

Q-smart Twins

Laser solutions by QUANTEL

Compact multipulse Nd:YAG laser



MAIN FEATURES

- WAVELENGTHS FLEXIBILITY WITH PLUG AND PLAY HARMONICS
- DUAL PULSE AT ALL WAVELENGTHS 1064, 532, 355, 266 AND 213 nm
- INTELLIGENT AUTOTUNING OF HARMONICS
- VERSATILE: LASERS CAN BE USED INDEPENDENTLY
- FOCUSABILITY CLOSE TO DIFFRACTION LIMIT
- PORTABLE WITH QUICK CONNECT CABLES
- INTERCHANGEABLE POWER SUPPLIES
- 100 MILLION LAMP LIFETIME GUARANTEED - 2-YEAR WARRANTY

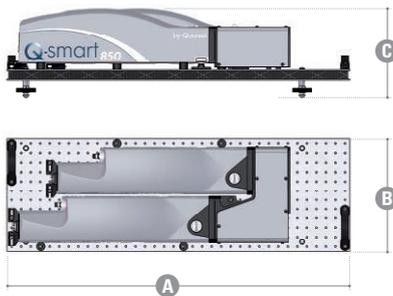
APPLICATIONS

- PIV
- LIBS
- LIF
- HOLOGRAPHY

DIMENSIONS

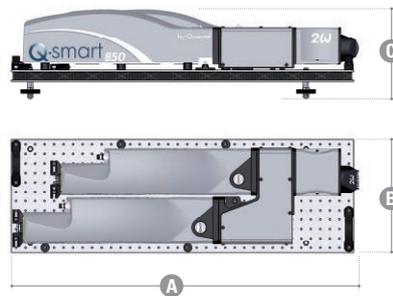
Q-smart Twins IR

- A 900 mm [35.43"]
- B 300 mm [11.81"]
- C 236.4 mm [9.29"]



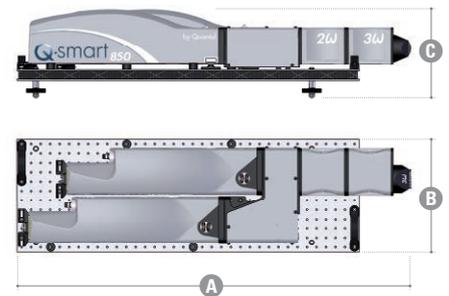
Q-smart Twins 532 nm

- A 913.5 mm [35.94"]
- B 300 mm [11.81"]
- C 236.4 mm [9.29"]

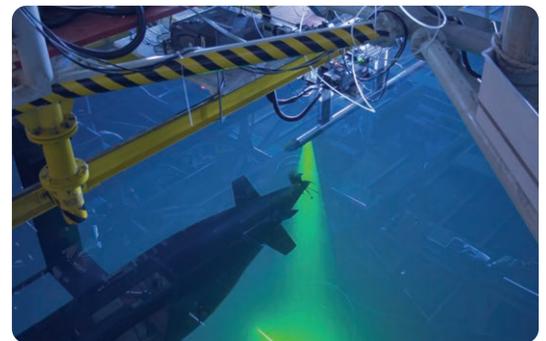


Q-smart Twins 355 nm

- A 1036.5 mm [40.78"]
- B 300 mm [11.81"]
- C 236.4 mm [9.29"]



Q-smart



SPECIFICATIONS

GREEN LASER SYSTEM

Wavelength (nm)	532	
Repetition rate (Hz)	10	
Pulsed energy (mJ)	2 x 380	400 mJ available upon request. Measured with a calibrated energymeter
Energy stability (%)	± 5 (1.7)	Peak to Peak, 100% of the shots (RMS)
Pulse duration (ns)	~ 5	
Beam diameter (mm)	9	
Divergence (mrad)	< 0.5	Full angle, at 1/e ² of the peak
Pointing stability (µrad)	< 50	Measured by Spiricon LBA FWB RMS, on 200 pulses at the focal plane of a 2-meter focus lens
Jitter (ns)	< ± 0.5	With respect to Q-Switch trigger, measured at half width at 500 accumulated shots for 99% of shots
Polarization	vertical	
Operating temperature	18-28°C	
Cable length	3m (10 feet)	
Service requirements	100-240 VAC / 50-60 Hz / Single phase	
Flashlamps lifetime	> 100 million shots	Flashlamps are guaranteed for up to 100 million shots (80% of energy) or for 2 years, whichever comes first.

BENEFIT FROM THE VERSATILITY OF THE SYSTEM: SWITCH FROM IR TO UV BY PLUGGING HARMONIC GENERATORS

IR TO UV GREEN LASER SYSTEM

Wavelength (nm)	1064	532	355	266	213
Energy (mJ)	2 x 730	2 x 380	2 x 200	2 x 90	on request
Polarization	cross-polarized	vertical	horizontal	horizontal	vertical

OPTIONS

• SLM option (Single Longitudinal Mode)

Q-smart SLM exclusive design makes it the most compact system available on the market. It results in a beam with reduced spectral linewidth (0.005 cm⁻¹) and increased coherence length, properties critical for applications such as OPO and dye laser pumping, Doppler LIDAR and holography.

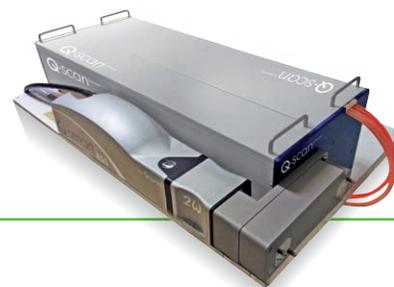
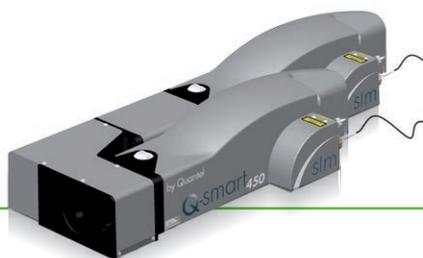
• High Energy configuration at 532 nm for specific applications such as PIV

• Harmonic generators

Plug and play harmonics can be mounted easily onto the combining module to switch from IR to 532 or UV. Automatic phase-matching can be launched on the Q-touch or computer software.

• Most compact LIF/PIV combination

Designed to be versatile and configured in single or double pulse configuration, combined laser head can be used independently for dye laser pumping. Its superior beam quality allows for maximum conversion efficiency in dye laser pumping.



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

