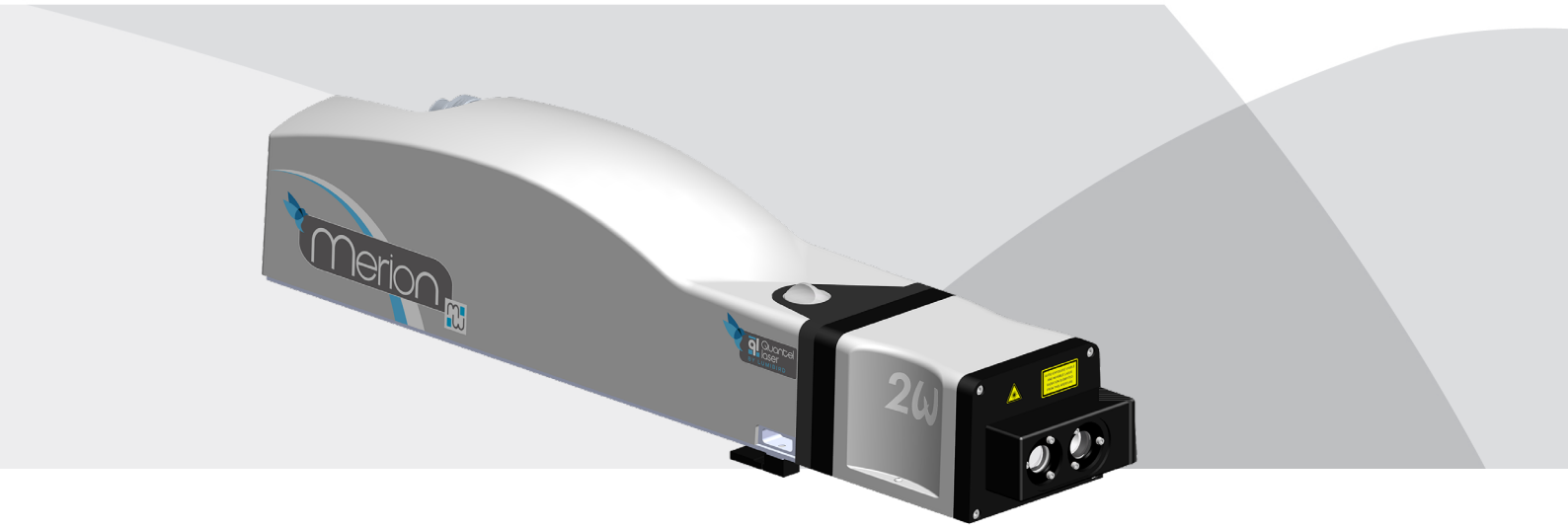
Merion MW

Modular Wavelengths diode-pumped pulsed Nd:YAG laser



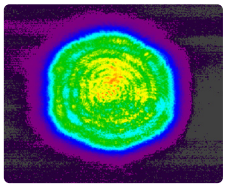
MAIN FEATURES

- Lightweight and compact design
- Repetition rates up to 200 Hz
- Plug & play harmonics with automatic phase-matching
- Quick-connect cables and cooling lines
- Single longitudinal mode option available
- No installation required
- Diode warranty: 5 billion shots
- Multimode configuration on request

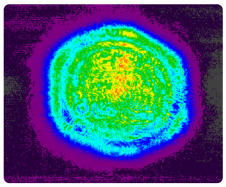
MAIN APPLICATIONS

- LiDAR
- MATERIAL PROCESSING
- ABLATION
- LASER PEENING
- LASER ULTRASOUND
- PHOTOACOUSTIC IMAGING
- DYE, OPO & Ti:Sa PUMPING
- LIF
- SPECTROSCOPY

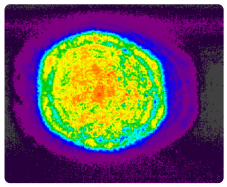
Typical beam profiles



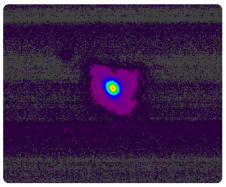
Merion MW 9
Near field @ 1064 nm



Merion MW 9
Near field @ 532 nm



Merion MW 9
Near field @ 355 nm



Merion MW 9
Far field @ 1064 nm

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.

Merion MW

Modular Wavelengths diode-pumped pulsed Nd:YAG laser

Quantel laser BY LUMIBIRD

SPECIFICATIONS

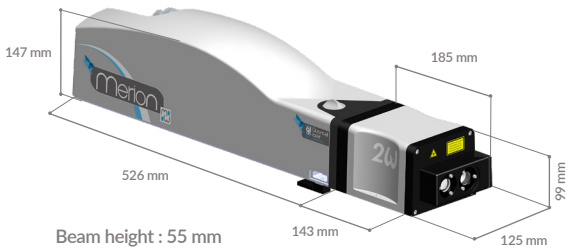
		MERION MW 7-100 (1)	MERION MW 7-200 (1)	MERION MW 9-100	MERION MW 9-100 SLM
Repetition rate (Hz)		100	200	100	100
Energy per pulse (mJ)	1064 nm	300	230	650	550
	532 nm	160	95	335	250
	355 nm	90	60	200	180
	266 nm	On request			
Pulse duration (ns) (2)	1064 nm	5 - 9			
	532 nm				
	355 nm				
	266 nm				
Beam diameter (mm) (3)	1064 nm	~ 6.5		~ 9	
	532 nm				
	355 nm				
	266 nm				
Beam divergence (mrad) (4)	1064 nm	< 1			
	532 nm				
	355 nm				
	266 nm				
Polarization	1064 nm	Vertical			
Polarization ratio (%)	1064 nm	> 95	> 90		
Spatial profile at 1064 nm (fit to Gaussian)	Near field (5)	≥ 0.7			
	Far field (6)	≥ 0.9			

(1) Single Longitudinal Mode (SLM) version on request
(2) Measured at FWHM with fast photodiode and 1 GHz oscilloscope
(3) At laser output
(4) Full angle at $1/e^2$ of the peak
(5) Measured at 1 m from laser output
(6) Measured at the focal plane of a 2 m focus lens, least square fit to Gaussian (perfect fit = 1)

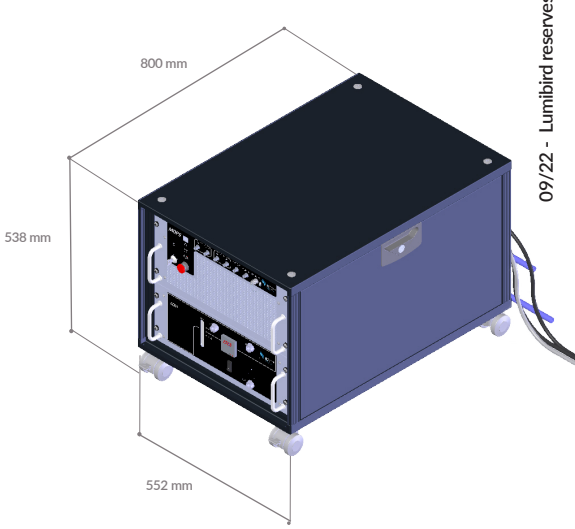
Pulse to pulse energy stability (%) (7)	1064 nm	± 2 (0.6)
	532 nm	± 4 (1.3)
	355 nm	± 6 (2)
	266 nm	On request
Power drift (%) (8)	1064 nm	± 3
	532 nm	± 5
	355 nm	± 5
	266 nm	On request
Pointing stability (µrad) (9)	1064 nm	≤ 40
Linewidth at 1064 nm (cm^{-1})	Standard (10)	≤ 0.7
	SLM (11)	≤ 0.005

(7) Peak to peak, 100% of the shots (RMS)
(8) Over 8 hours, without readjustment of phase-matching, 18°C < T < 28°C
(9) Measured by Spiricon LBA FWB RMS, on 200 pulses at the focal plane of a 2 m focus lens
(10) Measured at FWHM with a grating spectrometer with 0.045 cm^{-1} resolution
(11) Measured at FWHM with a slow scan Fabry-Perot etalon

Laser head



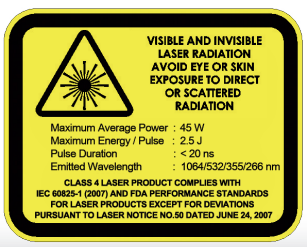
Electronics

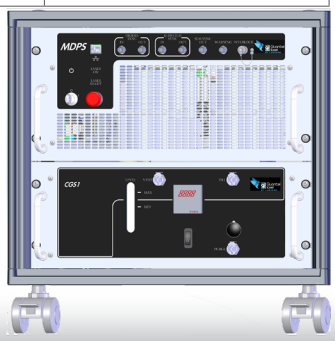


OTHER INFORMATION

Power requirements	Power supply	200-240 VAC, 50/60 Hz, 1600 VA
	Cooling group	200-240 VAC, 50/60 Hz, 2200 VA
Cooling	Water to water (12)	
Operating temperature	+ 18 °C to + 28 °C	
Storage temperature (13)	- 5 °C to + 45 °C	
Cable length (m) (14)	3	
Diode warranty	5 billion shots	
Weight (kg)	Laser head	8.6
	Harmonic modules	2.1
	Power supply & cooling group	85.4

(12) Chiller as an option
(13) System rinsed and drained with ethylene glycol/water mixture
(14) Other lengths up to 10 m on request. Some losses are to be expected





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