Visible and Near IR CW DPSS Laser System
DPN Series (Visible-NIR)

Data Sheet

Overview

The DPN series is a line of visible blue, green, yellow, orange, and red and near infrared diode pumped solid state (DPSS) lasers that can provide output power levels up to 5000mW. The DPN laser series features a compact design, long lifetime, easy operation, and FDA-compliant system with driver. The DPN visible series laser is widely used in collimation, laser medical treatment, scientific experiment, optical instrument, laser display, laser lighting show, and many other applications. The DPN infrared laser series is widely used in scientific experiment, optical instrument, optical sensor, measurement, communication, spectrum analysis, and many other applications.

Features

- Available wavelengths: 457nm, 515nm, 523.5nm, 526.5nm, 532nm, 543nm, 556nm, 561nm, 589nm, 594nm, 656.5nm, 660nm, 671nm, 1064nm, and 1342nm
- CW operating mode
- Optical output power 50mW to 3000mW
- 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

457-543 nm Specifications

Parameter	DPN457	DPN515	DPN523	DPN526	DPN532	DPN543
Wavelength	457±1 nm	515±1 nm	523.5±1 nm	526.5±1 nm	532±1 nm	543±1 nm
Output power	>1000 mW, >2000 mW	>100 mW, >150 mW	>100 mW, >200 mW, >300 mW, >500 mW, >800 mW	>100 mW, >200 mW, >300 mW, >500 mW, >800 mW, >1000 mW	>3000 mW, >4000 mW, >5000 mW	>1000 mW, >1500 mW
Transverse mode	Near TEM_{00}	TEM_{00}	Near TEM_{00}	Near TEM_{00}	Near TEM_{00}	Near TEM_{00}
Operating mode	CW	CW	CW	CW	CW	CW
Power stability (rms, over 4 hours)	<5%, <3%, <1%	<5%, <3%	<5%, <3%	<5%, <3%	<5%, <3%, <2%, <1%	<5%, <3%
M^2 factor	<3.0	<1.2	3-5	3-5	3-5	<3.0
Beam diameter at aperture ($1/e^2$)	~3.0 mm	~2.0 mm	~3.0 mm	~3.0 mm	~3.0 mm	~3.0 mm
Beam divergence, full angle	<1.2 mrad	<1.2 mrad	<1.5 mrad	<1.5 mrad	<1.5 mrad	<1.5 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					
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.

556-660 nm Specifications

Parameter	DPN556	DPN561	DPN589	DPN594	DPN656	DPN660
Wavelength	556±1 nm	561±1 nm	589±2 nm	594±1 nm	656.5±1 nm	660±1 nm
Output power	>800 mW, >1000 mW	>800 mW, >1000 mW	>300 mW, >400 mW, >500 mW, >600 mW, >800 mW	>300 mW	>50 mW, >100 mW, >300 mW, >500 mW, >800 mW, >1000 mW	>500 mW, >800 mW, >1000 mW
Transverse mode	Near TEM_{00}	Near TEM_{00}	Near TEM_{00}	Near TEM_{00}	Near TEM_{00}	Near TEM_{00}
Operating mode	CW	CW	CW	CW	CW	CW
Power stability (rms, over 4 hours)	<5%, <3%	<5%, <3%	<5%, <3%	<5%, <3%	<5%, <3%	<5%, <3%
M^2 factor	<3.0	<3.0	<3.0	<3.0	<3.0	8
Beam diameter at aperture ($1/e^2$)	~4.0 mm	~4.0 mm	~3.0 mm	~3.0 mm	~3.5 mm	~4.5 mm
Beam divergence, full angle	<1.5 mrad	<1.5 mrad	<1.5 mrad	<2.0 mrad	<1.5 mrad	<1.1 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					
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.

671-1342 nm Specifications

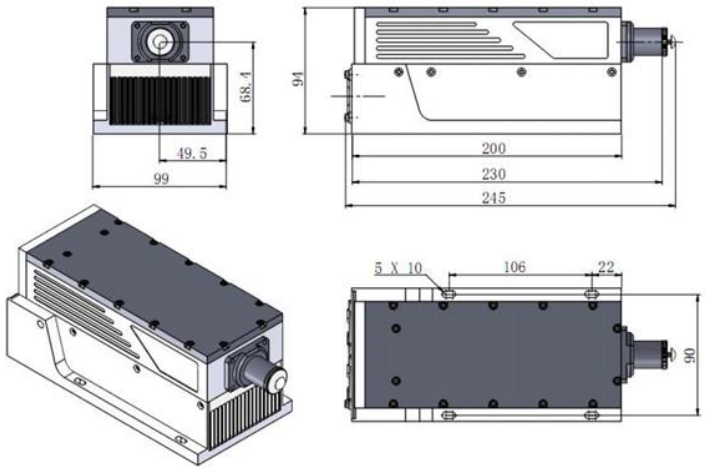
Parameter	DPN671	DPN1064	DPN1342
Wavelength	671±1 nm	1064±1 nm	1342±1 nm
Output power	>2000 mW, >2500 mW, >3000 mW	>4000 mW, >5000 mW	>3000 mW, >4000 mW
Transverse mode	Near TEM_{00}	Near TEM_{00}	Near TEM_{00}
Operating mode	CW	CW	CW
Power stability (rms, over 4 hours)	<5%, <3%, <2%, <1%	<5%, <3%, <2%, <1%	<5%, <3%
M^2 factor	<3.0	<3.0	3-6
Beam diameter at aperture ($1/e^2$)	~3.0 mm	~3.0 mm	~3.0 mm
Beam divergence, full angle	<1.5 mrad	<1.5 mrad	<3.0 mrad
Polarization ratio	>100:1	>100:1	>100:1
Warm-up time	<10 min	<10 min	<15 min
Pointing stability after warm-up	/	<0.05 mrad	<0.05 mrad
Operating temperature	20-30°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.

DPN Series (Visible-NIR) Laser Head Dimensions

Unit: mm

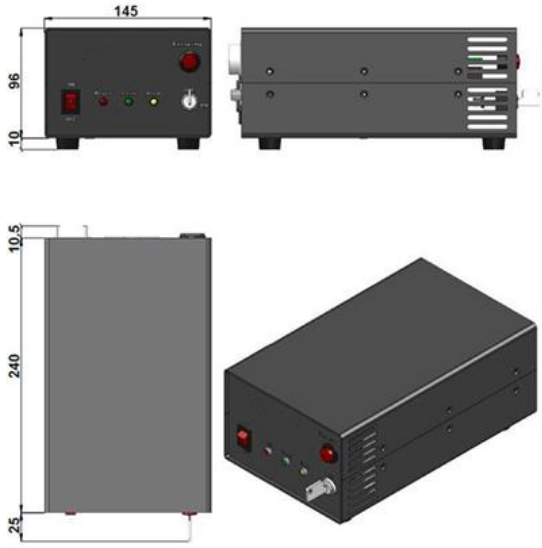


Parameter	DPN Series (Visible-NIR)
Dimensions	245(L)×99(W) ×94(H) mm^3
Weight	2.6 kg
Beam height from base plate	68.4 mm

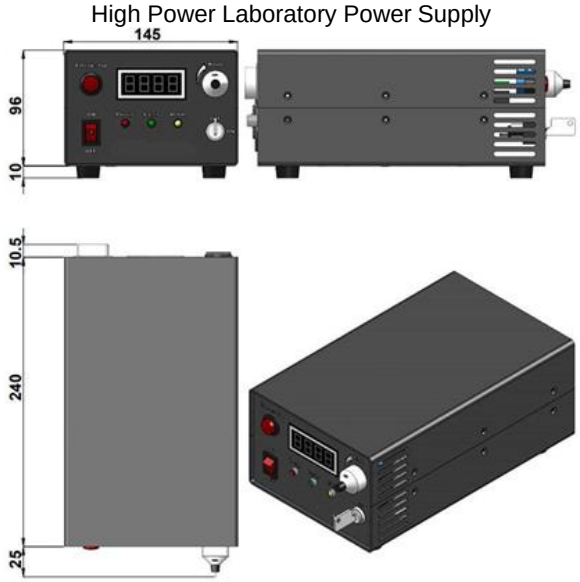
DPN Series (Visible-NIR) Power Supply Dimensions

Unit: mm

High Power Elite Power Supply



High Power Laboratory Power Supply



Parameter	High Power Elite Power Supply	High Power Laboratory Power Supply
Dimensions	275.5(L) ×145(W) ×106(H) mm^3	275.5(L) ×145(W) ×106(H) mm^3
Weight	2.5 kg	2.5 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 DPN[1][2][3][4]5]					
DPN = Laser Model Series	**[1] = Wavelength**	**[2] = Output Power**	**[3] = Power Supply**	**[4] = Power Stability**	**[5] = Modulation**
	457= 457nm 515= 515nm 523= 523.5nm 526= 526.5nm 532= 532nm 543= 543nm 556= 556nm 561=561nm 589= 589nm 594= 594nm 656= 656.5nm 660= 660nm 671= 671nm 1064= 1064nm 1342= 1342nm	50= >50mW 100= >100mW 150= >150mW 200= >200mW 300= >300mW 400= >400mW 500= >500mW 600= >600mW 800= >800mW 1W= >1000mW 1H= >1500mW 2W= >2000mW 2H= >2500mW 3W= >3000mW 4W= >4000mW 5W= >5000mW	H= High Power Elite Power Supply M= High Power 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.