527DQE-S

Scientific Q-Switched Green Nd:YLF Laser

Proven in a variety of complex applications worldwide, our frequency doubled Nd:YLF Laser continues to be a success story at Quantronix. The Model 527DQE-S provides superior beam quality and offers variable repetition rates for added system flexibility.

The 527DQE-S incorporates an intracavity double-pass SHG (Second Harmonic Generation) configuration, resulting in superior conversion efficiency from Infrared to Green wavelengths. The result is the highest average output power available on the market which translates to optimum performance.

Another area of success is pumping high power Ti:Sapphire amplifiers. The superior beam quality of the 527DQE-S results in excellent efficiency and high output energy when pumping a Ti:Sapphire Amplifier. We achieve over 3.0 mJ of output energy when the Model 527DQE-S is used to pump our *Titan* Ti:Sapphire Amplifiers.

The 527DQE-S incorporates a First Pulse Suppression (FPS) feature into the power supply cooler/laser controller unit. The FPS feature controls the amplitude of the initial Q-Switched pulse thus eliminating possible damage to the optical components and resulting in a more reliable laser system.

This laser also serves as a powerful pump source for the Quantronix Proteus, our tunable narrow line-width Ti:Sapphire/UV laser, which provides tunable visible and UV output.

Features:

- Average output power of more than 35 W
- Kilohertz pulse repetition rates
- Outstanding beam-pointing stability
- Uniform multimode beam profile
- Optional TEM_{00} and Low-order mode operation
- Intracavity frequency conversion for high output power and long term reliability
- Upgradeable to 351 nm and/or 263 nm operation
- Low-profile Power Supply Cooler/Laser Controller unit that includes:
  - Front panel controls and diagnostics
  - *Laser Commander*™ Windows™ based control software
  - RS-232 computer interface
  - Optional Remote Control
  - First pulse suppression feature to control initial pulse amplitude

Applications:

- Ideal pump source for Regenerative and Multipass Ti:Sapphire Amplifiers
- Ideal pump source for narrow line-width tunable Ti:Sapphire/UV laser systems
- Spectroscopy/Micro-spectroscopy
- LIDAR Spectroscopy
- CARS Spectroscopy
- Multi-Photon Interactions
- Plasma creation for Mass Spectral Analysis

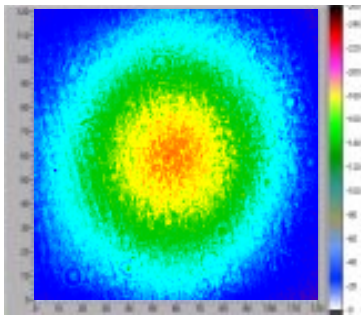

Figure 1. Typical 527 DQE-S Multimode Beam Profile

QUANTRONIX

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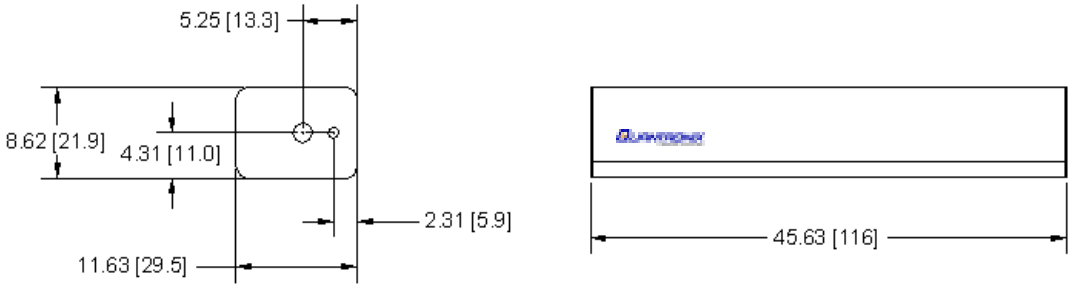
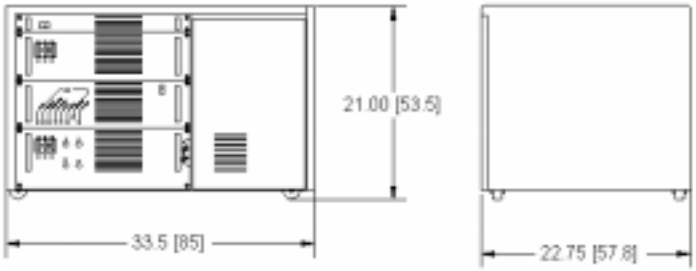
527DQE-S Series Performance Specifications

Transverse Mode		*Multimode*			
Repetition Rate	**(kHz)**	**0.5**	**1**	**2**	**3**
Average Output Power	(W)	15	25	35	35
Power Instability, RMS	(%)	2	2	2	2
Energy/Pulse	(mJ)	30	25	18	12
Pulsewidth, Typical	(ns)	120	150	200	230
Beam Pointing Stability	(μrad)	30	30	30	30
Beam Diameter, at Beam Waist	(mm)	3	3	3	3
Beam Divergence	(mrad)	5	5	5	5

LASER DIMENSIONS (inches [cm])



Power Supply Cooler/Laser Controller Unit (inches [cm])



Electrical Utilities	
Power	3 phase with ground
Frequency	50/60 Hz
Voltage	200 to 220 VAC
Current	50 A/Phase
Water Utilities	
Inlet temperature	7 to 18°C (45 to 65°F)
Pressure	1 to 7 kg/cm^2 (15 to 100 psi)
Flow rate	16 to 24 l/min (4 to 6 gpm)

B R O A D E N your Spectrum of choices, call Quantronix today.

CORPORATE

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