DTL-399QT

3-wavelength, Diode-pumped, Solid-state, Q-switched Laser





FEATURES

- IR, VIS and UV laser light from one source
- Simultaneous pulses at 1053 nm, 527 nm and 351 nm
- High beam quality, TEM₀₀
- Low jitter for critical timing applications
- Pulse repetition rate: 0 100 kHz
- PC control through RC-232 interface
- CDRH-compliant configuration
- Long-term reliability
- Compact design
- RoHS compliance



YOUR BENEFITS

- Cost effectiveness 3-in-1 laser for the price of 1
- Choice of repetition rate, and correspondingly pulse energy and pulse width
- Possibility to separate the required wavelength with external optics
- Numerous usage modes



APPLICATIONS

- Various types of spectroscopy
- Hi-tech R&D
- Materials testing / processing
- Light detection
- Non-contact inspection

The DTL-399QT is a pulsed, diode-pumped, solid-state laser with output at 3 wavelengths - in IR, visible (green) and UV spectrum ranges. The laser emits simultaneous pulses at 1053 nm, 527 nm and 351 nm in one beam with the same direction.

It is convenient multiwavelength source of laser light that suits numerous scientific applications, including various types of spectroscopy, light detection, and materials testing / processing.

The laser has flexible PC control through RS-232 interface. Customers can change the pulse repetition rate from single pulses to 100 kHz. Changing the pulse rate enables different pulse durations.

Typical performance data are given in the graphs (please see the other side).

It is also possible to use the laser without PC or external generator - the laser works with internal triggering at 1 kHz.

The DTL-399QT is actively Q-switched; it delivers more than 1000 mW of 1053 nm, more than 100 mW of 527 nm and more than 100 mW of 351 nm.

If necessary, the customer can separate one or two required wavelengths with external optics.

The availability of 3 wavelengths and the possibility of usage different pulse energies and pulse widths by changing the pulse rate, allow selecting of the best mode for the appication. The DTL-399QT combines three lasers in one for those users who want to try different pulse energies and pulse widths at different wavelengths, avoiding the extra money spending.

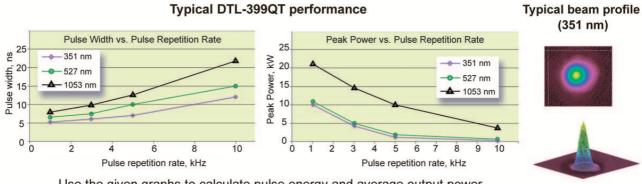
The very attractive price, which is lower than the price of standard one-wavelength laser, and long-term reliability make the DTL-399QT extremely cost-effective and multipurpose solution.



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Specifications ¹			DTL-399QT	
Wavelength	351 nm	527 nm	1053 nm	
Pulse Energy @ 1 kHz	> 50 µJ	> 50 µJ	> 100 μJ	
Average Output Power, mW	> 100 @ 3 kHz	> 100 @ 4 kHz	> 1000 @ upper 50 kHz	
Pulse Repetition Rate:				
external triggering	Single shot to 30 kHz	Single shot to 50 kHz	Single shot to 100 kHz	
internal triggering	0.01 - 30 kHz	0.01 - 30 kHz	0.01 - 30 kHz	
Pulse Width:				
@ 1 kHz	< 6 ns	< 7 ns	< 10 ns	
@ 5 kHz	< 8 ns	< 11 ns	< 14 ns	
@ 30 kHz	< 30 ns	< 40 ns	< 70 ns	
Jitter (Laser Pulse to Sync Out)		< <u>+</u> 1 ns		
Beam Mode	TEM ₀₀			
Beam Diameter (1/e², at output aperture)	1.05 ± 0.15 mm	1.3 ± 0.2 mm	1.75 <u>+</u> 0.25 mm	
Beam Divergence (full angle, 1/e²)	0.55 ± 0.08 mrad	1.3 ± 0.2 mrad	2.5 ± 0.4 mrad	
Polarization	>100:1, vertical	>50:1, horizontal	>50:1, vertical	
Warm-Up Time	< 10 min			
Operating Voltage				
with AC/DC adapter	90 to 264 VAC			
without AC/DC adapter	12 ± 10% VDC			
Operating Temperature	15 - 35°C (<80% relative humidity, non-condensing)			
Dimensions				
Laser Head	301 x 90 x 55 mm			
Power Supply	150 x 43 x 93 (x 115 with key) mm			

^{1.} Specifications are subject to change without notice



Use the given graphs to calculate pulse energy and average output power

