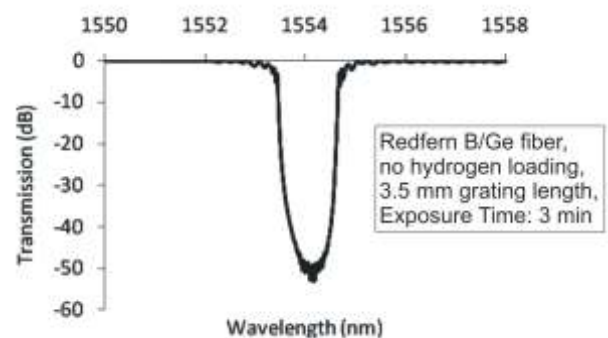
Product specifications *

Model	IMPRESS 213
Wavelength	213 nm
Average power	150 mW #
Pulse duration	6-8 ns
Energy per pulse	15 μJ
Repetition rate	1-30 kHz
M ²	< 1.6

* Data at 12.5 kHz pulse repetition rate.
 # Max. output option: up to 225mW available on request.

Outstanding in FBG writing

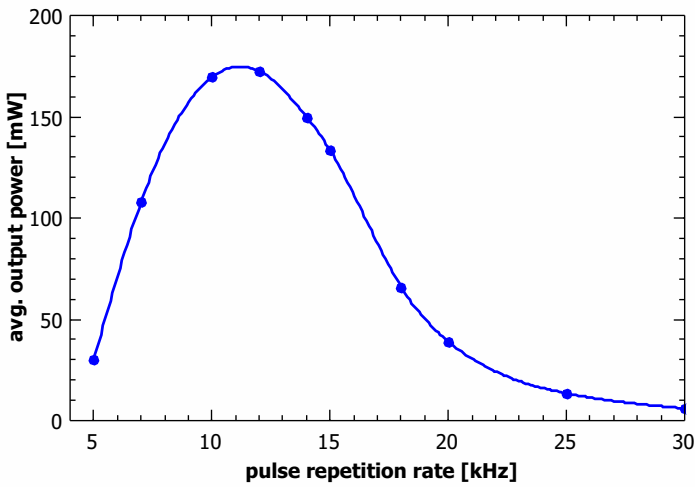
- Extremely fast writing
- No Hydrogen loading necessary



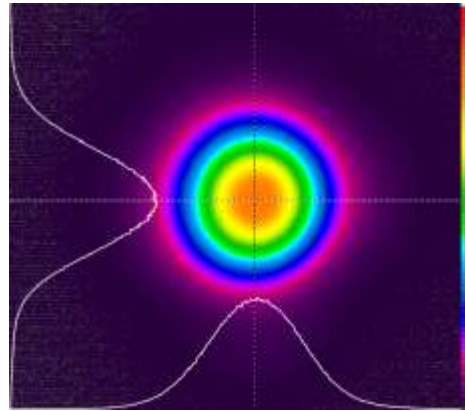
Features

- Graphical user interface
- LabVIEW libraries
- Integrated N₂ Gas Flow regulator
- CDRH compliant
- vertical side mounting possible

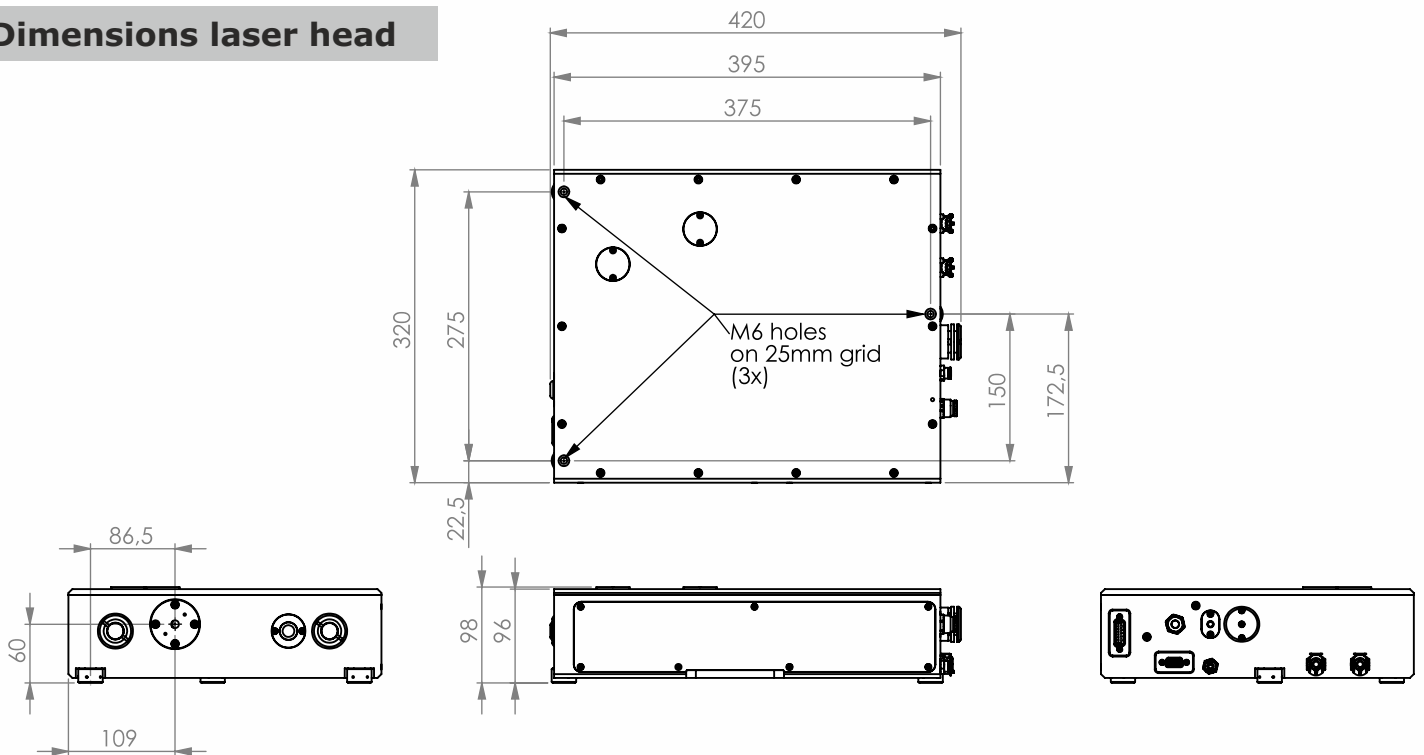
Typical performance



Typical beam profile



Dimensions laser head



System dimensions (L x W x H), weight

Laser head	395 x 320 x 96 mm ³	17.8 kg
Power supply	447 x 440 x 134 mm ³	18.0 kg
Chiller	447 x 440 x 134 mm ³	12.0 kg

Electrical characteristics

Operating voltage	85-264 VAC
Frequency	47-63 Hz
Power consumption	300 W typ

Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice Bo. 50, dated June 24, 2007

Class 4 laser (IEC 60825-1)



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