

Nd:YAG passively q-switched DPSS lasers

WAVEGUARD-D



FEATURES:

- Robust and compact design
- Internal and external TLL triggering
- Laser controller with USB or RS232 interface
- OEM version available
- Adjustable repetition rate

APPLICATIONS:

- Material processing and micromachining
- LIBS
- Marking
- LIDAR and Laser Ranging
- Biophotonics

Laser characteristics:

Wavelength	1064 nm ¹				
Wavelength tolerance	± 1 nm				
Repetition rate	1 Hz – 1 kHz				
Pulse energy	>135 μJ @1Hz	>130 μJ @10Hz	>125 μJ @100Hz	>120 μJ @500Hz	>120 μJ @1kHz
Average output power	0,135 mW	1,3 mW	12,5 mW	60 mW	120 mW
Energy stability (3 hr), @1 kHz	<1 %				
Pulse duration	< 1 ns				
Polarization contrast	>100:1				
Beam diameter at exit window	<1 mm				
Beam quality	M ² <1.5				
Beam divergence	<5 mRad				
Beam profile	TEM ₀₀				

¹additional harmonics modules for 532 nm, 355 nm or 266 nm wavelengths available on request

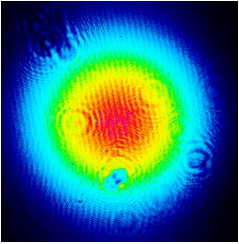
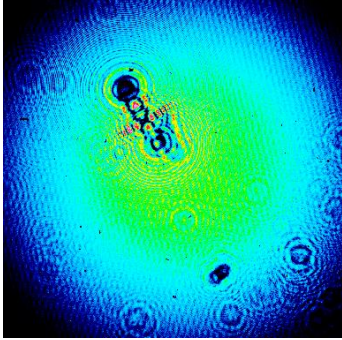
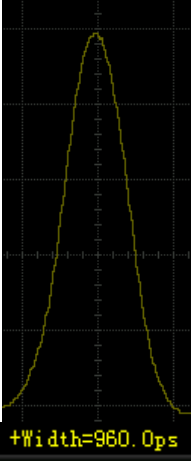
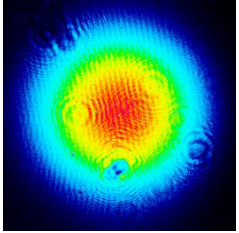
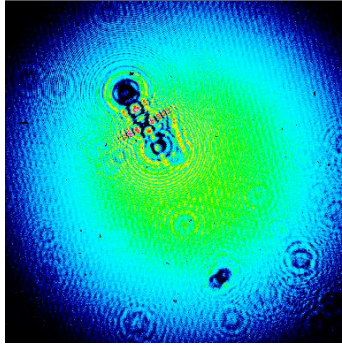
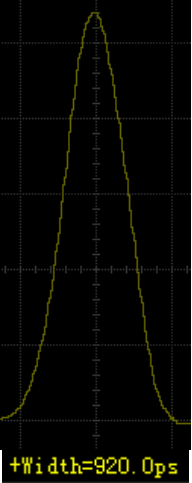
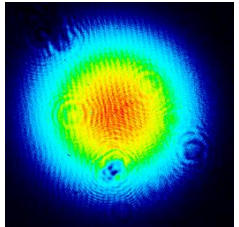
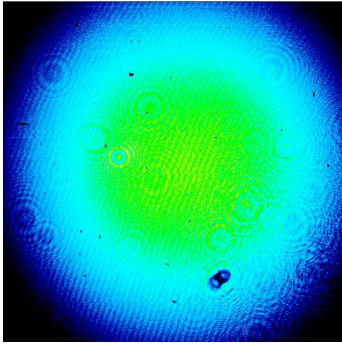
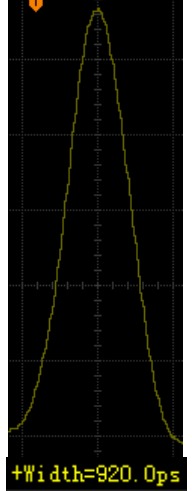
Physical dimensions:

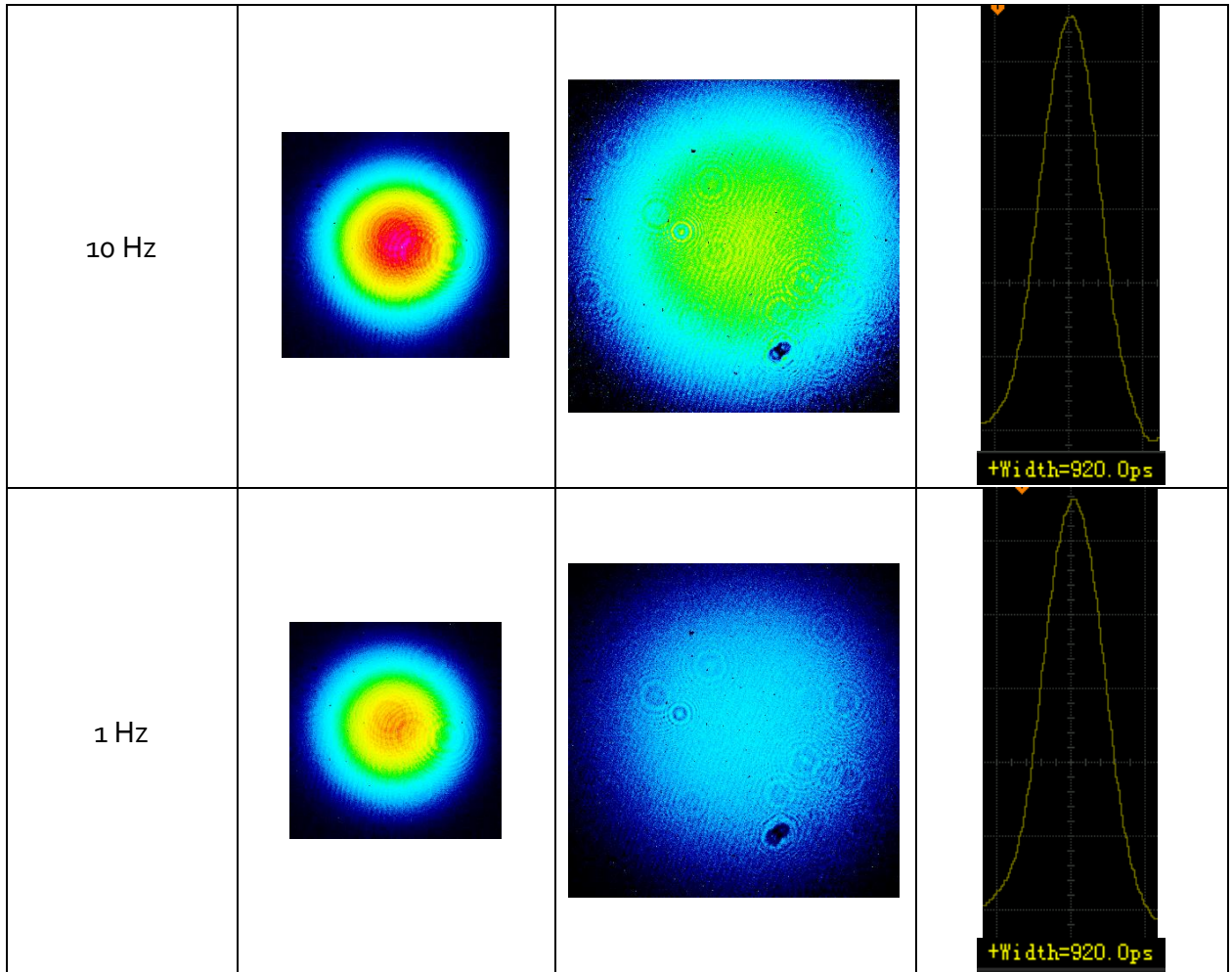
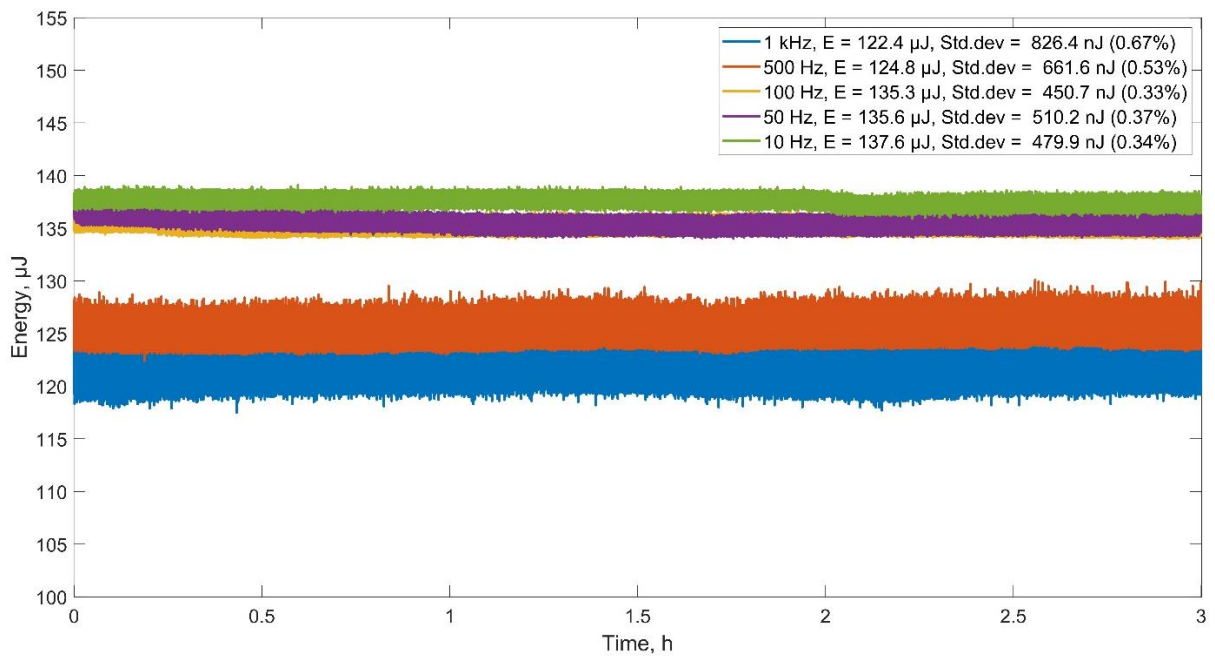
Laser module dimensions	170 x 103 x 64 mm
Laser driver dimensions	164 x 105 x 44 mm

Utility requirements:

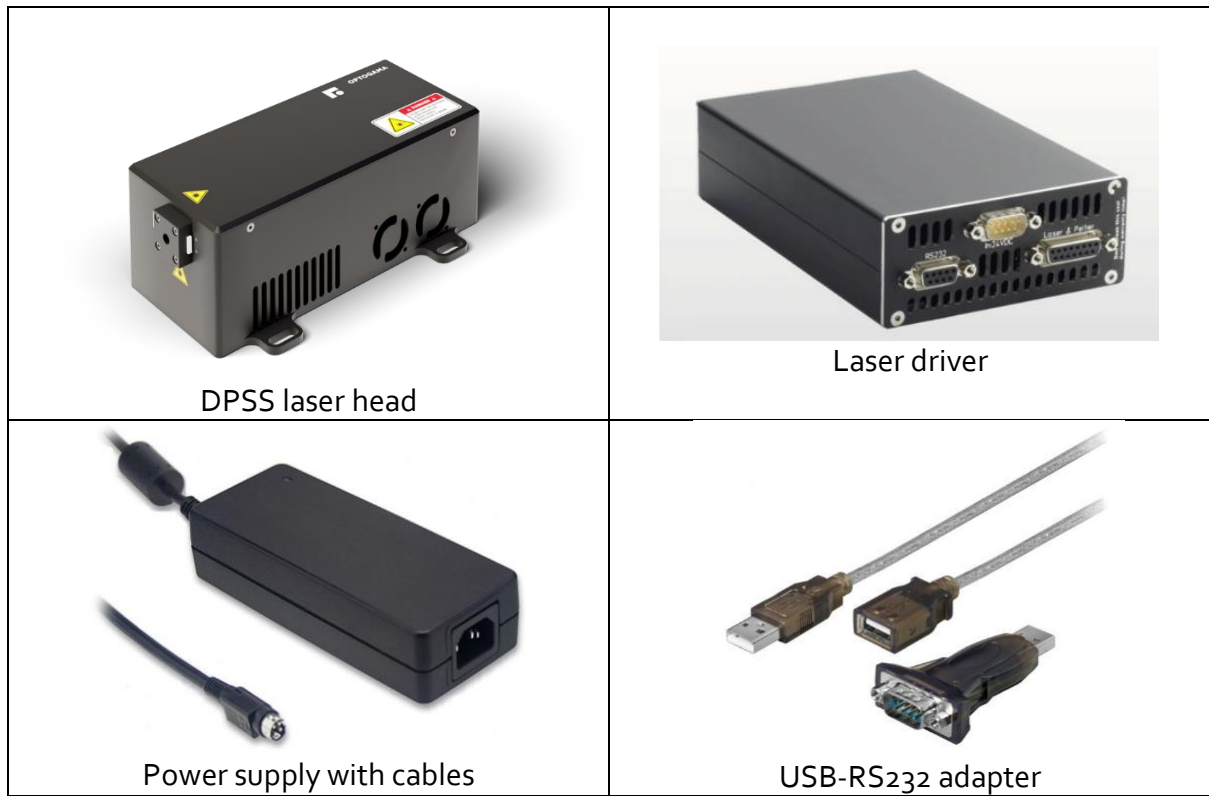
Pump current	8 A
Electric	100-240 V AC, 50/60 Hz, 1.4 A
Working temperature	20 – 28 °C
Cooling	TEC element + air cooling

Laser beam profile and laser pulse duration data:

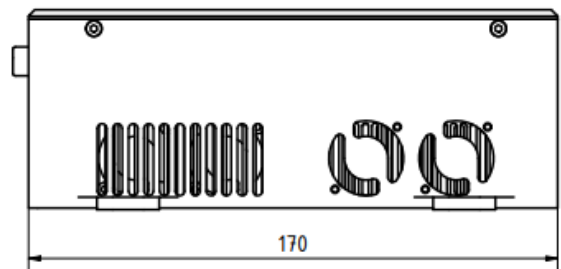
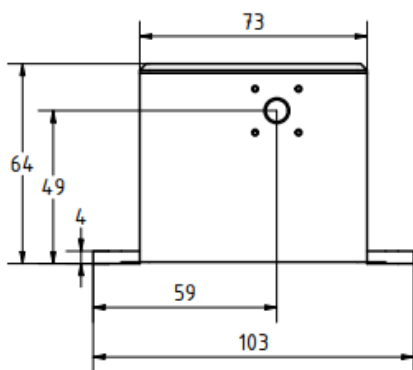
Repetition rate	Near field (15 cm from the laser) beam profile	Far field (50 cm from the laser) beam profile	Pulse duration
1 kHz			 <p data-bbox="1190 943 1382 983">+Width=960.0ps</p>
500 Hz			 <p data-bbox="1190 1435 1382 1471">+Width=920.0ps</p>
100 Hz			 <p data-bbox="1190 1928 1382 1966">+Width=920.0ps</p>

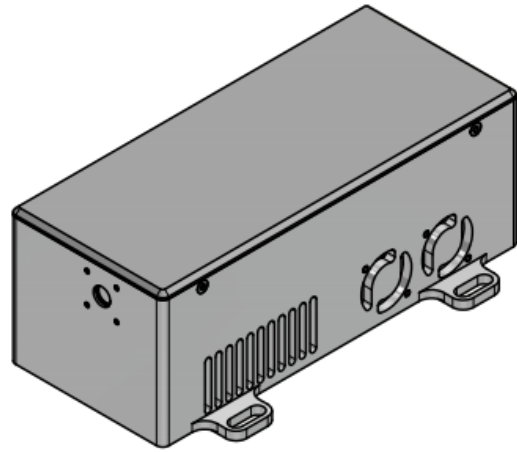
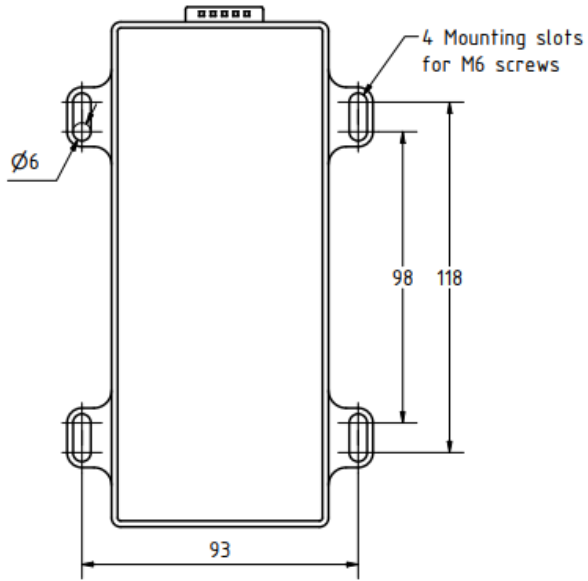

Output energy stability:


Necessary components to run the laser:



Laser head schemes:





Laser safety class:

