CENTURION+

Compact pulsed diode-pumped Nd:YAG laser

Quantel laser BY LUMIBIRD

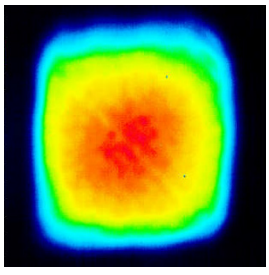
MAIN FEATURES

- Full energy output from very first shot
- Electronics embedded
- Optional variable attenuator inside housing
- Harmonic generators (532 nm, 355 nm, 266 nm) integrated internally
- 1.57 µm eye-safe operation available
- Very homogenous near field intensity distribution
- Excellent energy stability at all wavelengths
- Low vibration fans
- Fiber coupling available at 1064 nm and 532 nm

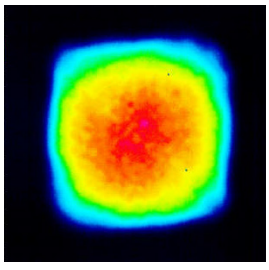
MAIN APPLICATIONS

- **FPD REPAIR**
- **SEMICONDUCTOR PROCESS**
- **LiDAR**
- **LIBS**
- **OPO AND TI:SA PUMPING**

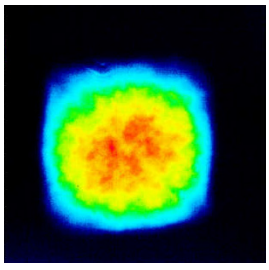
Typical beam profiles



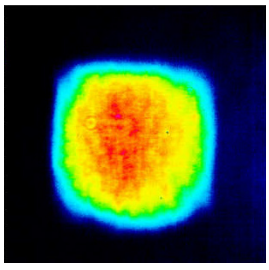
Near field 50 mJ @ 1064 nm, 100 Hz



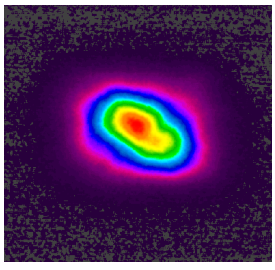
Near field 25 mJ @ 532 nm, 100 Hz



Near field 8 mJ @ 355 nm, 100 Hz



Near field 2.5 mJ @ 266 nm, 100 Hz



Near field 10 mJ @ 1570 nm, 100 Hz

www.quantel-laser.com

Many options and configurations are available. Please contact Lumibird to find the best match for your needs and compatibility between options.

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SPECIFICATIONS

	CENTURION+	
Repetition rate (Hz)	1-100	
Energy per pulse (mJ)	1064 nm	50
	532 nm	25
	355 nm	8
	266 nm	2.5
	1570 nm	10
Pulse duration (ns) (1)	1064 nm	< 14
	532 nm	< 13
	355 nm	< 12
	266 nm	< 12
	1570 nm	< 5
Beam diameter (mm) (2)	1064 nm	3.5 ± 0.5
	532 nm	3.2 ± 0.5
	355 nm	3.0 ± 0.5
	266 nm	3.0 ± 0.5
	1570 nm	2.5 ± 0.5
Beam divergence (mrad) (3)	1064 nm	< 9
	532 nm	< 8
	355 nm	< 7
	266 nm	< 6
	1570 nm	< 5
Polarization (4)	All wavelengths	Vertical
Polarization extinction ratio	1064 nm	150 : 1

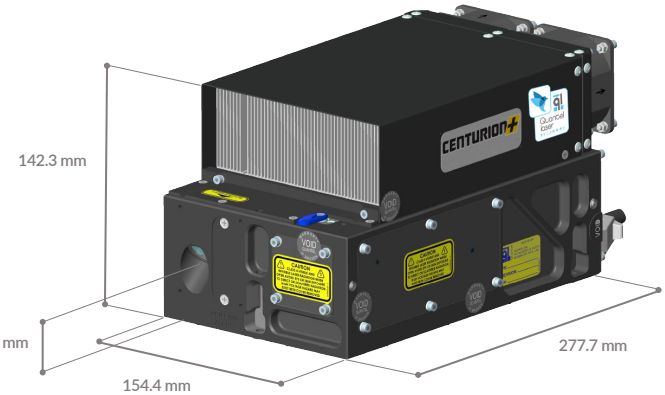
(1) Measured at FWHM with fast photodiode and 1 GHz scope
(2) D4σ at output window
(3) D4σ, full angle
(4) Polarization is given for final wavelength

Pulse to pulse energy stability (%) (1)	1064 nm	≤ 2 (0.5)
	532 nm	≤ 2.5 (1)
	355 nm	≤ 4.5 (1.5)
	266 nm	≤ 4.5 (1.5)
	1570 nm	≤ 2 (0.5)
First shot energy stability (%) (2)	1064 nm	≤ 2 (0.5)
	532 nm	≤ 2.5 (1)
	355 nm	≤ 3.5 (1.2)
	266 nm	≤ 3.5 (1.2)
	1570 nm	≤ 2 (0.5)
Energy drift (%) (3)	1064 nm	≤ 5
Pointing stability (µrad) (4)	1064 nm	≤ 100
Linewidth (cm^{-1})	1064 nm	≤ 1

(1) Peak-to-peak (RMS), measured on 6000 shots from turn-on at 100 Hz
(2) Peak-to-peak (RMS), measured on 5 sets of 20 consecutive shots from turn-on at 1 Hz
(3) Measured over 5 minutes
(4) Measured at 1064 nm on the first 1000 consecutive shots at 100 Hz

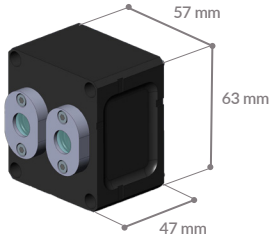
Other information	
Power requirements	48 ± 10 % VDC, 5 A
Cooling	Air cooled
Operating temperature	15 °C to 35 °C
Storage temperature	5 °C to 60 °C
Laser head sealing	IP 51 sealed
Vibration and shock	Complies with MIL-STD-810
Diode warranty	1 billion shots

Laser head & electronics



OPTIONS

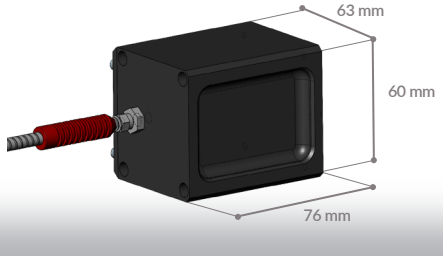
Wavelength separation module



Remote box

Fiber optic launch adaptor

Dimensions for 1064 and 1570 nm versions



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