

CRYSTAL SERIES

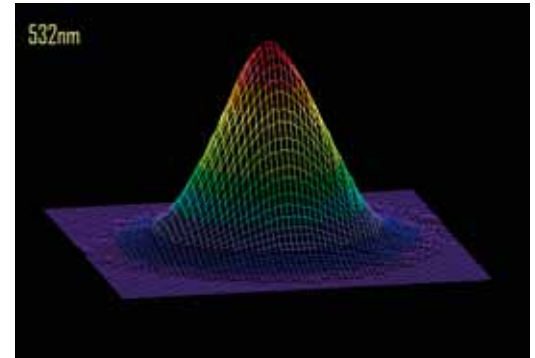
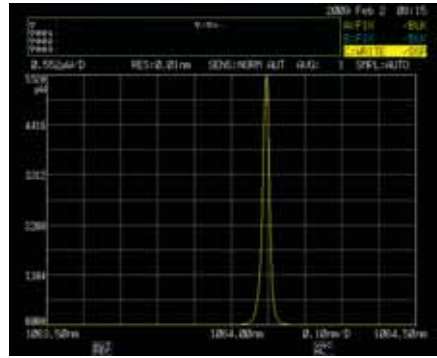
DPSS CW Laser

Features:

Wavelength 473nm to 1064nm, and Power up to 3W • Low noise and SLM
Air-cooled • Ultra-stable • TTL modulation • Free space or fiber delivery system

Applications:

Raman Spectroscopy • LIDAR • Fluorescence • Confocal Microscopy • Seed Laser
Interferometry • Neuroscience • Optical Tweezers • Flow Cytometry



CW DPSS Green Lasers

Wavelengths	532 nm		
Laser version	SLM version	Low noise version	Basic version
Output power(mW)	300, 200, 100, 50, 25, 10	500, 300, 200, 100, 50, 25	1W, 500, 200, 100, 50, 25, 10, 5
Output noise, rms	< 0.5% (10 Hz - 20 MHz)	< 0.5% (10 Hz - 20 MHz)	2% (0 -10 kHz), ~20% at 300 kHz
Longitudinal mode	Single	--	--
Linewidth	< 10 ⁻⁵ nm	0.2 nm	0.2 nm
Coherence length	> 300 m	--	--
Transverse mode	TEM ₀₀ , M ² < 1.1		
Beam diameter (1/e ²)	0.4 mm for 1-200 mW, 0.2 mm for > 210 mW (2X-10X laser beam expander options available)		
Beam divergence, full angle	2 mrad for 1-200 mW, 4 mrad for > 210 mW (can be reduced with a beam expander)		
Power stability, rms	< 2% over 8 hours; Ultra-stable options: 0.5% or 0.25% over 24 hours		
Beam pointing stability	< 0.02 mrad at constant temperature		
Polarization	Linear; Ratio 50:1, 45 degree off vertical; 100:1 or >300:1 options available		

CW DPSS Green Lasers

Wavelengths	523 nm, 527 nm, 542 nm	
Laser version	SLM version	Basic version
Output power (mW)	10, 5	400, 200, 100, 10, 5; For 542nm: 75, 50, 25, 10
Output noise, rms	< 0.5% (10 Hz - 20 MHz)	2% (0 -10 kHz), >10% at 300 kHz
Longitudinal mode	Single	--
Linewidth	< 10 ⁻⁵ nm	0.2 nm
Coherence length	> 300 m	--
Transverse mode	TEM ₀₀ , M ² < 1.1	
Beam diameter (1/e ²)	0.2 mm	
Beam divergence, full angle	4 mrad (can be reduced with a beam expander)	
Power stability, rms	< 2% over 8 hours; Ultra-stable options: 0.5% or 0.25% over 24 hours	
Beam pointing stability	< 0.02 mrad at constant temperature	
Polarization	Linear; Ratio 50:1; > 100:1 or >300:1 options available	

CW DPSS Yellow Orange Lasers

Wavelengths	561 nm, 555 nm	593 nm
Output power (mW)*	200, 150, 100, 50, 25, 10, 5	50, 25, 10, 5
Transverse mode	TEM ₀₀ , M ² < 1.1	
Beam diameter (1/e ²)	0.7 mm (2X, 3X or 5X laser beam expander options available)	
Beam divergence, full angle	1.1 mrad (can be reduced with a beam expander)	
Output noise, rms	2% (10 Hz – 10 kHz), ~20% (100 kHz – 1 MHz)	
Power stability, rms	< 2% over 8 hours; Ultra-stable options: 0.5% or 0.25% over 24 hours	
Beam pointing stability	< 0.02 mrad at constant temperature	
Polarization	Linear; Ratio 50:1; > 100:1 option available	

*For SLM & low noise version, please contact CrystaLaser

CW DPSS Red Lasers

Wavelengths	657 nm, 660 nm, 671 nm	
Laser version	SLM version	Basic version
671 nm power (mW)	200, 150, 100, 50, 25	300, 200, 150, 100, 50
657 nm 660 nm power (mW)	--	300, 200, 150, 100, 50
Longitudinal mode	Single	--
Linewidth	< 10 ⁻⁵ nm	< 0.15 nm, nominal
Output noise, rms	< 0.5% (10 Hz - 20 MHz)	2% (10 Hz - 10 kHz), >20% (100 kHz - 1 MHz)
Coherence length	> 300 m	--
Transverse mode	TEM ₀₀ , M ² < 1.1	
Beam diameter (1/e ²)	0.2 mm (2X, 3X, 5X or 10X laser beam expander options available)	
Beam divergence, full angle	4 mrad (can be reduced with a beam expander)	
Power stability, rms	< 2% over 8 hours; Ultra-stable options: 0.5% or 0.25% over 24 hours	
Beam pointing stability	< 0.02 mrad at constant temperature	
Polarization	Linear; Ratio 50:1; >100:1 option available	

CW DPSS Infrared Lasers

Wavelengths (nm)	1064	1047	1053	946	1030	1080	1122	1313	1319	1342
Basic version max. power (mW)	4W	3W	3W	500	300	500	1W	1W	1W	1W
SLM version max. power (mW)	1W	300	300	150	25	50	50	150	150	300
Output power	4W, 3W, 2W, 1.5W, 1W, 500mW, 300mW, 100mW, 50mW, 25mW									
Beam diameter (1/e ²)	0.3 – 0.5 mm depending on output power and wavelength									
Beam divergence, full angle	3 to 5 mrad depending on output power and wavelength									
Transverse mode	TEM ₀₀ , M ² < 1.1									
Output noise, rms	<0.5% (10 Hz – 20 MHz)									
Linewidth	<10 ⁻⁵ nm (for SLM version); 0.3nm (for low noise version)									
Coherence length	>300 m (for SLM version); low noise version: Not specified									
Power stability, rms	< 2% over 8 hours; Ultra-stable options: 0.5% or 0.25% over 24 hours									
Beam pointing stability	< 0.02 mrad at constant temperature									
Polarization	Linear; Ratio 100:1; >300:1 option available									

CW Lasers Mechanical, Electrical and Environmental Specifications

Size and weight of laser head	Type 1: LxWxH, 12x3x3 cm ³ with a fixed 6 mm thick base plate , 0.3 kg (For most CW laser systems) Type 2: LxWxH, 18.5x5x3.6 cm ³ , 0.4 kg Type 3: LxWxH, 18.5x7x3.6 cm ³ , 0.5 kg Type 4: LxWxH 13.5x3x3.6 cm ³
Size and weight of power supply	DxWxH, AC: 14x15x5 cm ³ (5"x6"x2"), 0.6 kg (1.4 lb); DC: 12.7x8.5x3.5 cm ³ (5"x3.3"x1.4"), 0.2 kg (0.5 lb)
Operating temperature	5 °C to 35 °C
Warm-up time	<1 minute
Operating voltage	90 - 250 VAC, 12 VDC optional
Power consumption	5 - 25 W, typically 12 W

Customized Options:

- Digital Modulation
- Analog power control
- Ultra stable
- Beam expander
- Fiber coupling
- Upgrade to CL2005 power supply with adjustable power and display
- RS-232 serial control



Model CL2005 Power Supply