

Nanosecond Tunable Dye Laser



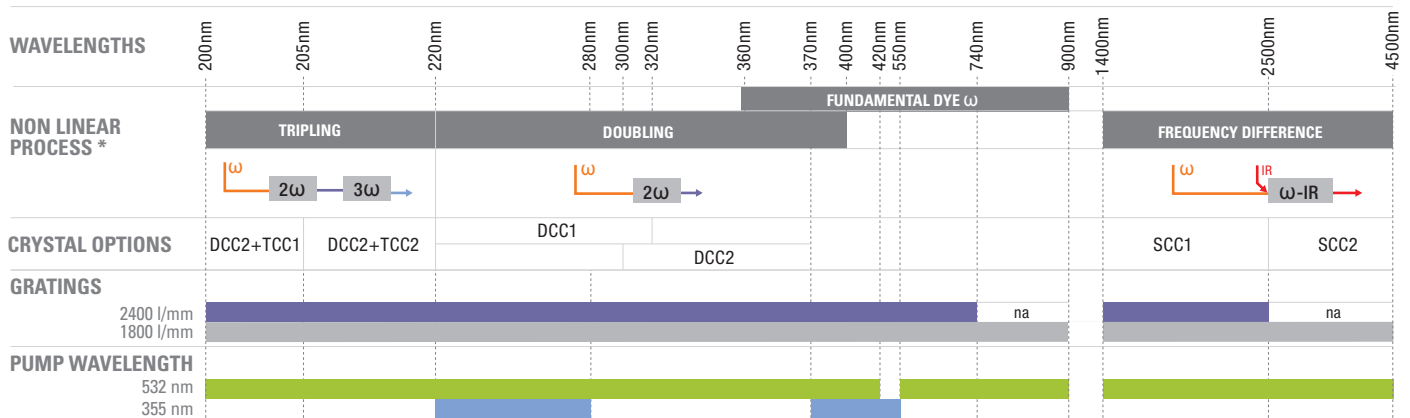
MAIN FEATURES

- **SCAN OVER A WIDE SPECTRAL RANGE: 200-4500 nm**
 - No gap in dye tuning range: easy grating exchange
- **EXTREME WAVELENGTH ACCURACY, REPRODUCIBILITY AND LINEARITY:**
 - Ultra high precision mechanics
- **USER FRIENDLY**
 - Quick dye change: plug and play dye cells
 - Easy scan with integrated look-up table for non linear crystals
 - Integrated beam deviation compensator
- **HIGH EFFICIENCY-EXCELLENT BEAM QUALITY**
- **FULLY INTEGRATED SYSTEM WITH Nd:YAG PUMP LASERS:**
 - Easy access to every Nd:YAG wavelengths
 - Benefits from Q-smart unique features
- **COMPACT AND PORTABLE**

APPLICATIONS

- HIGH RESOLUTION SPECTROSCOPY
- COMBUSTION
- LIF
- CARS
- LIDAR
- LIBS
- PHOTOLYSIS
- ETC.

WIDE TUNABILITY

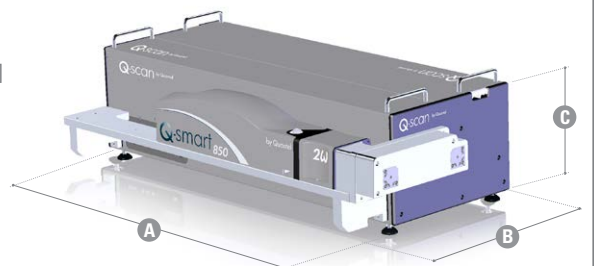


* Mixing options are also available on request

DIMENSIONS

Q-scan / Q-smart 850

- A 1150 mm [45.27"]
- B 650 mm [25.59"]
- C 300 mm [11.81"]



Q-scan

ENERGY SPECIFICATIONS

OUTPUT WAVELENGTH	ENERGY (mJ) WITH			PROCESS	TYPE OF DYE
	430 mJ @ 532 nm 230 mJ @ 355 nm (Q-smart 850 10 Hz)	600 mJ @ 532 nm 280 mJ @ 355 nm (YG981C 10 Hz)	820 mJ @ 532 nm 490 mJ @ 355 nm (YG981E 10 Hz)		
205 nm	4.5	6	10	Frequency tripling of 615 nm	Rh 640 + Rh 610
226 nm	5	7	9	Frequency doubling of 574 nm then mixing with 1064 nm	Rh 590
281 nm	25	40	50	Frequency doubling of 562 nm	Rh 590
390 nm	20	30	40	Sum frequency mixing of 615 nm with residual 1064 nm	Rh 640 + Rh 610
	30	40	60	Fundamental dye @390 nm	Exalite
562 nm	100	150	200	Fundamental dye @ 562 nm	Rh 590
632 nm	100	150	200	Fundamental dye @ 632 nm	DCM
2000 nm	6	9	11	Frequency difference of fundamental dye @695 nm and residual 1064 nm	LDS 698
2700 nm	2	3	4	Frequency difference of fundamental dye @763 nm and residual 1064 nm	LDS 751
4500 nm	0.5	1	1.5	Frequency difference of fundamental dye @860 nm and residual 1064 nm	LDS 867

Energies with standard linewidth and built-in beam deviation compensator

GENERAL SPECIFICATIONS

Pulse duration (ns)	4 - 5	FWHM with Q-smart 850
	8 - 10	FWHM with YG980 series
Beam divergence (mrad)	0.5	full angle at $1/e^2$ of the peak
Beam diameter (mm)	≤ 6	depends on pump laser
Beam pointing stability (μrad)	< 50	on 200 shots
Polarization (%)	98	vertical, in fundamental
Absolute Accuracy (nm)	< 0.01	
Wavelength reproducibility (nm)	< 0.005	
Scan linearity (nm)	< 0.002	
Thermal stability (nm/C°)	0.001	
ASE (%)	< 0.5	at the peak

LINEWIDTH SPECIFICATIONS

1800 l / mm	355-900 nm	< 0.06 cm ⁻¹ at 620 nm
2400 l / mm	355-740 nm	< 0.06 cm ⁻¹ at 570 nm

Dual grating option available for narrower linewidth

SERVICE REQUIREMENTS

Power	110V 6A /240V • 3A • 50/60 Hz • Single phase
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Many options and configurations are available. Please contact Quantel to find the best match for your needs and compatibility between options.

