



High Power CW DPSS Laser System

DPW Series (Visible-NIR)

Data Sheet



Overview

The DPW series is a line of visible and near infrared diode pumped solid state (DPSS) lasers that can provide output power levels up to 20000 mW. The DPW laser series features a compact design, long lifetime, easy operation, and FDA-compliant system with driver. The DPW blue series laser is widely used in fluorescence sensors, Raman spectrum, laser printing, holography, laser display, submarine communication, biomedicine, laser lighting show, and many other applications. The DPW green, yellow, orange, and red laser series is widely used in collimation, laser medical treatment, scientific experiment, optical instrument, laser display, laser lighting show, and many other applications. The DPW near infrared series is used in scientific experiments, optical instrument, optical sensor, measurement, communication, spectrum analysis, etc.

Features

- Available wavelengths: 457nm, 473nm, 515nm, 532nm, 556nm, 561nm, 577nm, 589nm, 594nm, 660nm, 671nm, 1064nm, and 1342nm
- CW operating mode
- Optical output power 200mW to 20000mW
- Ultra-compact design
- FDA compliant

Applications

- Collimation
- Laser medical treatment
- Scientific experiment
- Optical instrument
- Laser display
- Laser lighting show
- Optical sensor
- Measurement
- Communication
- Spectrum analysis

457-577 nm Specifications

Parameter	DPW457	DPW473	DPW515	DPW532	DPW556	DPW561	DPW577
Wavelength	457±1 nm	473±1 nm	515±1 nm	532±1 nm	556±1 nm	561±1 nm	577±1 nm
Output power	~3000 mW	>2000 mW	>200 mW, >300 mW, >400 mW, >500 mW	>15000 mW, >18000 mW, >20000 mW	>1500 mW, >2000 mW, >2500 mW	>1500 mW, >2000 mW	>1500 mW, >2000 mW, >2500 mW, >3000 mW, >3500 mW
Operating mode	CW	CW	CW	CW	CW	CW	CW
Transverse mode	Near TEM ₀₀	TEM ₀₀	Near TEM ₀₀	Near TEM ₀₀	Near TEM ₀₀	Near TEM ₀₀	Near TEM ₀₀
Power stability (rms, over 4 hours)	<5%, <3%	<5%, <3%	<5%, <3%	<5%, <3%, <2%, <1%	<5%, <3%	<5%, <3%	<5%, <3%
M ² factor	/	<1.5	<3.0	3-6	3-6	3-4	~5
Beam diameter at aperture (1/e ²)	~2.0 mm	~3.0 mm	~3.0 mm	~4.0 mm	~4.0 mm	~4.0 mm	~7.0 mm
Beam divergence, full angle	<1.0 mrad	<1.0 mrad	<2.0 mrad	<2.0 mrad	<2.0 mrad	<2.0 mrad	<0.9 mrad
Polarization ratio	>100:1	>100:1	>100:1	>50:1	>100:1	>100:1	>100:1
Warm-up time	<10 min	<10 min	<10 min	<10 min	<10 min	<10 min	<10 min
Operating temperature	10-35°C	20-30°C	10-35°C	10-35°C	10-35°C	10-35°C	10-35°C
Modulation option	TTL/Analog: 1Hz-1kHz, 1kHz-10kHz, 10kHz-30kHz						
Expected lifetime	10,000 hours						
Warranty period	10 months						

Remarks:

- Specifications of the CW laser is based on the laser performance at full power output after the specified warmup period. The stability of output power may change when output power is adjusted at a different power level.

589-1342 nm Specifications

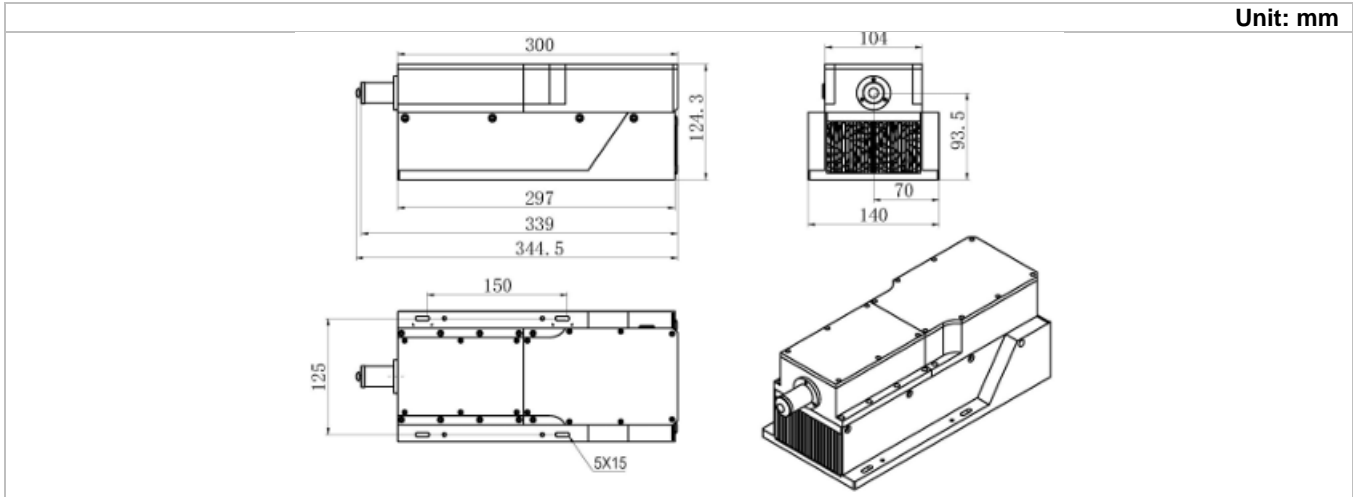
Parameter	DPW589	DPW594	DPW660	DPW671	DPW1064	DPW1342
Wavelength	589±2 nm	594±1 nm	660±2 nm	671±1 nm	1064±1 nm	1342±1 nm
Output power	>1000 mW, >2000 mW, >3000 mW, >4000 mW, >4500 mW	>500 mW, >800 mW	>1000 mW, >1500 mW, >2000 mW	>3500 mW, >4000 mW, >5000 mW	>8000 mW, >10000 mW, >15000 mW, >20000 mW	>4000 mW, >5000 mW, >6000 mW
Operating mode	CW	CW	CW	CW	CW	CW
Transverse mode	Near TEM ₀₀	Near TEM ₀₀	Near TEM ₀₀	Near TEM ₀₀	Near TEM ₀₀	Near TEM ₀₀
Power stability (rms, over 4 hours)	<5%, <3%, <2%, <1%	<5%, <3%	<5%, <3%	<5%, <3%	<5%, <3%, <2%, <1%	<5%, <3%
M ² factor	3-6	3-6	<2.5	3-6	3-8	3-6
Beam diameter at aperture (1/e ²)	~4.0 mm	~4.0 mm	~4.0 mm	~4.0 mm	3-5 mm	~5.0 mm
Beam divergence, full angle	<2.0 mrad	<2.0 mrad	3-6 mrad	<2.0 mrad	<2.0 mrad	<2.0 mrad
Polarization ratio	>100:1	>100:1	>100:1	>100:1	>100:1	>100:1
Warm-up time	<10 min	<10 min	<10 min	<10 min	<10 min	<10 min
Operating temperature	10-35°C	10-35°C	10-35°C	10-35°C	10-35°C	10-35°C
Modulation option	TTL/Analog: 1Hz-1kHz, 1kHz-10kHz, 10kHz-30kHz					
Expected lifetime	10,000 hours					
Warranty period	10 months					

Remarks:

- Specifications of the CW laser is based on the laser performance at full power output after the specified warmup period. The stability of output power may change when output power is adjusted at a different power level.

DPW Series (Visible-NIR) Laser Head Dimensions

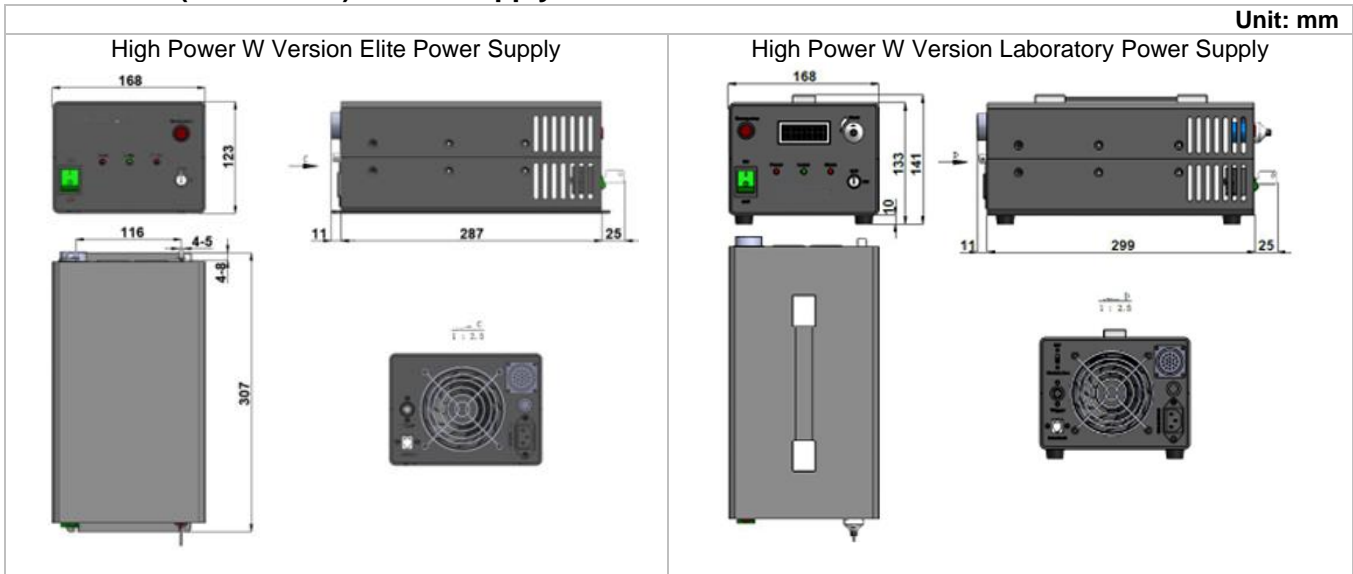
Unit: mm



Parameter	DPW Series (Visible-NIR)
Dimensions	344.5(L)×140(W) ×124.3(H) mm ³
Weight	5.7 kg
Beam height from base plate	93.5 mm

DPW Series (Visible-NIR) Power Supply Dimensions

Unit: mm



Parameter	High Power W Version Elite Power Supply	High Power W Version Laboratory Power Supply
Dimensions	323(L) ×168(W) ×123(H) mm ³	335(L) ×168(W) ×133(H) mm ³
Weight	4.1 kg	4.2 kg
Input voltage	90-264VAC	90-264VAC
Feature	Standard	Adjustable power

Ordering Information

For more information, please contact Lasermate directly at sales@lasermate.com.

Part Number Configuration DPW[1][2][3][4][5]					
DPW = Laser Model Series	[1] = Wavelength	[2] = Output Power	[3] = Power Supply	[4] = Power Stability	[5] = Modulation
		200= >200mW 300= >300mW 1W= >1000mW 1H= >1500mW 2W= >2000mW 2H= >2500mW 3W= >3000mW 5W= >5000mW ... 20W= >20000mW	W= High Power W Version Elite Power Supply N= High Power W Version Laboratory Power Supply	A=<5% E=<3% 2=<2% D=<1%	0=None T1=TTL 1Hz-1kHz T2=TTL 1kHz-10kHz T3=10kHz-30kHz A1=Analog 1Hz- 1kHz A2=Analog 1kHz- 10kHz A3=10kHz-30kHz

Note: The above specifications are subject to change without notice.