



# Fan-less CW DPSS Laser System (Ultraviolet) DPFN Series (UV)

Data Sheet



## Overview

The DPFN UV series is a family of ultraviolet diode pumped solid state (DPSS) lasers that can deliver up to 100 mW output power. The laser series features a compact design, long lifetime, easy operating, and FDA-compliant system with driver. The laser is widely used in collimation, laser medical treatment, scientific experiment, optical instrument, and many other applications.

## Features

- UV at 273nm, 303nm, 320nm, 335nm, 349nm, 355nm, and 360nm
- CW operating mode
- Optical output power 1mW to 100mW
- Ultra-compact design
- FDA compliant

## Applications

- Collimation
- Laser medical treatment
- Scientific experiment
- Optical instrument

## 261-320 nm Specifications

Parameter	DPFN261	DPFN273	DPFN303	DPFN320
Wavelength	261±1 nm	273±1 nm	303±1 nm	320±1 nm
Output power	>1 mW, >3 mW, >5 mW	>1 mW, >3 mW, >5 mW	>1 mW, >3 mW, >5 mW	>5 mW, >10 mW, >20 mW
Transverse mode	Near TEM <sub>00</sub>	Near TEM <sub>00</sub>	Near TEM <sub>00</sub>	TEM <sub>00</sub>
Operating mode	CW	CW	CW	CW
Power stability (rms, over 4 hours)	<10%	<10%	<10%	<5%, <3%
Beam diameter at aperture	<2.0 mm	~1.5 mm	<1.5 mm	<0.5 mm
Beam divergence, full angle	<6.0 mrad	<1.0 mrad	<6.0 mrad	<2.5 mrad
M <sup>2</sup> factor	<2.0	<2.0	<2.0	<1.5
Polarization ratio	>50:1, Vertical	>50:1, Horizontal	>50:1, Horizontal	>50:1, Horizontal
Warm-up time	<10min	<10min	<10min	<10min
Pointing stability after warm-up	<0.05 mrad	<0.05 mrad	<0.05 mrad	<0.05 mrad
Operating temperature	10-35°C			
Modulation option	TTL/Analog: 1Hz-1kHz, 1kHz-10kHz, 10kHz-30kHz			
Expected lifetime	10 months			

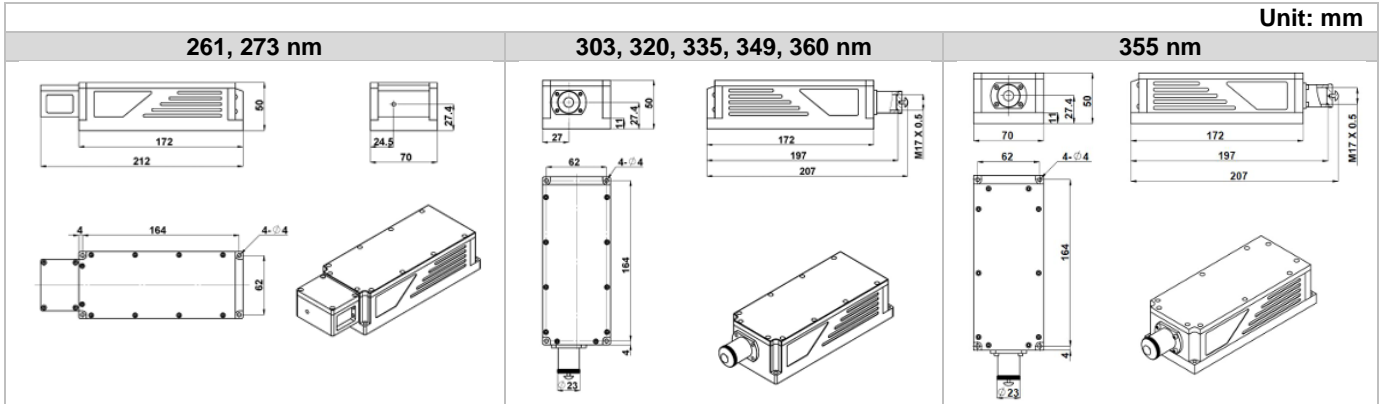
## 335-360 nm Specifications

Parameter	DPFN335	DPFN349	DPFN355	DPFN360
Wavelength	335±1 nm	349±1 nm	355±1 nm	360±1 nm
Output power	>5 mW, >10 mW, >20 mW, >30 mW, >40 mW, >50 mW, >60 mW	>5 mW, >10 mW, >20 mW, >30 mW, >40 mW, >50 mW, >60 mW, >80 mW, >100 mW	>3 mW, >5 mW, >10 mW, >15 mW, >20 mW, >30 mW	>10 mW, >20 mW, >30 mW, >50 mW, >80 mW, >100 mW
Transverse mode	Near TEM <sub>00</sub>	TEM <sub>00</sub>	Near TEM <sub>00</sub>	TEM <sub>00</sub>
Operating mode	CW	CW	CW	CW
Power stability (rms, over 4 hours)	<5%, <3%	<5%, <3%, 1%	<10%, <5%	<5%, <3%, <1%
Beam diameter at aperture (1/e <sup>2</sup> )	<1.5 mm	<1.2 mm	<1.2 mm	<1.2 mm
Beam divergence, full angle	<2.5 mrad	<1.2 mrad	<1.5 mrad	<1.0 mrad
M <sup>2</sup> factor	<2.0	<1.5	<1.5	<1.2
Polarization ratio	>50:1, Horizontal	>50:1	>50:1	>50:1, Horizontal
Warm-up time	<10min	<10min	<10min	<10min
Pointing stability after warm-up	<0.05 mrad	<0.05 mrad	<0.05 mrad	<0.05 mrad
Operating temperature	10-35°C			
Modulation option	TTL/Analog: 1Hz-1kHz, 1kHz-10kHz, 10kHz-30kHz			
Expected lifetime	10 months			

## Remarks:

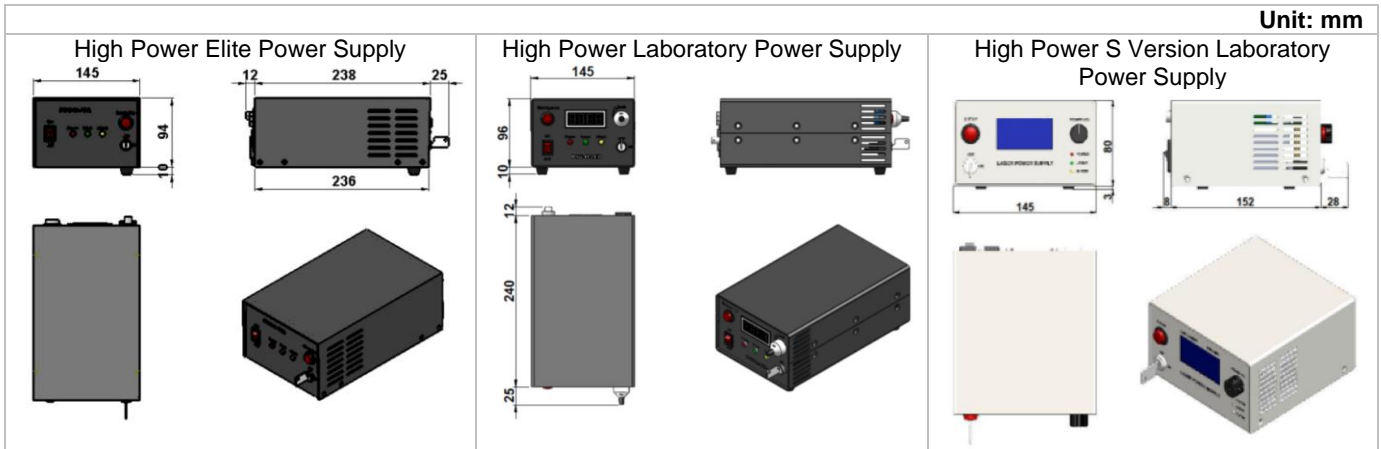
- Specifications of the CW laser is based on the laser performance at full power output after the specified warmup period. The stability of output power may change when output power is adjusted at a different power level.
- The laser head needs to be used on a heat sink with good heat dissipation.
- Specifications are subject to change without notice.

DPFN Series (UV) Laser Head Dimensions



Parameter	261, 273 nm	303, 320, 335, 349, 360 nm	355 nm
Dimensions	212(L)x70(W) x50(H) mm <sup>3</sup>	197(L)x70(W) x50(H) mm <sup>3</sup>	197(L)x70(W) x50(H) mm <sup>3</sup>
Weight	1.5 kg	1.5 kg	1.5 kg
Beam height from base plate	27.4 mm	27.4 mm	27.4 mm
Beam exit from side	24.5 mm	27 mm	35 mm

DPFN Series (UV) Power Supply Dimensions



Parameter	High Power Elite Power Supply	High Power Laboratory Power Supply	High Power S Version Laboratory Power Supply
Dimensions	275(L) x145(W) x104(H) mm <sup>3</sup>	277(L) x145(W) x106(H) mm <sup>3</sup>	188(L) x145(W) x83(H) mm <sup>3</sup>
Weight	2.3 kg	2.6 kg	1.2 kg
Input voltage	90-264VAC	90-264VAC	90-264VAC
Feature	Standard	Adjustable power	Adjustable power

**Ordering Information**

For more information, please contact Lasermate directly at [sales@lasermate.com](mailto:sales@lasermate.com).

Part Number Configuration DPFN[1][2][3][4][5]					
DPFN = Laser Model Series	[1] = Wavelength	[2] = Output Power	[3] = Power Supply	[4] = Power Stability	[5] = Modulation
		1= >1mW 3= >3mW 10= >10mW 15= >15mW ... 80= >80mW 100= >100mW	H= High Power Elite Power Supply M= High Power Laboratory Power Supply S= High Power S Version Laboratory Power Supply	B=<10% 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.