



# Short-Wavelength IR CW DPSS Laser System DPN Series (SWIR)

Data Sheet



## Overview

The DPN series is a line of short wavelength infrared diode pumped solid state (DPSS) lasers that can provide up to 1000 mW output power. The DPN laser series features a compact design, long lifetime, easy operation, and FDA-compliant system with driver. The DPN 1645nm laser series is in the eye-safe spectral range and made with features of good beam quality, which is also widely used for long-distance telemetry and ranging, laser radars, and designation. The DPN 1910nm and 1990nm laser series is widely used in Ho: YAG laser pumping, medical, scientific research, and many other applications. The DPN 1940nm laser series is used in measurement, communication, spectrum analysis, etc.

## Features

- Infrared at 1645nm, 1910nm, 1940nm, and 1990nm
- CW operating mode
- Optical output power 50mW to 1000mW
- Ultra-compact design
- FDA compliant

## Applications

- Ho: YAG laser pumping
- Medical
- Scientific research
- Long-distance telemetry and ranging
- Laser radars
- Designation
- Communication
- Spectrum analysis

1645-1990 nm Specifications

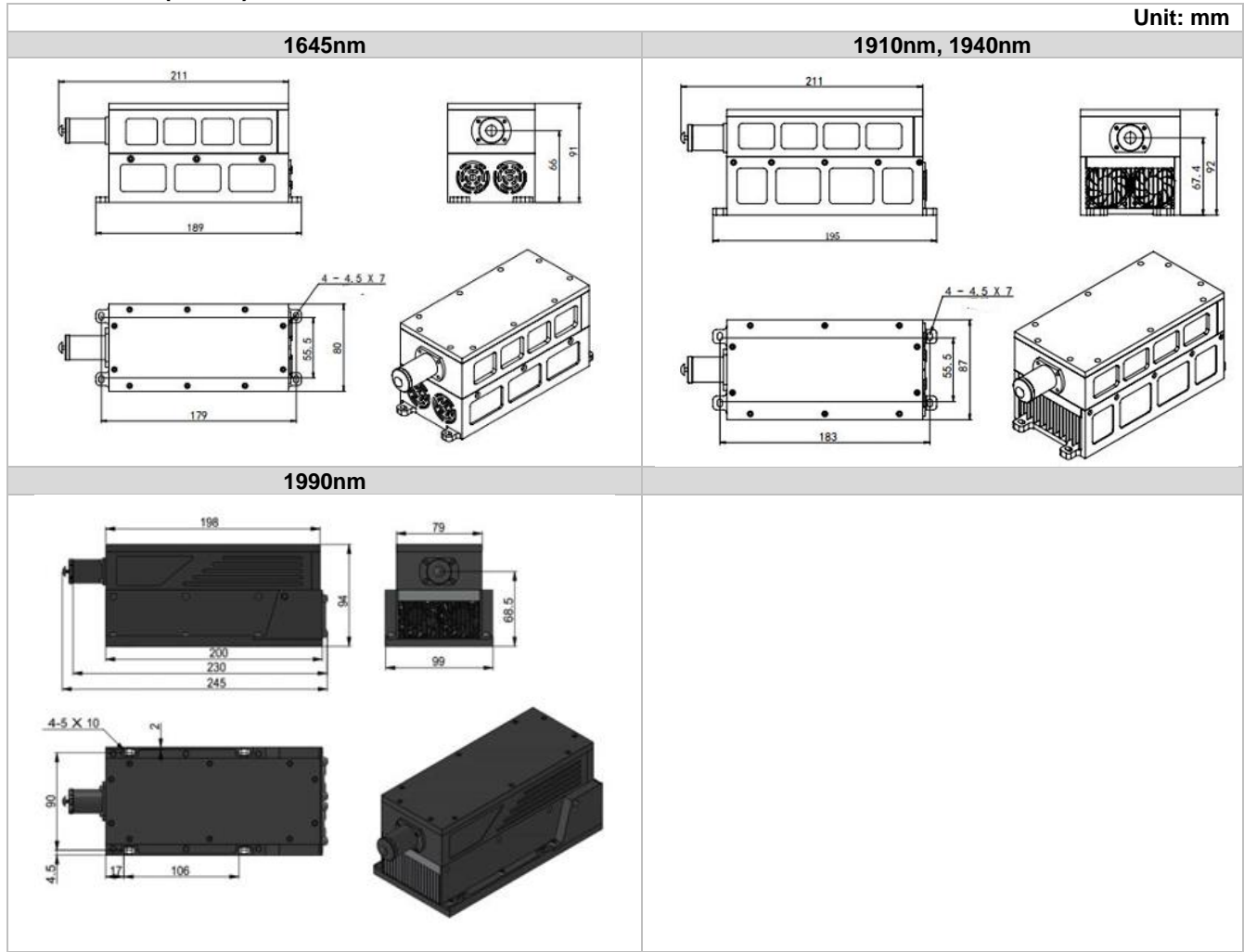
Parameter	DPN1645	DPN1910	DPN1940	DPN1990
Wavelength	1645±1 nm	1910±4 nm	1940±2 nm	1990±2 nm
Output power	>100 mW, >300 mW, >500 mW, >800 mW, >1000 mW	>200 mW, >300 mW, >600 mW	>200 mW, >300 mW, >600 mW	>200 mW, >400 mW, >600 mW
Transverse mode	Near TEM <sub>00</sub>	Near TEM <sub>00</sub>	Near TEM <sub>00</sub>	Near TEM <sub>00</sub>
Operating mode	CW	CW	CW	CW
Power stability (rms, over 4 hours)	<5%, <3%	<1%	<1%	<5%, <3%, <1%
Beam diameter at aperture (1/e <sup>2</sup> )	<3 mm	<5 mm	<5 mm	<3 mm
Beam divergence, full angle	<3 mrad	<7 mrad	<7 mrad	<8 mrad
Polarization ratio		>100:1	>100:1	>100:1
Warm-up time	<10 min	<10 min	<10 min	<10 min
Pointing stability after warm-up	<0.05 mrad	/	/	/
Operating temperature	10-30°C	15-30°C	15-30°C	15-30°C
Expected lifetime	10,000 hours	10,000 hours	10,000 hours	10,000 hours
Warranty period	10 months	10 months	10 months	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 (SWIR) Laser Head Dimensions

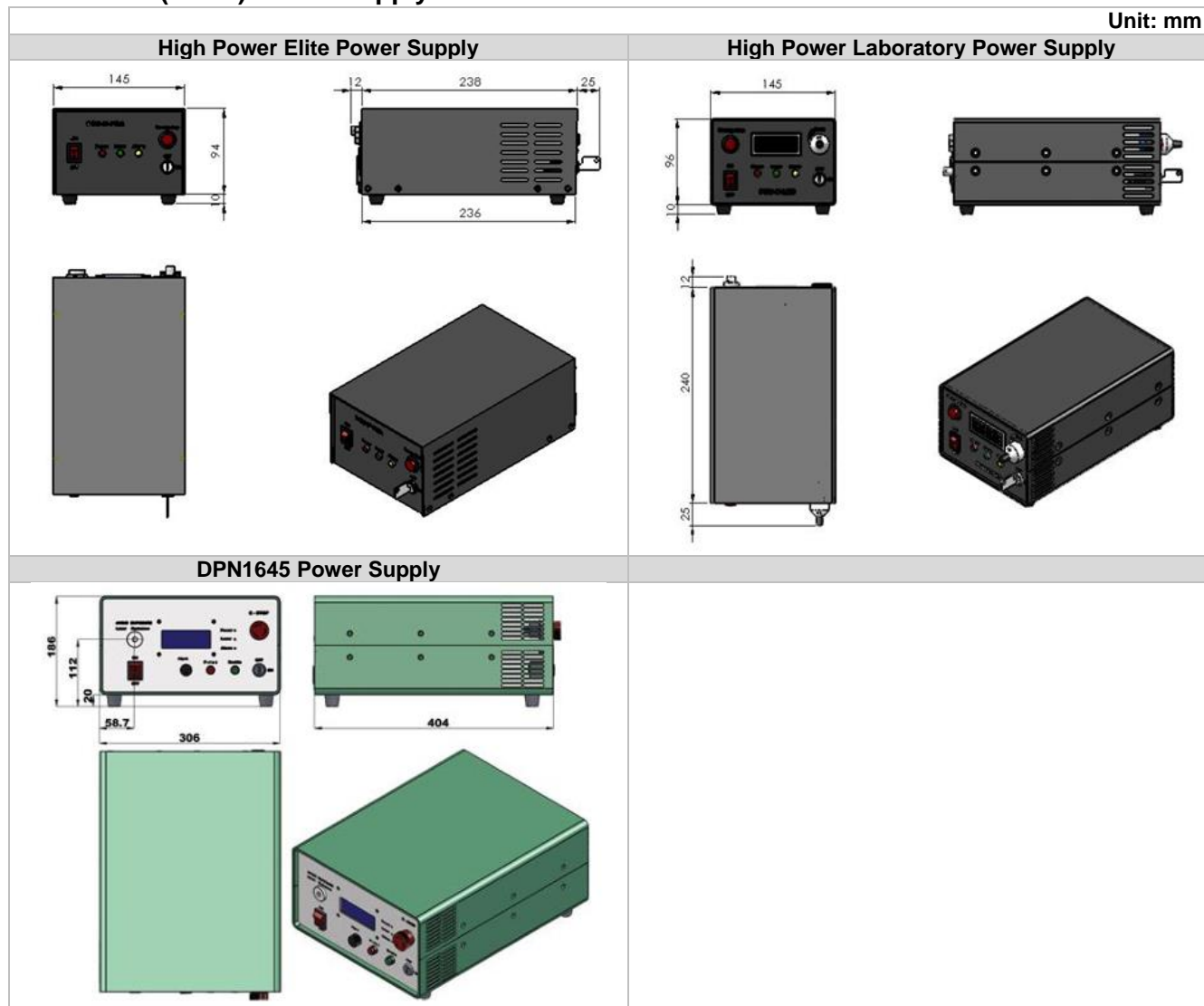
Unit: mm



Parameter	1645nm	1910nm, 1940nm	1990nm
Dimensions	245(L)x99(W) x94(H) mm <sup>3</sup>	211(L)x87(W) x92(H)	230(L)x99(W) x94(H)
Weight	2.6 kg	4.5 kg	2.5 kg
Beam height from base plate	66 mm	67.4 mm	68.5 mm

DPN Series (SWIR) Power Supply Dimensions

Unit: mm



Parameter	High Power Elite Power Supply (1910, 1940, 1990 nm)	High Power Laboratory Power Supply (1910, 1940, 1990 nm)	1645nm
Dimensions	275(L) x 146(W) x 104(H) mm <sup>3</sup>	277(L) x 145(W) x 106(H) mm <sup>3</sup>	404(L) x 306(W) x 186(H) mm <sup>3</sup>
Weight	2.4 kg	2.6 kg	5.2 kg
Input voltage	90-264VAC	90-264VAC	90-264VAC
Feature	Standard	Adjustable power	Standard

**Ordering Information**

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

Part Number Configuration DPN[1][2][3][4]				
DPN = Laser Model Series	[1] = Wavelength	[2] = Output Power	[3] = Power Supply	[4] = Power Stability
	1645= 1645nm 1910= 1910nm 1940= 1940nm 1990= 1990 nm	100= >100mW 200= >200mW 300= >300mW 400= >400mW 500= >500mW 600= >600mW 800= >800mW 1W= >1000mW	H= High Power Elite Power Supply M= High Power Laboratory Power Supply B= DPN1645 Power Supply	A=<5% E=<3% D=<1%

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