



Visible CW DPSS Laser System

DPU Series (Visible)

Data Sheet



Overview

The DPU visible series is a family of blue, green, yellow, orange, and red diode pumped solid state (DPSS) lasers that can deliver up to 1500 mW output power. The DPU laser series features an ultra-compact design, long lifetime, easy operation, and FDA-compliant system with driver. The DPU series laser is widely used in scientific experiment, medical measurement, instrument, spectrum analysis, and many other applications.

Features

- Blue, green, yellow, orange, and red spectral range
- CW operating mode
- Optical output power 10mW to 1500mW
- Ultra-compact design
- FDA compliant

Applications

- Scientific experiment
- Optical instrument
- Medical measurement
- Spectrum analysis

457-561 nm Specifications

Parameter	DPU457		DPU473		DPU532	DPU543	DPU556	DPU561	
Wavelength	457±1 nm		473±1 nm		532±1 nm	543±1 nm	556±1 nm	561±1 nm	
Output power	>50 mW, >100 mW	>300 mW, >500 mW	>50 mW, >100 mW	>200 mW, >300 mW	>500 mW, >1000 mW, >1500 mW	>30 mW, >50 mW, >100 mW, >150 mW, >200 mW	>30 mW, >50 mW, >80 mW, >100 mW, >200 mW	>30 mW, >50 mW, >80 mW, >100 mW, >200 mW	>100 mW, >200 mW, >300 mW, >300 mW
Transverse mode	TEM ₀₀		TEM ₀₀		TEM ₀₀	TEM ₀₀	TEM ₀₀	TEM ₀₀	
Operating mode	CW		CW		CW	CW	CW	CW	
Power stability (rms, over 4 hours)	<3%, <1%	<5%, <3%	<3%, <2%, <1%	<5%, <3%, <2%	<3%, <2%	<3%, <2%, <1%	<3%, <2%, <1%	<3%, <2%, <1%	<3%, <2%
M ² factor	<1.5		<1.2		<1.2	<1.2	<1.2	<1.2	
Beam diameter at aperture (1/e ²)	<1.0 mm		<1.0 mm		<1.0 mm	<1.0 mm	<1.0 mm	<1.0 mm	
Beam divergence, full angle	<1.5 mrad		<1.5 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	<5 min		<5 min		<5 min	<5 min	<5 min	<5 min	
Pointing stability after warm-up	<0.05 mrad		<0.05 mrad		<0.05 mrad	<0.05 mrad	<0.05 mrad	<0.05 mrad	
Laser head consumption	15W (typical), <25W (40°C)								
Max. laser head base plate temp	50°C								
Operating temperature	10-40°C								
Modulation option	TTL/Analog: 1Hz-1kHz, 1kHz-10kHz, 10kHz-30kHz								
Expected lifetime	10,000 hours								
Warranty period	10 months								

Remarks:

- The laser head needs to be used on a heat sink with good heat dissipation.
- 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.

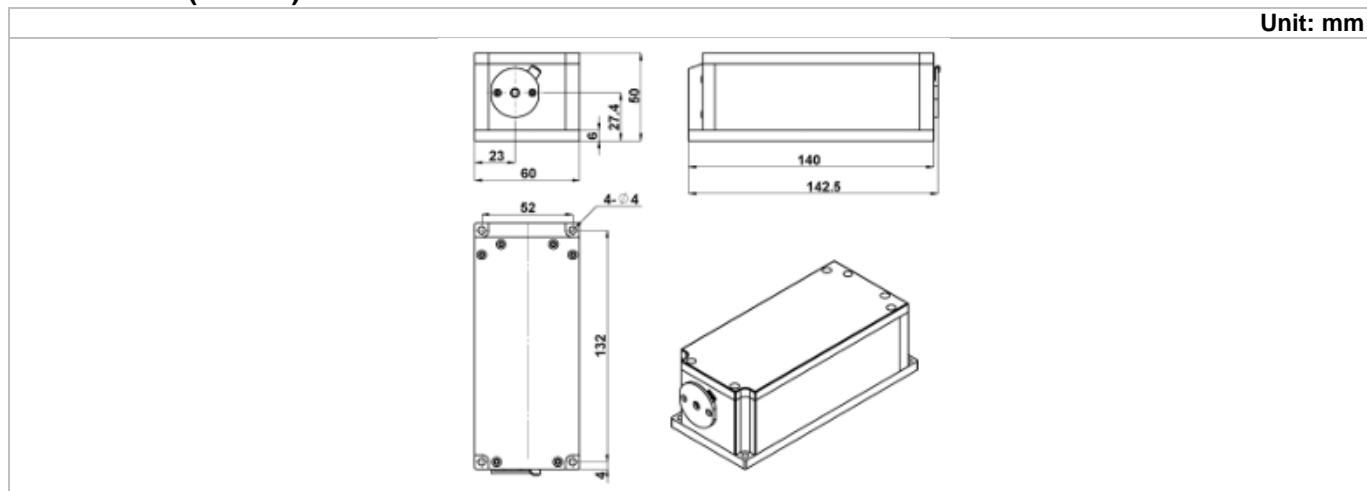
577-671 nm Specifications

Parameter	DPU577		DPU585	DPU588	DPU589	DPU671	
Wavelength	577±2 nm		585±1 nm	588±1 nm	589±1 nm	671±1 nm	
Output power	>30 mW, >50 mW, >100 mW	>200 mW, >500 mW	>10 mW, >30 mW, >50 mW	>100 mW, >200 mW	>100 mW, >200 mW	>100 mW, >200 mW	>300 mW, >500 mW
Transverse mode	TEM ₀₀		Near TEM ₀₀	TEM ₀₀	TEM ₀₀	TEM ₀₀	
Operating mode	CW		CW	CW	CW	CW	
Power stability (rms, over 4 hours)	<3%, <2%, <1%	<5%, <3%, <2%	<5%, <3%, <2%	<3%, <2%, <1%	<3%, <2%, <1%	<3%, <2%, <1%	<3%, <2%
M ² factor	<1.5		<2.0	<1.2	<1.2	<1.2	
Beam diameter at aperture (1/e ²)	<1.0 mm		<1.0 mm	<1.0 mm	<1.0 mm	<1.0 mm	
Beam divergence, full angle	<1.5 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	
Warm-up time	<5 min		<5 min	<5 min	<5 min	<5 min	
Pointing stability after warm-up	<0.05 mrad		<0.05 mrad	<0.05 mrad	<0.05 mrad	<0.05 mrad	
Laser head consumption	15W (typical), <25W (40°C)						
Max. laser head base plate temp	50°C						
Operating temperature	10-40°C						
Modulation option	TTL/Analog: 1Hz-1kHz, 1kHz-10kHz, 10kHz-30kHz						
Expected lifetime	10,000 hours						
Warranty period	10 months						

Remarks:

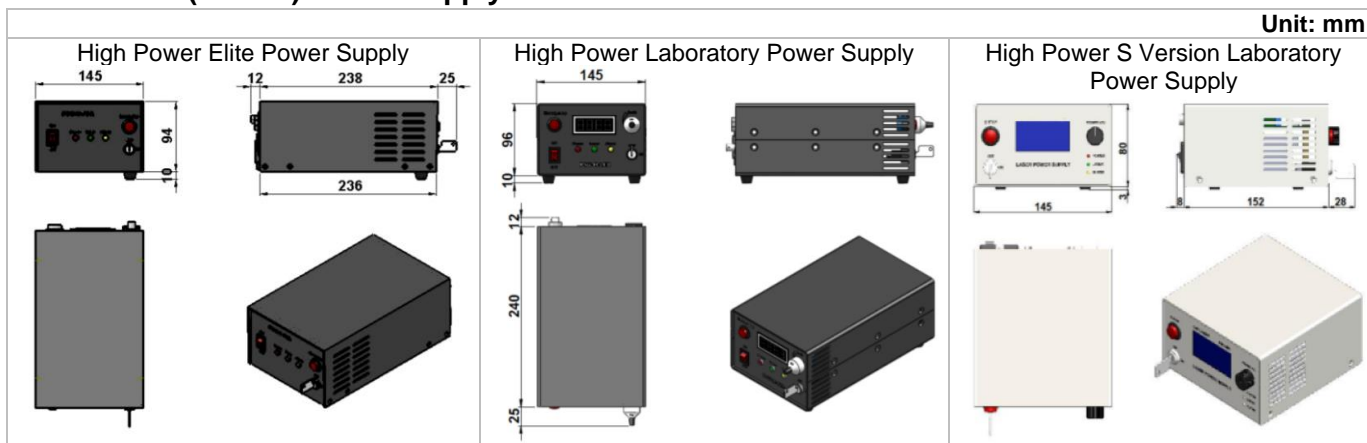
- The laser head needs to be used on a heat sink with good heat dissipation.
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DPU Series (Visible) Laser Head Dimensions



Parameter	DPU Series (Visible)
Dimensions	142.5(L)×60(W) ×50(H) mm ³
Weight	1.0 kg
Beam height from base plate	27.4 mm

DPU Series (Visible) Power Supply Dimensions



Parameter	High Power Elite Power Supply	High Power Laboratory Power Supply	High Power S Version Laboratory Power Supply
Dimensions	275(L) ×145(W) ×104(H) mm ³	277(L) ×145(W) ×106(H) mm ³	188(L) ×145(W) ×83(H) mm ³
Weight	2.3 kg	2.6 kg	1.2 kg
Input voltage	90-264VAC	90-264VAC	90-264VAC
Features	Standard	Adjustable power	Adjustable power

Ordering Information

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

Part Number Configuration DPU[1][2][3][4][5]					
DPU = Laser Model Series	[1] = Wavelength	[2] = Output Power	[3] = Power Supply	[4] = Power Stability	[5] = Modulation
		10= >10mW 30= >30mW 50= >50mW 80= >80mW 100= >100mW ... 1W= >1000mW 1H= >1500mW	H=High Power Elite Power Supply M=High Power Laboratory Power Supply S=High Power S 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.