Low Noise DPSS Laser System
DPLW Series

Data Sheet

Overview

The DPLW series is a line of visible and near infrared diode pumped solid state (DPSS) lasers with less than 1% noise that can provide output power levels up to 20000 mW. The DPLW laser series features a compact design, low noise, long lifetime, easy operation, and FDA-compliant system with driver. The DPLW 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 DPLW green, yellow, orange, 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 DPLW near infrared series is used in scientific experiment, optical instrument, optical sensor, measurement, communication, spectrum analysis, etc.

Features

- Visible-near infrared wavelength range
- CW operating mode
- Optical output power 3000mW to 20000mW
- Low noise
- 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

457-1342 nm Specifications

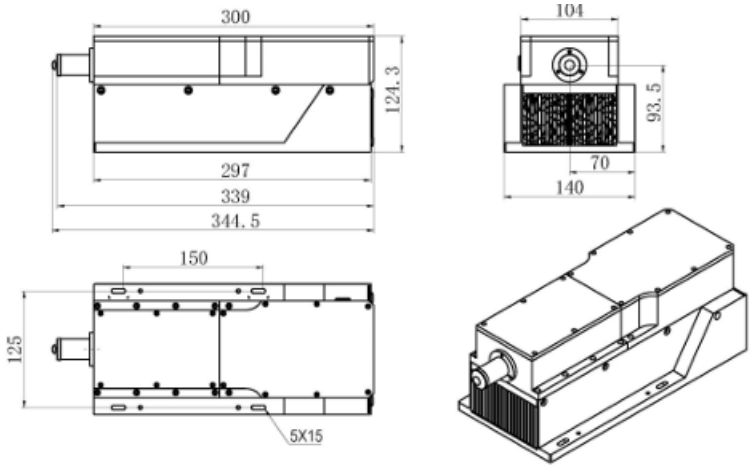
Parameter	DPLW457	DPLW532	DPLW671	DPLW1064	DPLW1342
Wavelength	457±1 nm	532±1 nm	671±1 nm	1064±1 nm	1342±1 nm
Output power	>3000 mW, >4000 mW, >5000 mW, >8000 mW, >10000 mW	>15000 mW, >18000 mW, >20000 mW	>3500 mW, >4000 mW, >5000 mW	>8000 mW, >10000 mW, >15000 mW, >20000 mW	>4000 mW, >5000 mW, >6000 mW
Operating mode	CW	CW	CW	CW	CW
Transverse mode	Near TEM_{00}	Near TEM_{00}	Near TEM_{00}	Near TEM_{00}	Near TEM_{00}
Noise amplitude (rms, 1-20MHz)	<3%	<1%	<1%	<3%, <1%	<1%
Power stability (rms, over 4 hours)	<5%, <3%	<5%, <3%, <2%, <1%	<5%, <3%, <2%, <1%	<5%, <3%, <2%, <1%	<5%, <3%, <2%, <1%
M^2 factor	3-6	3-6	3-6	3-8	3-6
Beam diameter at aperture ($1/e^2$)	~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	<2.0 mrad	<2.0 mrad	<2.0 mrad
Polarization ratio	>100:1	>50:1	>100:1	>100:1	>100:1
Warm-up time	<10 min	<10 min	<10 min	<10 min	<10 min
Operating temperature	15-30°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.
- Specifications are subject to change without notice.

DPLW Series Laser Head Dimensions

Unit: mm

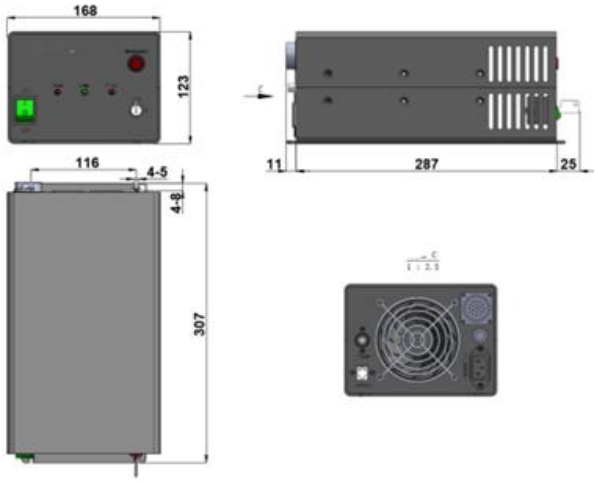


Parameter	DPLW Series
Dimensions	344.5(L)×140(W) ×124.3(H) mm^3
Weight	5.7 kg
Beam height from base plate	93.5 mm
Beam exit (from side)	70 mm

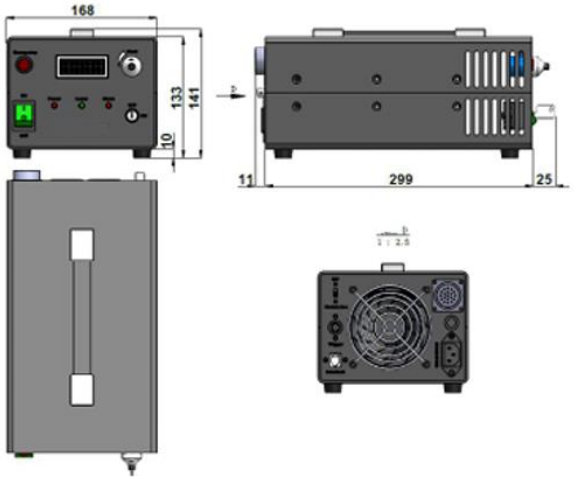
DPLW Series Power Supply Dimensions

Unit: mm

High Power W Version Elite Power Supply



High Power W Version Laboratory Power Supply



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
Features	Standard	Adjustable power

Ordering Information

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

Part Number Configuration DPLW[1][2][3][4][5][6]						
DPLW = Laser Model Series	**[1] = Wavelength**	**[2] = Output Power**	**[3] = Power Supply**	**[4] = Power Stability**	**[5] = Noise of Amplitude**	**[6] = Modulation**
	457= 457nm 473= 473nm 515= 515nm 532= 532nm 556= 556nm 561= 561nm 577= 577nm 589= 589nm 594= 594nm 660= 660nm 671= 671nm 1064= 1064nm 1342= 1342nm	3W= >3000mW 3H= >3500mW 4W= >4000mW 5W= >5000mW … 18W= >18000mW 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%	1= <1% 3= <3%	0=None T1=TTL 1Hz-1kHz T2=TTL 1kHz-10kHz T3=TTL 10kHz-30kHz A1=Analog 1Hz-1kHz A2=Analog 1kHz-10kHz A3=Analog 10kHz-30kHz

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