

# DSS 1064-3000

Diode pumped passively Q-switched solid state laser

- 1064 nm
- single pulse
- < 2 ns
- 1 – 80 Hz
- > 2500 µJ



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<b>Optical Data</b>	Wavelength	1064 nm
	Beam Divergence (full angle)	< 9 mrad
	Beam Ellipticity	< 2:1
	Waist Diameter	600 ± 150 µm (located at about 110 mm inside the laser head)
	Beam Diameter	1.2 ± 0.4 mm (at laser exit)
	Peak Power	> 1250 kW @ 20 Hz
	Pulse Energy	> 2500 µJ @ 20 Hz
	Pulse Repetition Rate (with external trigger)	1 - 80 Hz
	Pulse Width (FWHM)	< 2 ns
	Polarization Ratio	> 50:1, vertical
	Long term pulse energy stability (6 hrs)	< ± 6 %
	Laser Classification	3B / IIIb
<b>Optical Output</b>	Free Beam	
<b>Electrical Data</b>	Electrical Power Consumption	< 150 W
	Line Voltage	90 - 265 V AC (50-60 Hz) or 24 V DC
<b>Interface</b>	RS 232 (USB on request)	
<b>Miscellaneous</b>	Warm-up Time	< 10 min
	Operating Temperature	18 - 38 °C
	Laser Head Size	217 x 65 x 45 mm <sup>3</sup> (core dimensions)
<b>Options</b>	SMA-connector for fiber with core diameter ≥ 400 µm	
	Synchronization signal output (rise time < 2 ns)	
	Electrical driven shutter	

# FDSS 532-1000

Diode pumped passively Q-switched solid state laser

- 532 nm
- single pulse
- < 1.7 ns
- 1 – 80 Hz
- > 1000 µJ



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<b>Optical Data</b>	Wavelength	532 nm
	Spatial Mode	TEM <sub>00</sub>
	M <sup>2</sup>	< 1.5
	Beam Divergence (full angle)	< 6.5 mrad
	Beam Ellipticity	< 2:1
	Waist Diameter	500 ± 150 µm (located at about 110mm inside the laser head)
	Beam Diameter	1.0 ± 0.3 mm (at laser exit)
	Peak Power	> 500 kW @ 20 Hz
	Pulse Energy	> 1000 µJ @ 20 Hz
	Pulse Repetition Rate (with external trigger)	1 - 80 Hz
	Pulse Width (FWHM)	< 1.7 ns
	Polarization Ratio	> 100:1, vertical
	Long term pulse energy stability (6 hrs)	< ± 8 %
Laser Classification	3B / IIIb	
<b>Optical Output</b>	Free Beam	
<b>Electrical Data</b>	Electrical Power Consumption	< 150 W
	Line Voltage	90 - 265 V AC (50-60 Hz) or 24 V DC
<b>Interface</b>	RS 232 (USB on request)	
<b>Miscellaneous</b>	Warm-up Time	< 10 min
	Operating Temperature	20 - 40 °C
	Laser Head Size	217 x 65 x 45 mm (core dimensions)
<b>Options</b>	SMA-connector for fiber with core diameter ≥ 400 µm	
	Synchronization signal output (rise time < 2 ns)	
	Electrical driven shutter	

# FDSS 355-300

Diode pumped passively Q-switched solid state laser

- 355 nm
- single pulse
- < 1.5 ns
- 1 – 80 Hz
- > 300 µJ



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<b>Optical Data</b>	Wavelength	355 nm
	Beam Divergence (full angle)	< 2.5 mrad
	Beam Ellipticity	< 2:1
	Waist Diameter	500 ± 150 µm (located at about 110 mm inside the laser head)
	Beam Diameter	0.8 ± 0.3 mm (at laser exit)
	Peak Power	> 200 kW @ 20 Hz
	Pulse Energy	> 300 µJ @ 20 Hz
	Pulse Repetition Rate (with external trigger)	1 - 80 Hz
	Pulse Width (FWHM)	< 1.5 ns
	Polarization Ratio	> 100:1, vertical
	Long term pulse energy stability (6 hrs)	< ± 8 %
	Laser Classification	3B / IIIb
<b>Optical Output</b>	Free Beam	
<b>Electrical Data</b>	Electrical Power Consumption	< 150 W
	Line Voltage	90 - 265 V AC (50-60 Hz) or 24 V DC
<b>Interface</b>	RS 232 (USB on request)	
<b>Miscellaneous</b>	Warm-up Time	< 10 min
	Operating Temperature	18 - 38 °C
	Laser Head Size	217 x 65 x 45 mm <sup>3</sup> (core dimensions)
<b>Options</b>	SMA-connector for fiber with core diameter ≥ 400 µm	
	Synchronization signal output (rise time < 2 ns)	
	Electrical driven shutter	
	Heat sink with fan (recommended for repetition rates > 50 Hz)	

# FQSS 266-200

Diode pumped passively Q-switched solid state laser

- 266 nm
- single pulse
- < 1.5 ns
- 1 – 60 Hz
- > 200 µJ

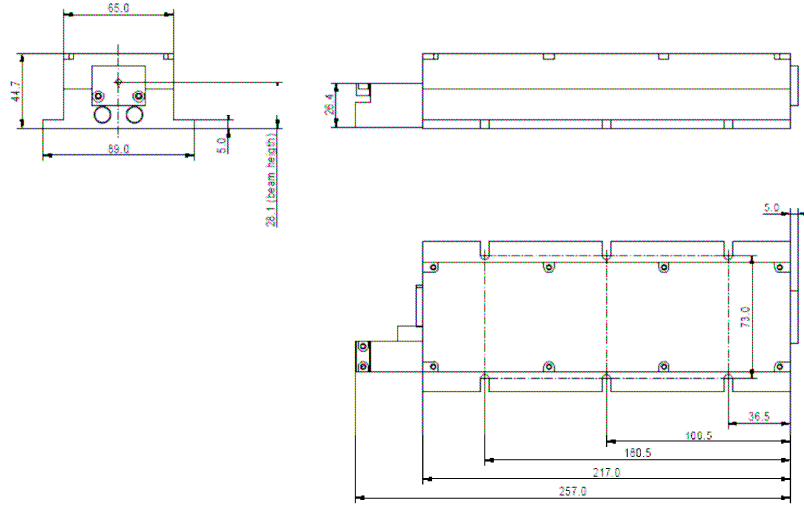


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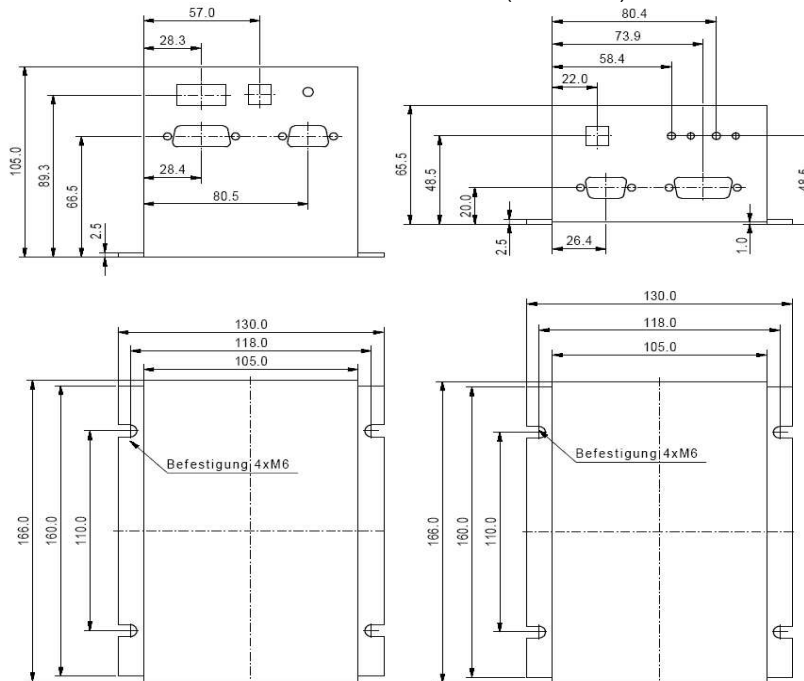
<b>Optical Data</b>	Wavelength	266 nm
	Beam Divergence (full angle)	< 3.0 mrad
	Beam Ellipticity	< 2:1
	Waist Diameter	500 ± 150 µm (located at about 110mm inside the laser head)
	Beam Diameter	0.8 ± 0.3 mm (at laser exit)
	Peak Power	> 130 kW @ 20 Hz
	Pulse Energy	> 200 µJ @ 20 Hz
	Pulse Repetition Rate (with external trigger)	1 - 60 Hz
	Pulse Width (FWHM)	< 1.5 ns
	Polarization Ratio	> 100:1, vertical
	Long term pulse energy stability (6 hrs)	< ± 8 %
Laser Classification	4 / IV	
<b>Optical Output</b>	Free Beam	
<b>Electrical Data</b>	Electrical Power Consumption	< 150 W
	Line Voltage	90 - 265 V AC (50-60 Hz) or 24 V DC
<b>Interface</b>	RS 232 (USB on request)	
<b>Miscellaneous</b>	Warm-up Time	< 10 min
	Operating Temperature	22 - 32 °C
	Laser Head Size	217 x 65 x 45 mm (core dimensions)
<b>Options</b>	Synchronization signal output (rise time < 2 ns)	
	Electrical driven shutter	
	Heat sink with fan (recommended for repetition rates > 20 Hz)	

## Laser Head and Controller

Laser head (schematic)



Laser booster and controller (schematic)



## Laser Safety Labels

The FQSS266-200 lasers are class 4 according to IEC 60825-1

