DPSSL Nd:YAG Micro Lasers

STANDA-Q

STANDA-Q is actively Q-switched DPSSL series delivering near transform-limited sub-nanosecond pulses at repetition rates from single shot up to 10 kHz with extremely low timing jitter (<350 ps, PtP) and single pulse energy as high as 140 µJ. STANDA-Q produce diffraction limited TEM_{00} beam with M^2<1.2, allowing excellent beam focusability.

FEATURES

- **Active Q-switch**
- **Very low timing jitter, PtP < 350 ps (optional < 200 ps)**
- **Sub-nanosecond pulses, pulse width < 900 ps**
- **TEM_{00} and SLM, spectral linewidth < 5 pm**
- **Single shot to 10 kHz, pulse energy ≥ 100 µJ**
- **Internal and External Triggering (triggering pulse rise time < 3 ns)**
- **USB Interface**
- **Monitor Photodiode**
- **Compact, small footprint**

SPECIFICATIONS

Model	STANDA-Q1	STANDA-Q10
Wavelength, nm	**1064**	
Pulse Energy, µJ	140	70
Pulse Width (FWHM), ns	1	0.9–3
Repetition Rate, Hz	1–1000	1–10000
Timing Jitter (PtP), ps	≤ 350	
Pulse to Pulse Energy Stability (RMS), %	< 3 over 5 hours	
Beam Profile	TEM_{00}	
M^2	< 1.2	
Beam Divergence (1/e², full angle), mrad	< 5	
Beam Waist Diameter (1/e²), µm	200 ± 20	
Pulse Spectral Structure	SLM	
Spectral Linewidth (FWHM), pm	< 3.7	
Polarization Ratio	> 100 : 1, horizontal	
Warm Up Time, min	< 20	
Interfaces	USB, External Trigger (TTL, rising edge)	
Operating Voltage, V AC	110–230	
Dimensions of Laser Head, mm	79 (W) × 39 (H) × 110 (L)	
Dimensions of Controller, mm	223 (W) × 94 (H) × 197 (L)	
Weight of Laser Head, g	750	
Weight of Controller, g	2750	

STANDA further refines STANDA-Q platform. Company plans to develop amplifying modules and raise the pulse repetition rates up to 100 kHz in multi longitudinal mode of operation.

STANDA kindly welcomes all interested customers to join development process.

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Manufacturer of Opto-Mechanical equipment for research, industry and education

DPSSL Nd:YAG Micro Lasers

STANDA-Q

STANDA-Q-SH STANDA-Q-TH — Second and Third Harmonic Generators

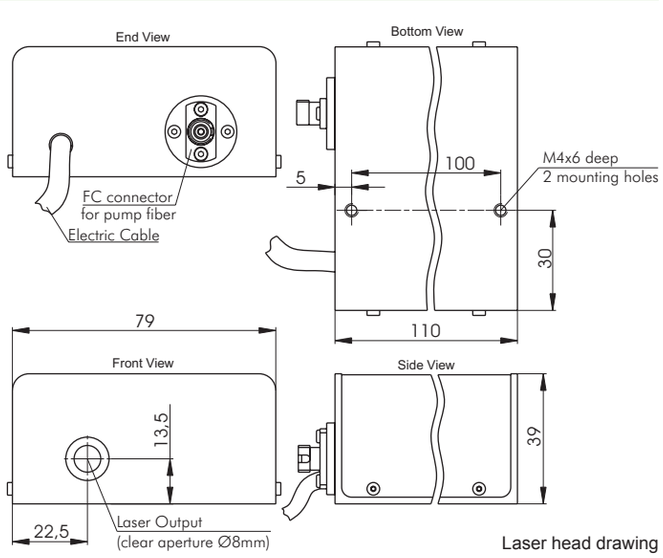
Without compromising compactness and beam quality STANDA-Q series lasers can be equipped with second and third harmonic generation crystals for nonlinear frequency conversion. STANDA can offer green and UV actively Q-switched lasers with 532 and 355 nm wavelengths accordingly.

SPECIFICATIONS

Model	STANDA-Q1-SH	STANDA-Q10-SH	STANDA-Q1-TH	STANDA-Q10-TH
Wavelength, nm	**532**		**355**	
Pulse Energy, µJ	70	35	35	18
Pulse Width (FWHM), ns	1	0.9–3	1	0.9–3
Repetition Rate, Hz	1–1000	1–10000	1–1000	1–10000
Timing Jitter (PtP), ps	≤ 350			
Pulse to Pulse Energy Stability (RMS), %	< 3 over 5 hours			
Beam Profile	TEM_{00}			
M^2	< 1.3			
Beam Divergence (1/e², full angle), mrad	< 5			
Beam Waist Diameter (1/e²), µm	200 ± 20			
Pulse Spectral Structure	SLM			
Spectral Linewidth (FWHM), pm	< 3.7			
Polarization Ratio	> 100 : 1, horizontal			
Warm Up Time, min	< 20			
Interfaces	USB, External Trigger (TTL, rising edge)			
Operating Voltage, V AC	110–230			

Controller — for STANDA-Q Lasers

The modified STA-01 controller is a convenient device for operating the STANDA-Q1 laser head. Intuitive GUI (JLV-SOFT9) allows to control and to monitor over 100 various parameters via USB or RS-232 interface. There are TTL inputs for precisely synchronized laser pulses and analog output that produces signals to trigger customer's electronics (pulse rise time ≤ 2.5 ns). The main laser parameters can be modified to better fit the customer's application. Systems providing 0.5–3 ns laser pulses (customer should specify the particular pulse width) with single pulse energy up to 0.5 mJ are available upon request.



Laser head drawing

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