

Nanosecond Tunable Dye Laser

MAIN FEATURES

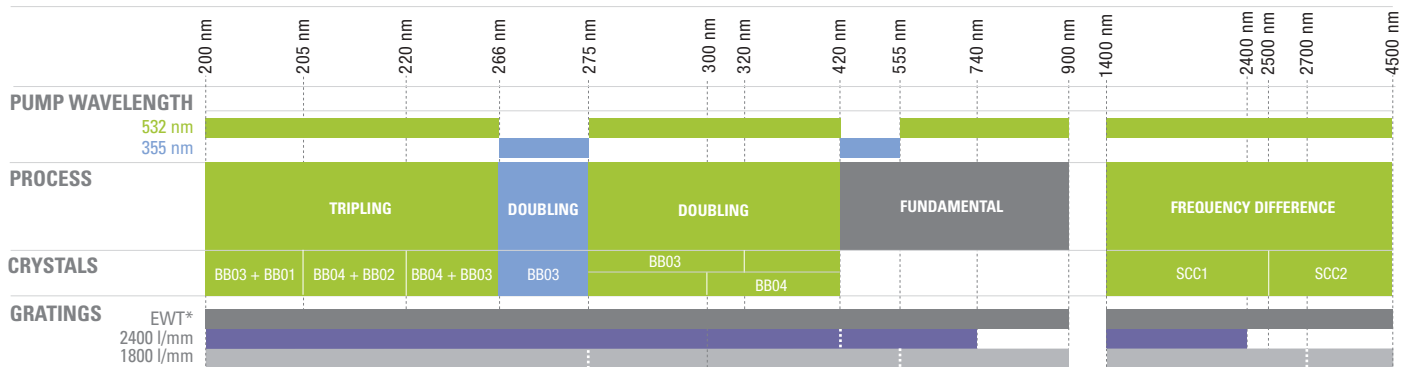
- **SCAN OVER A WIDE SPECTRAL RANGE: 200-4500 nm**
 - No gap in dye tuning range: easy grating exchange
- **EXTREME WAVELENGTH ACCURACY, REPRODUCIBILITY AND LINEARITY**
 - Ultra high precision mechanics
- **USER FRIENDLY**
 - Quick dye change: plug and play dye cells
 - Easy scan with integrated look-up table for non linear crystals
 - Integrated beam deviation compensator and residual beam dumping
- **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**



APPLICATIONS

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

WIDE TUNABILITY

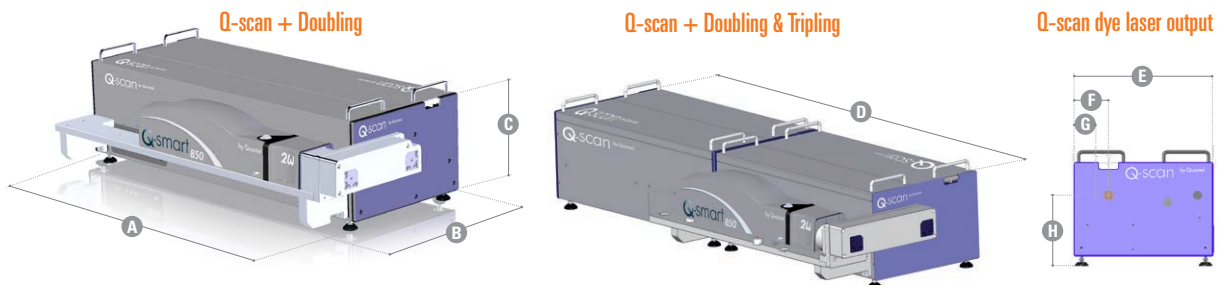


* Enhanced Wavelength Tunability

DIMENSIONS

Q-scan / Q-smart 850

- A 1150 mm [45.27"]
- B 600 mm [23.62"]
- C 300 mm [11.81"]
- D 1600 mm [62.99"]
- E 400 mm [15.75"]
- F 100 mm [3.94"]
- G 60 mm [2.36"]
- H 203 mm [7.99"]



Q-scan

ENERGY SPECIFICATIONS

OUTPUT WAVELENGTH	OUTPUT ENERGY (mJ) WITH			PROCESS	TYPE OF DYE
	Q-smart 850 10 Hz	Q-smart 1200 10 Hz	Q-smart 1500 10 Hz		
205 nm	4.5	7	10	Frequency tripling of 615 nm	Rh 640 + Rh 610
226 nm	5	6.5	9	Frequency tripling of 678 nm	DCM + LDS 698
230 nm	3.5	4.5	7	Frequency tripling of 690 nm	LDS 698
270 nm	4	4.5	9	Frequency tripling of 540 nm	Coumarin 540A
282 nm	25	35	50	Frequency doubling of 564 nm	Rh 590
361 nm	17	23	32	Frequency doubling of 722 nm	LDS 722
390 nm	11	16	22	Frequency doubling of 780 nm	LDS 798
540 nm	30	36	60	Fundamental dye @ 540 nm	Coumarin 540A
565 nm	110	150	210	Fundamental dye @ 565 nm	Rh 590
627 nm	110	150	210	Fundamental dye @ 627 nm	DCM

Energies with standard linewidth and built-in beam deviation compensator

GENERAL SPECIFICATIONS

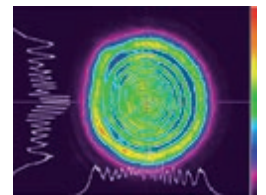
Pulse duration (ns)	4 - 5	FWHM
Beam divergence (mrad)	0.5	full angle at 1/e ² of the peak
Beam diameter (mm)	≤ 6	depends on pump laser
Beam pointing stability (μrad)	< 50	on 200 shots
Polarization (%)	98	vertical, in fundamental
Absolute Accuracy (nm)	< 0.01	
Wavelength reproducibility (nm)	< 0.005	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

LINewidth SPECIFICATIONS

1800 l / mm	420-900 nm	< 0.06 cm ⁻¹ at 620 nm
2400 l / mm	420-740 nm	< 0.06 cm ⁻¹ at 570 nm

Dual grating option available for narrower linewidth

Near Field @ 562 nm



SERVICE REQUIREMENTS

Power	110V 6A /240V • 3A • 50/60 Hz • Single phase
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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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