

Brio

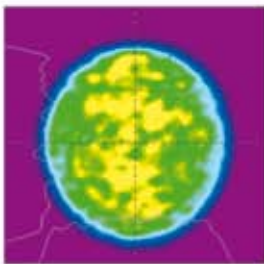


Compact Q-Switched Nd : YAG oscillator - 120mJ at 1064nm, 20 Hz

Beam diameter : 4.5 mm - 1 flashlamp - air/water heat exchanger

Extremely compact power supply - Detachable cables - Interchangeable harmonic generators

Beam profile in near field @ 1064 nm, Multimode resonator



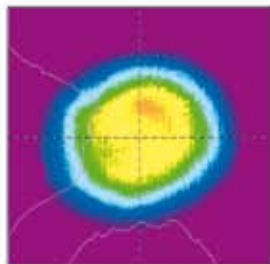
Horizontal Cursor Profile



Vertical Cursor Profile



Beam profile in near field @ 1064 nm, GRM resonator



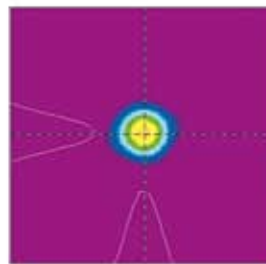
Horizontal Cursor Profile



Vertical Cursor Profile



Beam profile in far field @ 1064 nm, GRM resonator



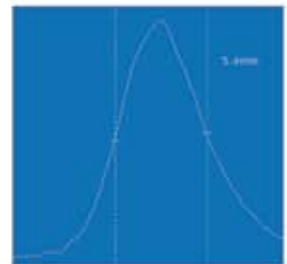
Horizontal Cursor Profile



Vertical Cursor Profile



Temporal profile @ 1064 nm, 20 Hz



Optical laser head :

(H x L x W)

2.2kg (4.85 lb)
73 x 232 x 80 (2.87 x 9.1 x 3.14)

Integrated Cooling and Electronics :

(H x L x W)

14kg (31 lb)
360 x 435 x 133 (14.2 x 17.14 x 5.23)

Harmonic generation module including separation package :

2w, 2w/3w, 2w/4w (H x L x W)

1.1kg (2.45 lb)
73 x 122 x 80 (2.87 x 3.46 x 3.14)

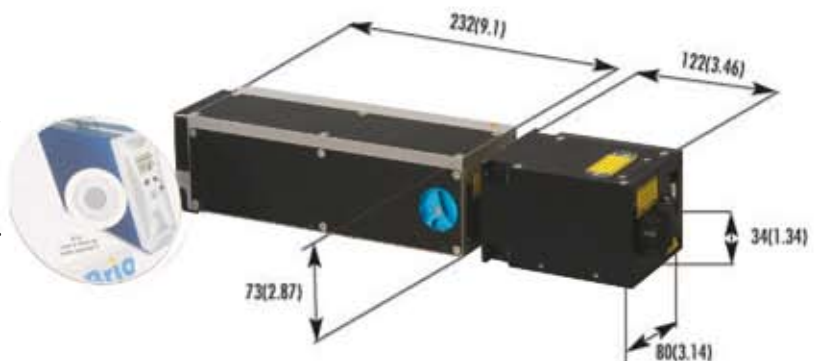
Remote control

All dimensions are in mm (inch).

195 x 100 (7.68 x 3.94)



External synchronization flexibility : flashlamp and Q-Switch control through TTL signals, RS232 or remote box.
Reduced warm-up time : heating element in coolant reservoir.

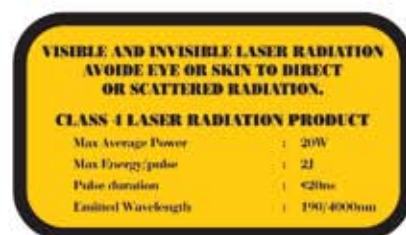


Brio Specifications

Resonator		STABLE	STABLE	GRM		
Repetition rate (Hz)		1 to 20	1 to 50	20	Specifications given at maximum repetition rate	
Energy per pulse (mJ)	1064 nm	120	75	100	Measured with a calibrated wattmeter * High energy green option ** High energy UV option	
	532 nm	65/80*	40	60/70*		
	355 nm	25/33**	12	20/33**		
	266 nm	15	7	12		
Energy stability – shot to shot (%)	1064 nm	±2 (0.6)	±2 (0.6)	±2 (0.6)	Peak to peak - (RMS)	
	532 nm	±4 (1.3)	±4 (1.3)	±4 (1.3)		
	355 nm	±6 (2)	±6 (2)	±6 (2)		
	266 nm	±8 (2.6)	±8 (2.6)	±8 (2.6)		
Power drift (%)	1064 nm	±3	±3	±3	Over 8 hours, without readjustment of phase-matching, 18°C < T° < 28°C	
	532 nm	±4	±4	±4		
	355 nm	±5	±5	±5		
	266 nm	±6	±6	±6		
Pulse duration (ns)	1064 nm	~5	~7	~4	FWHM, fast photodiode and 1GHz scope	
	532 nm	~4	~6	~3		
	355 nm	~4	~6	~3		
	266 nm	~4	~6	~3		
Linewidth (cm ⁻¹)	1064 nm	0.7	0.7	0.7	FWHM, measured by a grating spectrometer with a 0.045cm ⁻¹ resolution	
	532 nm	1.4	1.4	1.4		
Jitter (ns)	1064 nm	±1	±1	±1	With respect to Q-switch trigger, measured at half-width of 500 accumulated shots	
Pointing stability (µrad)	1064 nm	<50	<50	<50	Measured by Spiricon LBA-PC, RMS, on 200 pulses at the focal plane of a 2m focus lens	
	532 nm	<50	<50	<50		
	355 nm	<50	<50	<50		
	266 nm	<50	<50	<50		
Divergence (mrad)	1064 nm	<5	<5	<0.6	Full angle, at 1/e ² of the peak, 85% of total energy	
Polarization ratio (%)	1064 nm	>90	>85	>90	Vertical polarization	
Beam diameter (mm)	1064 nm	~4.5	~4.5	~4.5	At the output of the laser	
Focusability (times diffraction limit)	1064 nm	n.a*	n.a*	<2	At 1/e ² of the peak, measured by Spiricon LBA-PC	
Spatial profile (fit to Gaussian)						
	Near field	1064 nm	Flat-top	Flat-top	0.7	At the laser output
	Far field	1064 nm	n.a*	n.a*	> 0.9	At focal plane of a 2m focus lens Least square fit to Gaussian (perfect fit=1)

Service requirement Power : 100-240V, 10A, 50/60Hz.
Cable length 3 m (10 feet)

*n.a : non applicable



2 bis, Avenue du Pacifique - ZA de Courtaboeuf - BP 23 - 91941 Les Ulis Cedex - France

Tel : + 33 (0)1 69 29 17 00 - Fax : + 33 (0)1 69 29 17 29 - email : quantel@quantel.fr - www.quantel-laser.com

Quantel - USA : 601 Haggerty Lane - Bozeman, MT 59715 - 2001 - USA - Tel : + 1 406 586 0131 - fax : + 1 406 586 2924