FTSS 355-Q

Diode Pumped Passively Q-Switched Solid State Laser

- **355 nm**
- **Pulsed (≤ 1.4 ns)**
- **> 42µJ**
- **Up to 20 kHz**
- **External and Internal Trigger**
- **Free Beam or Fiber Coupling**
- **Single Pulse Operation**

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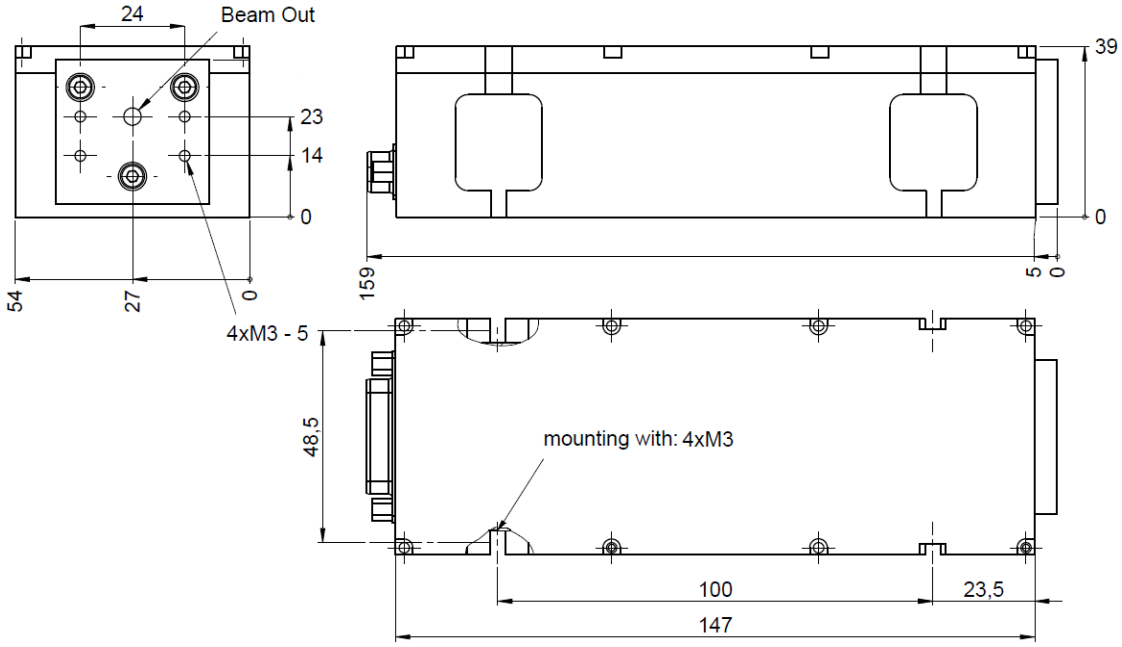
		FTSS355-Q1	FTSS355-Q2	FTSS355-Q3	FTSS355-Q4_1k
Optical Data	Wavelength	355 nm			
	Pulse Energy	> 0.3 µJ @15kHz	> 3 µJ @10kHz	> 15 µJ @1kHz	> 42 µJ @1kHz
	Peak Power	>0.27kW @15kHz	>2.7 kW @10kHz	> 13 kW @1kHz	> 30 kW @1kHz
	Pulse Repetition Rate	≤ 20 kHz	≤ 10 kHz	≤ 2.5 kHz	≤ 1 kHz
	Pulse Width, FWHM	≤ 1.1 ns	≤ 1.1 ns	≤ 1.1 ns	≤ 1.4 ns
	Polarization Ratio	> 100:1 vertical			
	Pulse Energy Drift [1]	< ± 5 %	< ± 5 %	< ± 5 %	< ± 5 %
	Pulse-To-Pulse RMS [2]	< 3% @15kHz	< 2% @10kHz	< 2% @1kHz	< 2% @1kHz
	Laser Classification	3B / IIIB	3B / IIIB	3B / IIIB	3B / IIIB
Optical Output	Spatial Mode	TEM_{00} (Main Axis Divergence Ratio < 1.3)			
	Beam Divergence, 2Θ	< 3 mrad	< 3.5 mrad	< 4 mrad	< 4 mrad
	Beam Diameter	190 ± 50 µm	200 ± 50 µm	200 ± 50 µm	300 ± 80 µm
Electrical Data	Power Consumption	15 W (max.40 W)	17 W (max.40 W)	20 W (max.70 W)	40 W (max.70 W)
	Operating Voltage	12 V DC			
	Line Voltage	90 - 265 V AC (50 – 60 Hz)			
	Marking	CE			
Interfaces	RS 232, USB				
	External Trigger (TTL, rising edge) single shot (pulse on demand) – max. repetition rate				
	Interface for TTL-control and power monitor				
Miscellaneous	Warm-up Time	< 5 min			
	Operating Temperature	18 - 38 °C			
Options	Stand-alone system (incl. key-switch, heat-sink and manual shutter; CDRH compliant)				
	Synchronization signal output (rise time < 2 ns)				
	Manual shutter or electrical beam blocker				
	External beam expander (e.g. 3x)				
	Manual or electrical attenuator on request				
	Manual or electrical driven wavelength switch 355 nm / 532 nm				
	Fiber coupling for fiber with core diameter ≥ 100 µm				
	Closed loop operation for pulse energy on request				

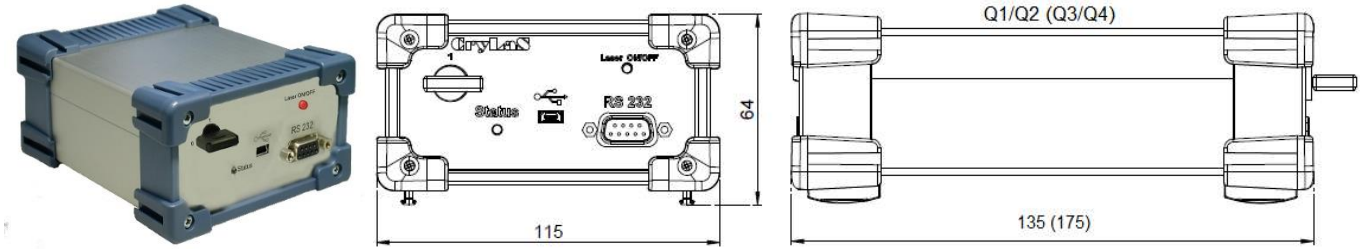
[1] Drift over 6 hours, energy averaged over 10 sec after 5 min of continuous operation, temperature variation ± 3 °C and < 3 °C/hour.
[2] RMS over 1000 pulses after 5 min of continuous operation.

Dimensions

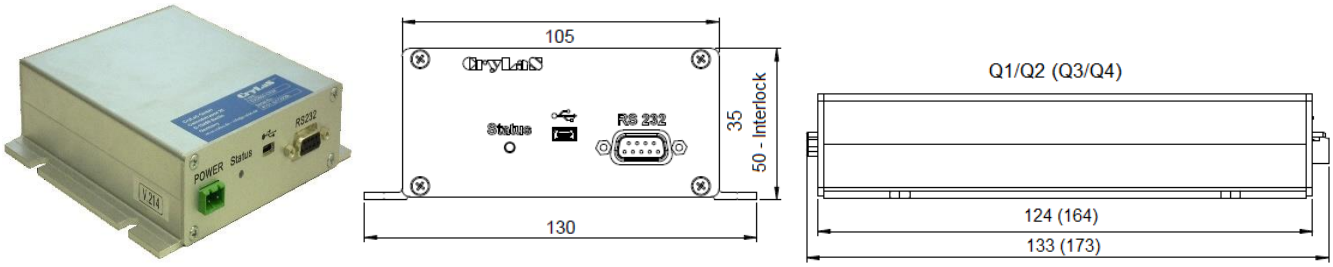
Laser Head: 159 x 54 x 39 mm



Controller Stand-Alone: Q1, Q2: 135 x 115 x 64 mm; Q3, Q4: 175 x 115 x 64 mm



Controller OEM: Q1, Q2: 133 x 130 x 35/50 mm; Q3, Q4: 173 x 130 x 35/50 mm



Laser Safety Labels

The FTSS355-Q lasers are class 3B / III b according to IEC 60825-1:2014

Q1 series Q2 series Q3 series Q4 series