

Merion C

Compact diode-pumped
pulsed Nd:YAG laser



MAIN FEATURES

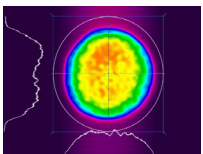
- Up to 200 mJ @ 1064 nm
- Superior beam profile up to 400 Hz
- Compact, portable and easy to integrate
- IP66 sealed optics
- Industrial design, built to last
- LaserBrain technology for interchangeable laser head
- Harmonics integrated in the laser head
- Fiber coupling available at 1064 nm, 532 nm and 1540 nm
- **Single Longitudinal Mode option for reduced linewidth**
- **Double pulse option for PIV application**

NEW

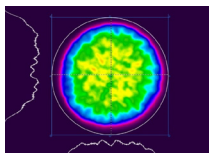
MAIN APPLICATIONS

- PHOTOACOUSTIC IMAGING
- LiDAR
- LIBS
- LASER ULTRASOUND
- WAFER INSPECTION
- LASER PEENING
- DYE, OPO & TI:SA PUMPING

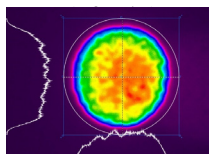
Typical beam profiles



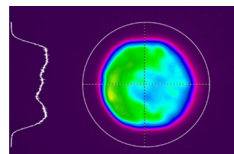
Merion C – S4
Near field @ 1064 nm



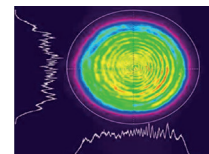
Merion C – S4
Near field @ 532 nm



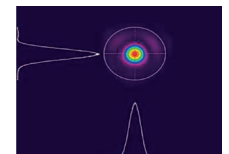
Merion C – S4
Near field @ 355 nm



Merion C – S4
Near field @ 266 nm



Merion C – G5
Near field @ 1064 nm



Merion C – G5
Far field @ 1064 nm

Merion C

Compact diode-pumped pulsed Nd:YAG laser



SPECIFICATIONS

		MERION C - S4	MERION C - G4	MERION C - S5	MERION C - G5
Repetition rate		Up to 400 Hz	Up to 400 Hz	Up to 200 Hz	Up to 200 Hz
Energy per pulse (mJ)	1064 nm	100	100	200	200
	532 nm	50	50	100	100
	355 nm	30	30	60	60
	266 nm	On request			
	1540 nm	On request	NA	On request	NA
Pulse duration (ns) ⁽¹⁾	1064 nm	< 10	< 7	< 10	< 7
Beam diameter (mm)	1064 nm	4		5.5	
Beam divergence (mrad) ⁽²⁾	1064 nm	< 5	< 1	< 7	< 1
Polarization ratio (%) ⁽³⁾	1064 nm	≥ 98			
Spatial profile	All wavelengths	Uniform near field	Excellent focusability	Uniform near field	Excellent focusability

(1) Measured at FWHM with fast photodiode and 1 GHz scope

(2) Full angle at D4 sigma

(3) Horizontal @ 1064 nm and @ 532 nm - Vertical @ 355 nm and @ 266 nm - For final wavelength only

Power drift (%) ⁽⁴⁾	1064 nm	± 3	
Pulse to pulse energy stability (%) ⁽⁵⁾	1064 nm	S models	G models
	532 nm	0.5	0.5
	355 nm	0.6	1.5
Jitter (ns) ⁽⁶⁾	All wavelengths	± 0.5	
Linewidth (cm ⁻¹) ⁽⁷⁾	1064 nm	≤ 0.7	

(4) Over 8 hours for $\Delta T^\circ \leq \pm 3^\circ C$

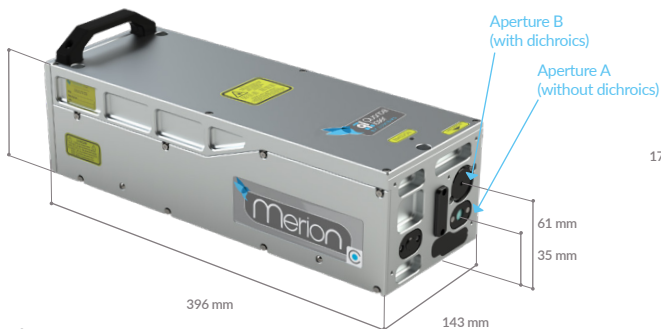
(5) RMS

(6) With respect to Q-Switch trigger

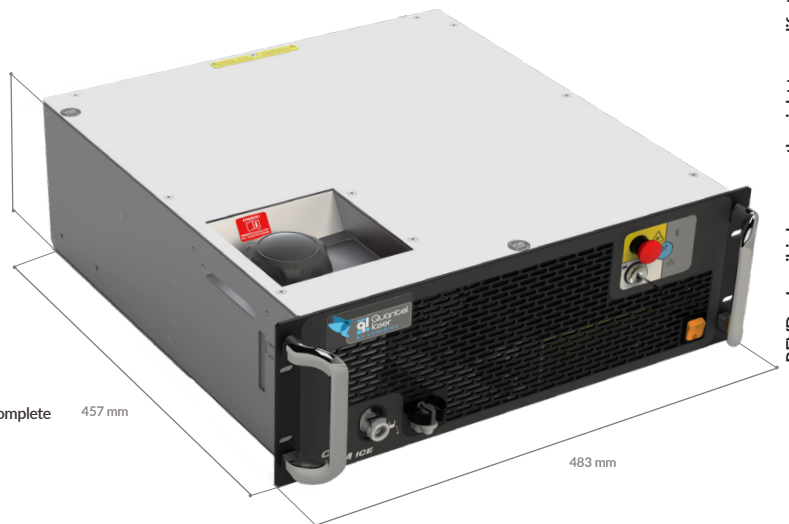
(7) Measured at FWHM with a grating spectrometer with 0.045 cm⁻¹ resolution

OTHER INFORMATION		
Power requirements	100-240 VAC, 50/60 Hz, Single phase, 850 VA	
Cooling	Water to air	
Operating temperature	+ 18 °C to + 35 °C	
Storage temperature	+ 5 °C to + 50 °C	
Diode warranty	2 billion shots	
Weight (kg)	Laser head (without options)	8.6
	Electronics	16.4

Laser head



Integrated cooling & electronics



3 OPTIONS

Please enquire with your specific application needs for complete specifications and details.

1. Fiber optic launch adaptor

Energy reduction up to 25%. Other specifications may also be derated.



2. Single Longitudinal Mode

for reduced linewidth (0.005 cm⁻¹ @ 1064 nm)

3. Double pulse PIV option

for double pulse at 532 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.



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REVD - Lumibird reserves the right to modify the specifications without prior notice.