

FQSS 266-Q

Diode Pumped Passively Q-Switched Solid State Laser

- 266 nm
- Pulsed (≤ 1.0 ns)
- Up to 12 μ J
- Up to 20 kHz
- External and Internal Trigger
- Free Beam
- Single Pulse Operation



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Optical Data		FQSS266-Q1	FQSS266-Q2	FQSS266-Q3	FQSS266-Q4_1k
Wavelength		266 nm			
Pulse Energy		> 0.3 μ J @15kHz	> 0.8 μ J @10kHz	> 4 μ J @1kHz	> 12 μ J @1kHz
Peak Power		> 0.3 kW @15kHz	> 0.8 kW @10kHz	> 4 kW @1kHz	> 12 kW @1kHz
Pulse Repetition Rate		≤ 20 kHz	≤ 10 kHz	≤ 2.5 kHz	≤ 1 kHz
Pulse Width, FWHM		≤ 1.0 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		4 / IV	4 / IV	4 / IV	4 / IV
Optical Output	Spatial Mode	TEM ₀₀ (Main Axis Divergence Ratio < 1.3)			TEM ₀₀ (< 1.5)
	Beam Divergence, 2 θ	< 2 mrad	< 2 mrad	< 2 mrad	< 2mrad
	Beam Diameter	800 \pm 200 μ m	800 \pm 200 μ m	600 \pm 200 μ m	600 \pm 200 μ m
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)				
	External beam expander (M = 5x)				
	Manual shutter or electrical beam blocker				
	Manual or electrical driven wavelength switch 266 / 532 nm				
	Manual or electrical attenuator				
	Closed loop operation for pulse energy on request				

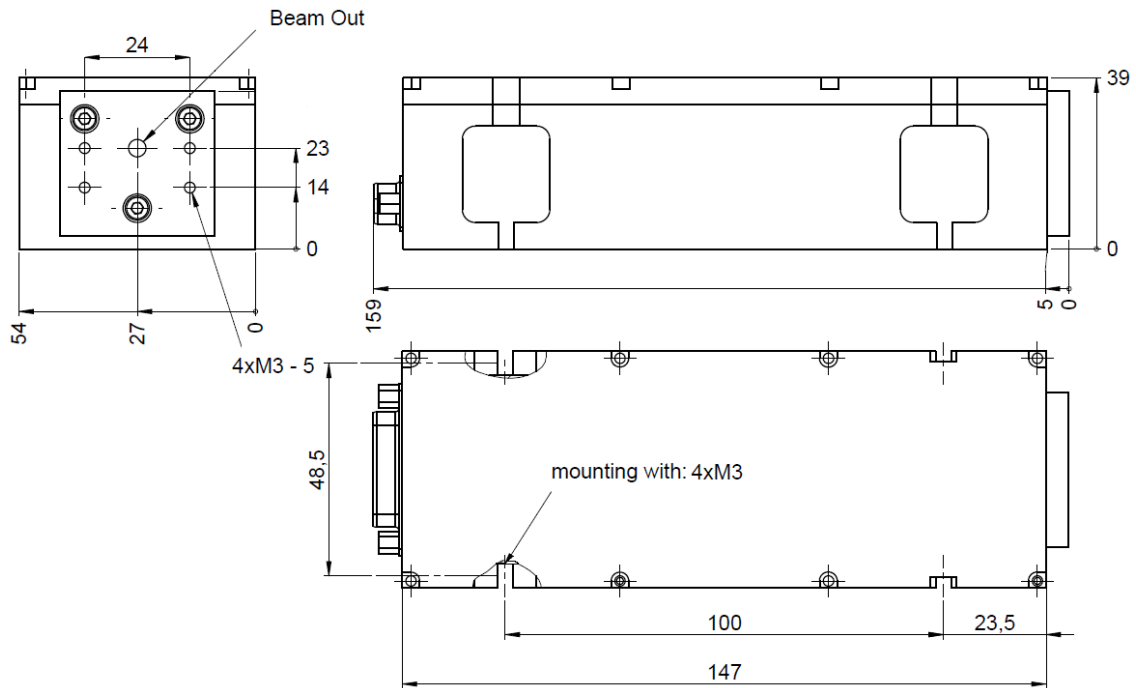
¹⁾ Drift over 6 hours, energy averaged over 10 sec after 5 min of continuous operation, temperature variation ± 3 °C and < 3 °C/hour.

²⁾ RMS over 1000 pulses after 5 min of continuous operation.

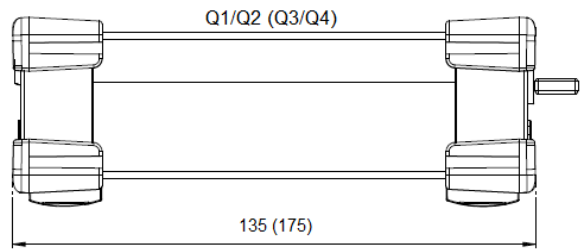
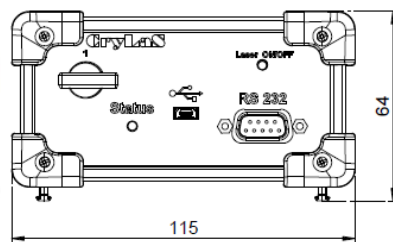
Dimensions

Laser Head:

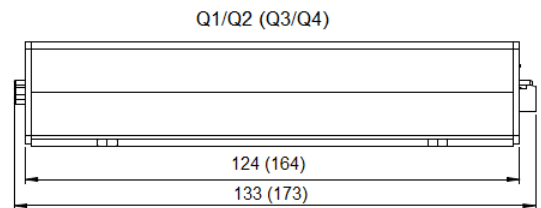
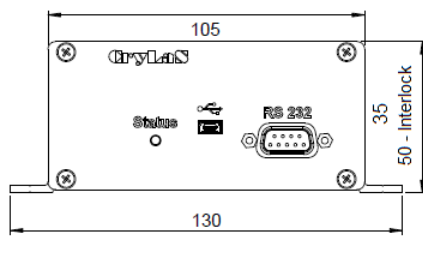
159 x 54 x 39 mm



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 Label

The FQSS266-Q lasers are class 4/ IV according to IEC 60825-1:2014

<p>wavelength: 266 nm max. output: 1 µJ pulse duration: < 1.2 ns max. repetition rate: 22 kHz</p> <p>Complies with IEC 60825-1:2014 Complies with 21CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated July 26, 2001</p>	<p>wavelength: 266 nm max. output: 2.5 µJ pulse duration: < 1.2 ns max. repetition rate: 11 kHz</p> <p>Complies with IEC 60825-1:2014 Complies with 21CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated July 26, 2001</p>	<p>wavelength: 266 nm max. output: 30 µJ pulse duration: < 1.2 ns max. repetition rate: 2.7 kHz</p> <p>Complies with IEC 60825-1:2014 Complies with 21CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated July 26, 2001</p>	<p>wavelength: 266 nm max. output: 40 µJ pulse duration: < 1.2 ns max. repetition rate: 1.2 kHz</p> <p>Complies with IEC 60825-1:2014 Complies with 21CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated July 26, 2001</p>	<p>DANGER - INVISIBLE LASER RADIATION AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION</p> <p>CLASS 4 LASER PRODUCT</p>
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Q1 series

Q2 series

Q3 series

Q4 series

