



High Power CW Diode Laser System DLHD Series

Data Sheet



Overview

The DLHD series is a family of visible violet and red diode lasers that can deliver up to 20000 mW output power. The laser series is available in seven different wavelengths and features high power, compact design, long operating lifetime, easy operation, and FDA-compliant system with driver. The DLHD 405nm violet series laser is used in measurement, communication, and spectrum analysis. The DLHD 637/640/642/650/655/660nm red series is widely used in measurement, spectrum analysis, laser lighting show, etc.

Features

- Visible violet and red spectral wavelengths
- CW operating mode
- Optical output power 1500mW to 20000mW
- Ultra-compact design
- FDA compliant

Applications

- Measurement
- Spectrum analysis
- Communication
- Laser lighting show

405-642 nm Specifications

Parameter	DLHD405	DLHD637	DLHD640	DLHD642
Wavelength	405 nm	637 nm	640 nm	642 nm
Wavelength tolerance	±5 nm	±5 nm	±5 nm	±5 nm
Output power	>10000 mW, >20000 mW	>1500 mW, >2000 mW	>1500 mW, >2000 mW	>1500 mW, >2000 mW
Operating mode	CW	CW	CW	CW
Power stability (rms, over 4 hours)	<3%, <2%, <1%	<2%, <1%	<2%, <1%	<2%, <1%
Polarization direction	Horizontal + Vertical	Horizontal + Vertical	Horizontal + Vertical	Horizontal + Vertical
Beam diameter at aperture (1/e ²)	~8.0x5.0 mm	~3.5x4 mm	~3.5x4 mm	~3.5x4 mm
Beam divergence, full angle	~8.0x1.0 mrad	<1.0 mrad	<1.0 mrad	<1.0 mrad
Warm-up time	<5 min	<5 min	<5 min	<5 min
Operating temperature	10-35°C	10-35°C	10-35°C	10-35°C
Dimensions	186(L)x117(W) x93.5(H) mm ³			
Weight	3.8 kg			
Modulation option	TTL/Analog: 1Hz-1kHz, 1kHz-10kHz, 10kHz-30kHz			
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.
- Specifications are subject to change without notice.

650-660 nm Specifications

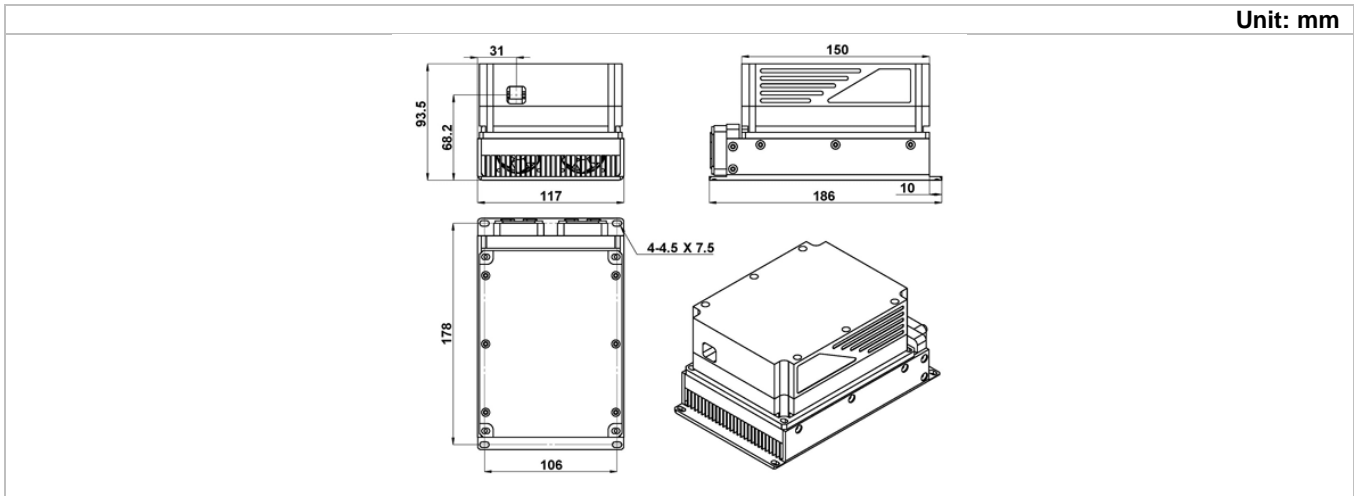
Parameter	DLHD650	DLHD655	DLHD660
Wavelength	650 nm	655 nm	660 nm
Wavelength tolerance	±10 nm	±10 nm	±5 nm
Output power	>2000 mW, >3000 mW	>2000 mW, >3000 mW	>2000 mW, >3000 mW
Operating mode	CW	CW	CW
Power stability (rms, over 4 hours)	<2%, <1%	<2%, <1%	<2%, <1%
Polarization direction	Horizontal + Vertical	Horizontal + Vertical	Horizontal + Vertical
Beam diameter at aperture (1/e ²)	~6x8 mm	~6x8 mm	~6x8 mm
Beam divergence, full angle	~4x3 mrad	~4x3 mrad	~4x3 mrad
Warm-up time	<5 min	<5 min	<5 min
Operating temperature	10-35°C	10-35°C	10-35°C
Dimensions	186(L)x117(W) x93.5(H) mm ³		
Weight	3.8 kg		
Modulation option	TTL/Analog: 1Hz-1kHz, 1kHz-10kHz, 10kHz-30kHz		
Expected lifetime	10,000 hours	10,000 hours	10,000 hours
Warranty period	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.
- Specifications are subject to change without notice.

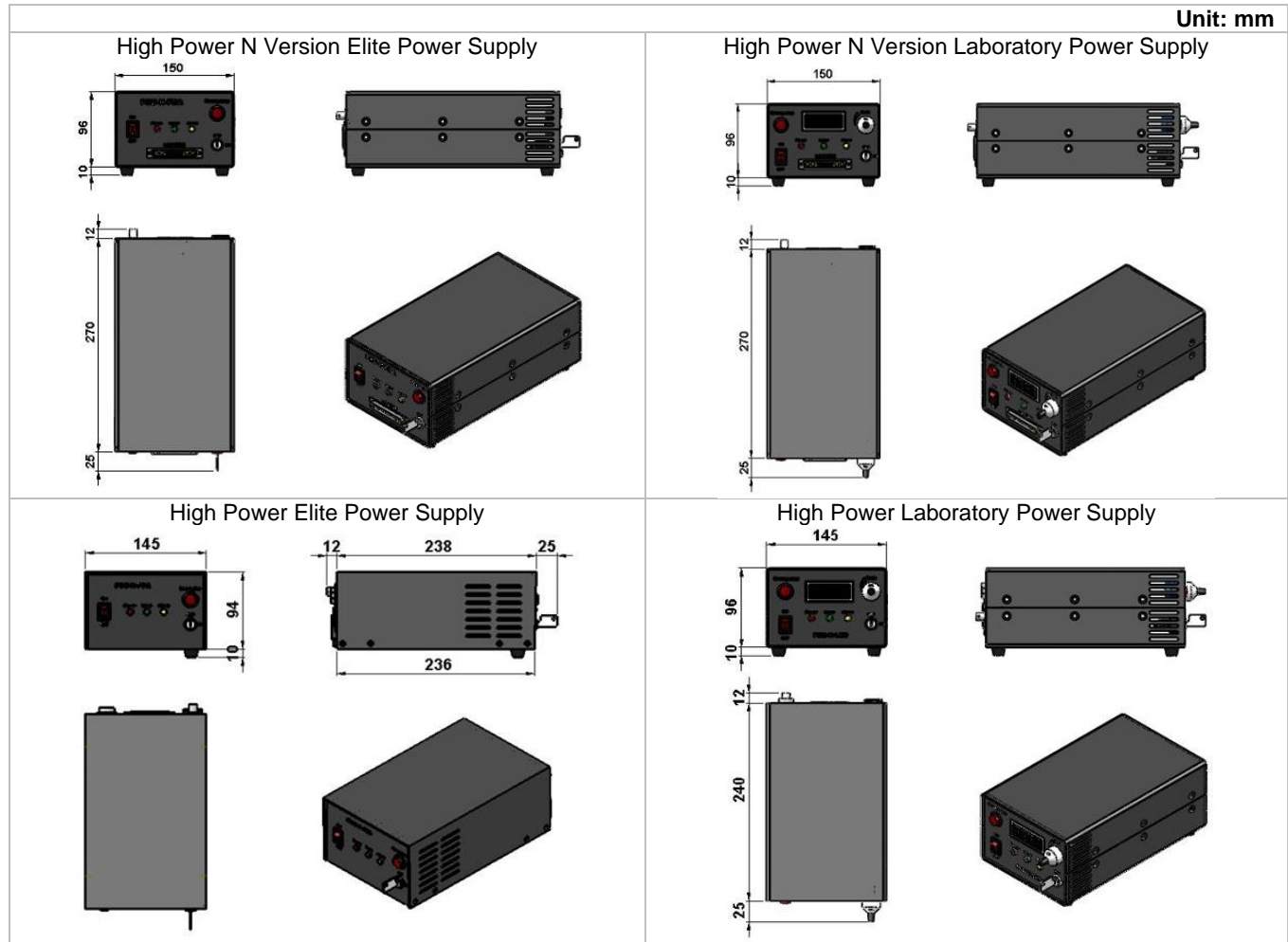
DLHD Series Laser Head Dimensions

Unit: mm



Parameter	DLHD Series
Dimensions	186(L)×117(W) ×93.5(H) mm ³
Weight	3.8 kg
Beam height from base plate	68.2 mm

DLHD Series Power Supply Dimensions



Parameter	High Power N Version Elite Power Supply (405, 650, 655, 660 nm)	High Power N Version Laboratory Power Supply (405, 650, 655, 660 nm)	High Power Elite Power Supply (637, 640, 642 nm)	High Power Laboratory Power Supply (637, 640, 642 nm)
Dimensions	307(L) × 150(W) × 106(H) mm ³	307(L) × 150(W) × 106(H) mm ³	275(L) × 145(W) × 104(H) mm ³	277(L) × 145(W) × 106(H) mm ³
Weight	3.0 kg	3.0 kg	2.1 kg	2.3 kg
Input voltage	100-240VAC	100-240VAC	100-240VAC	100-240VAC
Feature	Standard	Adjustable power	Standard	Adjustable power

Ordering Information

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

Part Number Configuration DLHD[1][2][3][4][5][6]						
DLHD = Laser Model Series	[1] = Wavelength	[2] = Output Power	[3] = Power Supply	[4] = Power Stability	[5] = Modulation	[6] = Polarization Direction
		1H= >1500mW 2W= >2000mW 3W= >3000mW 10W= >10000mW 20W= >20000mW	D=High Power N Version Elite Power Supply V=High Power N Version Laboratory Power Supply H=High Power Elite Power Supply M=High Power Laboratory Power Supply	E=<3% 2=<2% D=<1%	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	M=Horizontal+Vertical

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