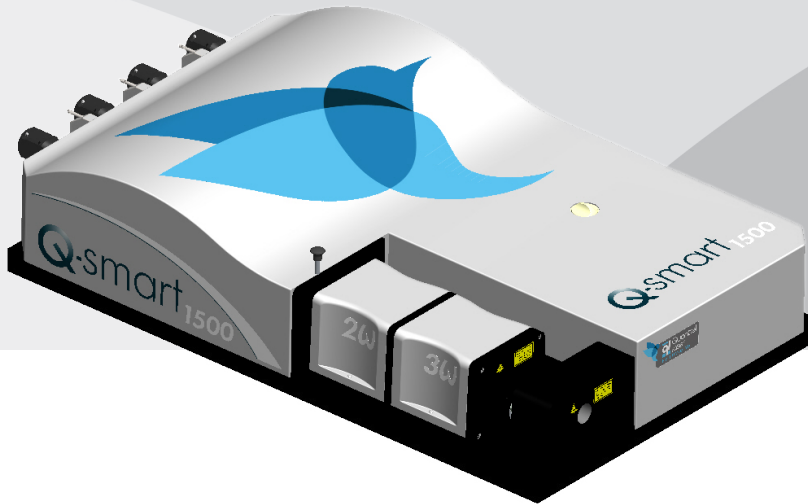


Q-SMART 1200 & 1500

Compact High-Energy pulsed Nd:YAG lasers
with excellent beam quality and versatility



MAIN FEATURES

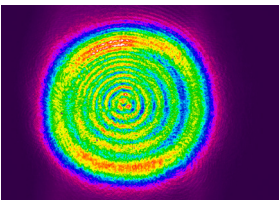
- Up to 1.5 J @ 1064 nm
- Robust and field proven technology
- Design to last thanks to ceramic reflectors and 100 million shots flashlamp lifetime warranty
- Plug & play harmonic modules with automatic phase-matching
- Cables and cooling lines fully disconnectable
- Easy to use and maintain
- No need for external water
- Universal voltage
- Intuitive GUI interface
- SLM option (Single Longitudinal Mode)

MAIN APPLICATIONS

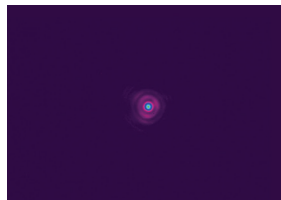
- LiDAR
- INSTRUMENTATION
- PLD
- DYE, OPO AND TI:SA PUMPING
- SPECTROSCOPY
- LIF AND COMBUSTION

...

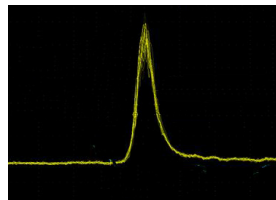
Typical beam profiles



Near Field 1.5 J @ 1064 nm, 10 Hz



Far Field 1.5 J 1064 nm, 10 Hz



Temporal Profile @ 1064 nm
(1 GHz scope)

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

		Q-smart 1200	Q-smart 1500
Repetition rate ⁽¹⁾ (Hz)		10	10
Energy per pulse (mJ)	1064 nm	1200	1500
	532 nm ⁽²⁾	600	820
	355 nm ⁽²⁾	280	490
	266 nm	130	150
Pulse duration ⁽³⁾ (ns)	1064 nm	5-10	
Beam diameter (mm)	1064 nm	≤ 10	
Divergence ⁽⁴⁾ (mrad)	1064 nm	≤ 0.5	
Polarization ⁽⁵⁾ ratio (%)	1064 nm	≥ 80	
Spatial profile	Near field ⁽⁶⁾ (fit to Gaussian)	≥ 0.7	
	Far field ⁽⁷⁾ (fit to Gaussian)	≥ 0.9	

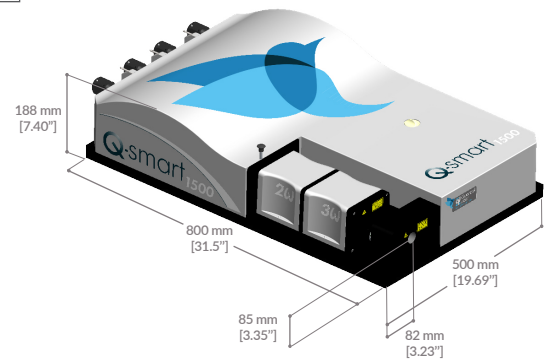
- (1) Other repetition rates on request
 (2) HE: High Energy option on request
 (3) Measured at FWHM with fast photodiode and 1 GHz scope
 (4) Full angle at 1/e² of peak
 (5) Horizontal @ 1064 nm – Vertical @ 532 nm – Horizontal @ 355 nm and @ 266 nm
 (6) Measured at 1 m from laser output
 (7) Measured at focal plane of a 2 m focus lens, least square fit to Gaussian (perfect fit = 1)

Power drift ⁽¹⁾ (%)	1064 nm	± 3
	532 nm	± 5
	355 nm	± 5
	266 nm	± 10
Energy stability ⁽²⁾ (%)	1064 nm	± 2 (0.6)
	532 nm	± 4 (1.3)
	355 nm	± 6 (2)
	266 nm	± 8 (2.6)
Pointing stability ⁽³⁾ (μrad)	1064 nm	< 40
Jitter ⁽⁴⁾ (ns)	Standard	± 0.5
	SLM option	± 1
M ² , focusability (times diffraction limit)	1064 nm	≤ 2
Linewidth (cm ⁻¹)	Standard ⁽⁵⁾	≤ 0.7
	SLM ⁽⁶⁾ option	≤ 0.005
Temperature range	18-28°C	

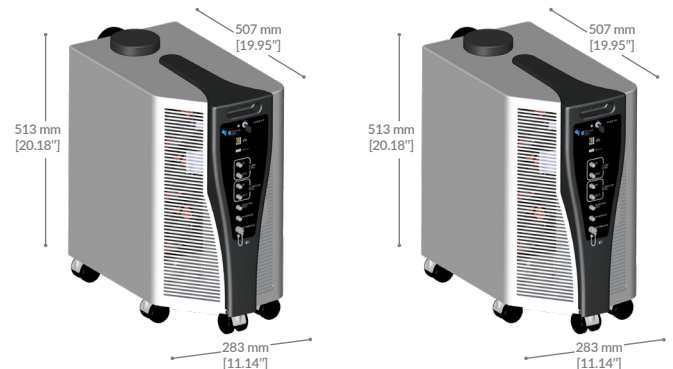
- (1) Over 8 hours for ΔT° ≤ ± 3°C
 (2) Peak-to-peak (RMS), 99% of shots
 (3) Measured with Spiricon LBA-100, rms, on 200 pulses at the focal plane of a 1 m focus lens
 (4) With respect to Q-Switch trigger, at half-width of 500 accumulated shots for 99% of shots
 (5) Measured at FWHM with a grating spectrometer with 0.045 cm⁻¹ resolution
 (6) Measured with a slow scan Fabry-Perot Etalon, ≤ 20% energy reduction @ 1064 nm

Service requirements	
Power	2 x 100-240 VAC 50-60 Hz Single phase
Cooling group	Air to water

Laser head



Electronics



12/19-REVA - Lumibird reserves the right to modify the specifications without prior notice.

www.quantel-laser.com

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Lumibird has locations across the globe
that are available to provide support
for any product, service or inquiry.
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