

DSS 1064-450

Diode pumped passively Q-switched solid state laser

- 1064 nm
- single pulse
- < 1.5 ns
- 1 – 100 Hz (up to 1 kHz optional)
- > 450 µJ



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Optical Data	Wavelength	1064 nm
	Spatial Mode	TEM ₀₀
	M ²	< 1.5
	Beam Divergence (full angle)	< 5.5 mrad (horizontal) < 6.5 mrad (vertical)
	Beam Ellipticity	< 2:1
	Waist Diameter	380 ± 100 µm (horizontal) 260 ± 60 µm (vertical) (located at about 110 mm inside the laser head)
	Beam Diameter	650 ± 150 µm (at laser exit)
	Peak Power	> 300 kW / > 200 kW @ 1-100 Hz
	Pulse Energy	> 450 µJ @ 1 - 100 Hz
	Pulse Repetition Rate (with external trigger)	1 - 100 Hz
	Pulse Width (FWHM)	< 1.5 ns / < 2.3 ns
	Polarization Ratio	> 100:1, vertical
	Long term pulse energy stability (6 hrs)	< ± 6 %
	Laser Classification	3B / IIIb
Optical Output	Free Beam	
Electrical Data	Electrical Power Consumption	< 70 W
	Line Voltage	90 - 265 V AC (50-60 Hz) or 24 V DC
Interface	RS 232, USB	
Miscellaneous	Warm-up Time	< 10 min
	Operating Temperature	18 - 38 °C
	Laser Head Size	217 x 65 x 45 mm ³ (core dimensions)
Options	Fiber coupling for fiber with core diameter ≥ 100 µm	
	Synchronization signal output (rise time < 2 ns)	
	Electrical driven shutter	
	Upgrade up to 1 kHz repetition rate (Parameters on request)	

FDSS 532-150

Diode pumped passively Q-switched solid state laser

- 532 nm
- single pulse
- < 1.2 ns
- 1 – 100 Hz (up to 1 kHz optional)
- > 150 µJ



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Optical Data	Wavelength	532 nm
	Spatial Mode	TEM ₀₀
	M ²	< 1.5
	Beam Divergence (full angle)	< 4.5 mrad (horizontal) < 5.5 mrad (vertical)
	Beam Ellipticity	< 2:1
	Waist Diameter	280 ± 80 µm (horizontal) 200 ± 60 µm (vertical) (located at about 110 mm inside the laser head)
	Beam Diameter	500 ± 150 µm (at laser exit)
	Peak Power	> 120 kW @ 1 - 100 Hz
	Pulse Energy	> 150 µJ @ 1 - 100 Hz
	Pulse Repetition Rate (with external trigger)	1 - 100 Hz
	Pulse Width (FWHM)	< 1.2 ns
	Polarization Ratio	> 100:1, vertical
	Long term pulse energy stability (6 hrs)	< ± 8 %
	Laser Classification	3B / IIIb
Optical Output	Free Beam	
Electrical Data	Electrical Power Consumption	< 70 W
	Line Voltage	90 - 265 V AC (50-60 Hz) or 24 V DC
Interface	RS 232, USB	
Miscellaneous	Warm-up Time	< 10 min
	Operating Temperature	18 - 38 °C
	Laser Head Size	217 x 65 x 45 mm ³ (core dimensions)
Options	Fiber coupling for fiber with core diameter ≥ 100 µm	
	Manual switch from 532 nm to 1064 nm	
	Synchronization signal output (rise time < 2 ns)	
	Electrical driven shutter or wavelength switch	
		Upgrade up to 1 kHz repetition rate (Parameters on request)

FTSS 355-50

Diode pumped passively Q-switched solid state laser

- 355 nm
- single pulse
- < 1 ns
- 1 – 100 Hz (up to 1 kHz optional)
- > 70 μ J



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Optical Data	Wavelength	355 nm
	Spatial Mode	TEM ₀₀
	M ²	< 1.5
	Beam Divergence (full angle)	< 2.6 mrad (horizontal) < 3.5 mrad (vertical)
	Beam Ellipticity	< 2:1
	Waist Diameter	280 ± 80 μ m (horizontal) 200 ± 60 μ m (vertical) (located at about 110 mm inside the laser head)
	Beam Diameter	450 ± 150 μ m (at laser exit)
	Peak Power	> 70 kW @ 1 - 100 Hz
	Pulse Energy	> 70 μ J @ 1 - 100 Hz
	Pulse Repetition Rate (with external trigger)	1 - 100 Hz
	Pulse Width (FWHM)	≤ 1.0 ns
	Polarization Ratio	> 100:1, vertical
	Long term pulse energy stability (6 hrs)	< ± 3 %
	Laser Classification	3B / IIIb
Residual 532 nm Emission	< 0.05 %	
Optical Output	Free Beam	
Electrical Data	Electrical Power Consumption	< 70 W
	Line Voltage	90 - 265 V AC (50-60 Hz) or 24 V DC
Interface	RS 232, USB	
Miscellaneous	Warm-up Time	< 10 min
	Operating Temperature	18 - 38 °C
	Laser Head Size	217 x 65 x 45 mm ³ (core dimensions)
Options	Fiber coupling for fiber with core diameter ≥ 100 μ m	
	Manual switch from 355 nm to 532 nm	
	Synchronization signal output (rise time < 2 ns)	
	Electrical driven shutter or wavelength switch	
Upgrade up to 1 kHz repetition rate (Parameters on request)		

FQSS 266-50

Diode pumped passively Q-switched solid state laser

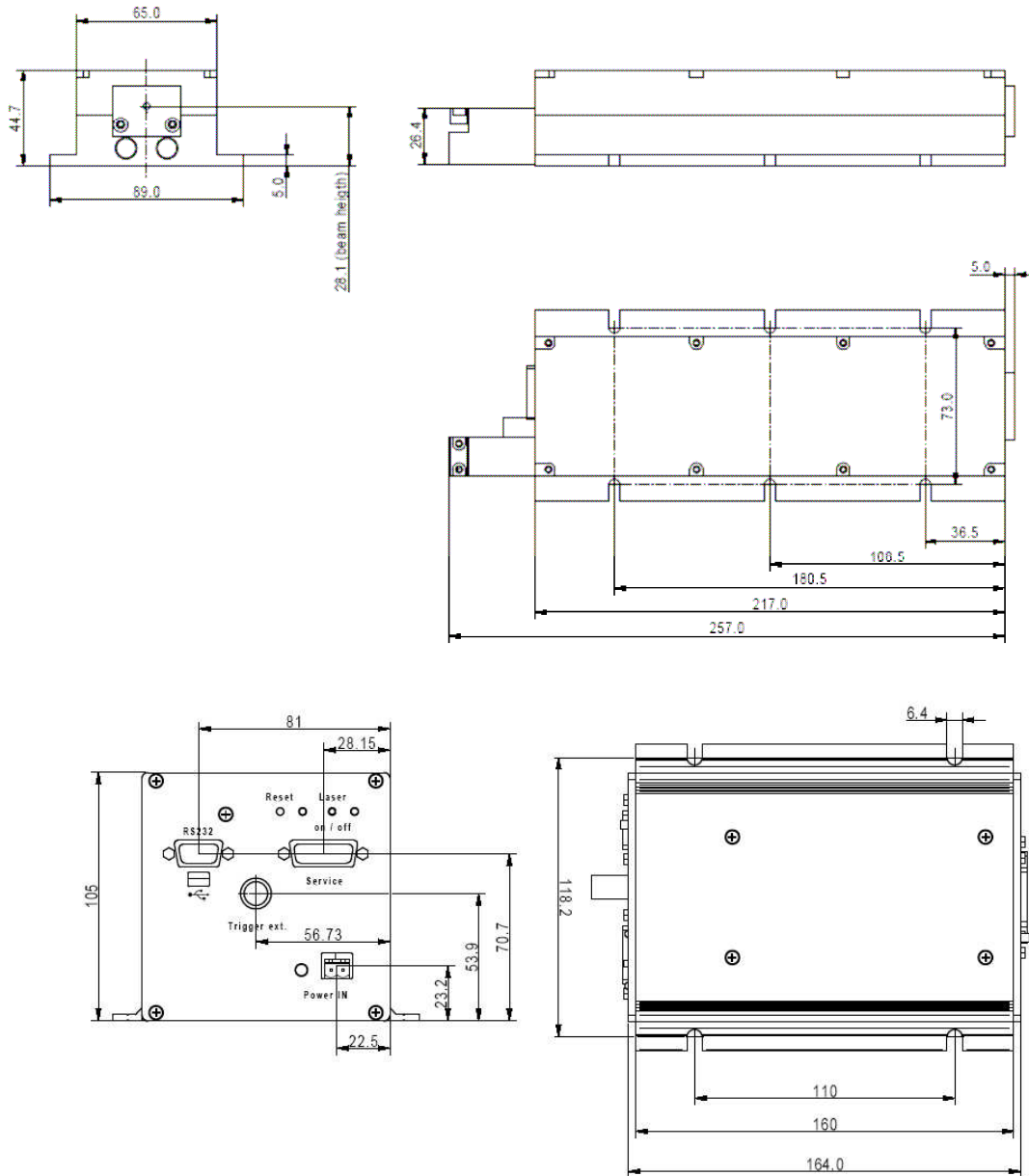
- 266 nm
- single pulse
- < 1 ns
- 1 – 100 Hz (up to 1 kHz optional)
- > 60 μJ



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Optical Data	Wavelength	266 nm
	Spatial Mode	TEM ₀₀
	M ²	< 1.3
	Beam Divergence (full angle)	< 0.6 ± 0.2 mrad
	Beam Ellipticity	< 1.5:1
	Waist Diameter	500 ± 150 μm (located at about 110 mm inside the laser head)
	Beam Diameter	500 ± 100 μm (at laser exit)
	Peak Power	> 60 kW @ 1 - 100 Hz
	Pulse Energy	> 60 μJ @ 1 - 100 Hz
	Pulse Repetition Rate (with external trigger)	1 - 100 Hz
	Pulse Width (FWHM)	≤ 1.0 ns
	Polarization Ratio	> 100:1, vertical
	Long term pulse energy stability (6 hrs)	< ± 3 %
	Laser Classification	4 / IV
Residual 532 nm Emission	< 0.5 %	
Optical Output	Free Beam	
Electrical Data	Electrical Power Consumption	< 70 W
	Line Voltage	90 - 265 V AC (50-60 Hz) or 24 V DC
Interface	RS 232, USB	
Miscellaneous	Warm-up Time	< 15 min
	Operating Temperature	18 - 38 °C
	Laser Head Size	217 x 65 x 45 mm ³ (core dimensions)
Options	Fiber coupling for fiber with core diameter ≥ 100 μm	
	Manual switch from 266 nm to 532 nm	
	Synchronization signal output (rise time < 2 ns)	
	Electrical driven shutter or wavelength switch	
	Upgrade up to 1 kHz repetition rate (Parameters on request)	

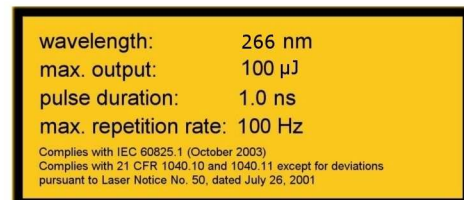
Laser Head and Controller



Front and top view of OEM-laser controller

Laser Safety Labels

The FQSS266-50 lasers are class 4 according to IEC 60825-1.



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