



High Power CW Diode Laser System DLXD Series

Data Sheet



Overview

The DLXD series is a family of visible diode lasers that can deliver up to 35000 mW output power. The laser series is available in violet, blue, and red wavelengths and features high power, compact design, long operating lifetime, easy operation, and FDA-compliant system with driver. The DLXD 405/445/447/450nm series laser is used in measurement, communication, and spectrum analysis. The DLXD 454/460/462/465/470nm series laser is used in laser projection, stage lighting, biomedical applications, metrology, etc. The DLXD 635/637/640/642/650/655/660nm series is widely used in measurement, spectrum analysis, laser lighting show, etc.

Features

- Visible violet, blue, and red spectral wavelengths
- CW operating mode
- Optical output power 2000mW to 35000mW
- Ultra-compact design
- FDA compliant

Applications

- Measurement
- Spectrum analysis
- Communication
- Laser projection
- Stage lighting
- Biomedical application
- Metrology

405-460 nm Specifications

Parameter	DLXD405	DLXD445		DLXD447		DLXD450		DLXD454	DLXD460
Wavelength	405 nm	445 nm		447 nm		450 nm		454 nm	460 nm
Wavelength tolerance	±5 nm	±5 nm		±5 nm		±5 nm		±5 nm	±5 nm
Output power	>20000 mW, >21000 mW, >25000 mW, >30000 mW, >35000 mW	>8000 mW, >10000 mW, >12000 mW, >15000 mW	>18000 mW, >20000 mW	>8000 mW, >10000 mW, >12000 mW, >15000 mW	>18000 mW, >20000 mW	>8000 mW, >10000 mW, >12000 mW, >15000 mW	>18000 mW, >20000 mW	>8000 mW, >10000 mW, >12000 mW, >16000 mW	>8000 mW, >10000 mW, >12000 mW, >16000 mW
Operating mode	CW								
Power stability (rms, over 4 hours)	<3%, <2%, <1%	<2%, <1%		<2%, <1%		<2%, <1%		<2%, <1%	<2%, <1%
Polarization direction	Horizontal + Vertical	Horizontal + Vertical		Horizontal + Vertical		Horizontal + Vertical		Horizontal + Vertical	Horizontal + Vertical
Beam diameter at aperture (1/e ²)	~12.0x5.0 mm	~5x5 mm	~7.5x5 mm	~5x5 mm	~7.5x5 mm	~5x5 mm	~7.5x5 mm	~5x5 mm	~5x5 mm
Beam divergence, full angle	~8.0x1.0 mrad	<2.4x2.0 mrad	<2x4 mrad	<2.4x2.0 mrad	<2x4 mrad	<2.4x2.0 mrad	<2x4 mrad	<2.4x2.0 mrad	<2.4x2.0 mrad
Warm-up time	<5 min	<5 min		<5 min		<5 min		<5 min	<5 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.
- Specifications are subject to change without notice.

462-640 nm Specifications

Parameter	DLXD462	DLXD465	DLXD470	DLXD635		DLXD637	DLXD640
Wavelength	462 nm	465 nm	470 nm	635 nm		637 nm	640 nm
Wavelength tolerance	±5 nm	±5 nm	±10 nm	±10 nm		±5 nm	±5 nm
Output power	>8000 mW, >10000 mW, >12000 mW, >16000 mW	>8000 mW, >10000 mW, >12000 mW, >16000 mW	>8000 mW, >10000 mW, >12000 mW, >16000 mW	>2000 mW, >3000 mW	>5000 mW, >8000 mW	>2000 mW, >3000 mW, >4000 mW	>2000 mW, >3000 mW, >4000 mW
Operating mode	CW						
Power stability (rms, over 4 hours)	<2%, <1%	<2%, <1%	<2%, <1%	<2%, <1%		<2%, <1%	<2%, <1%
Polarization direction	Horizontal + Vertical	Horizontal + Vertical	Horizontal + Vertical	Horizontal + Vertical		Horizontal + Vertical	Horizontal + Vertical
Beam diameter at aperture (1/e ²)	~5x5 mm	~5x5 mm	~5x5 mm	~5x4.8 mm	~7x5.5 mm	~5x4 mm	~5x4 mm
Beam divergence, full angle	<2.4x2.0 mrad	<2.4x2.0 mrad	<2.4x2.0 mrad	<1.6x2.8 mrad	<1.6x2.6 mrad	<2.6x1.2 mrad	<2.6x1.2 mrad
Warm-up time	<5 min	<5 min	<5 min	<5 min		<5 min	<5 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.
- Specifications are subject to change without notice.

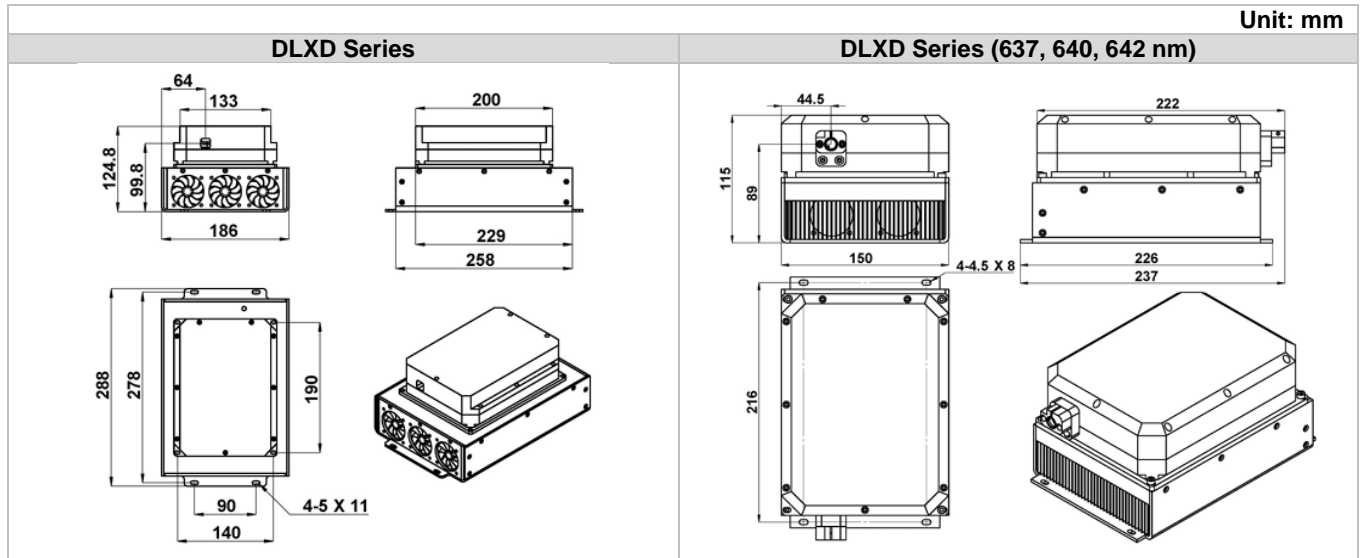
642-660 nm Specifications

Parameter	DLXD642	DLXD650	DLXD655	DLXD660
Wavelength	642 nm	650 nm	655 nm	660 nm
Wavelength tolerance	±5 nm	±10 nm	±10 nm	±5 nm
Output power	>2000 mW, >3000 mW, >4000 mW	>3000 mW, >4500 mW	>3000 mW, >4500 mW	>3000 mW, >4500 mW
Operating mode	CW			
Power stability (rms, over 4 hours)	<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)	~5x4 mm	~9.5x14 mm	~9.5x14 mm	~9.5x14 mm
Beam divergence, full angle	<2.6x1.2 mrad	<3.5x4.0 mrad	<3.5x4.0 mrad	<3.5x4.0 mrad
Warm-up time	<5 min	<5 min	<5 min	<5 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:

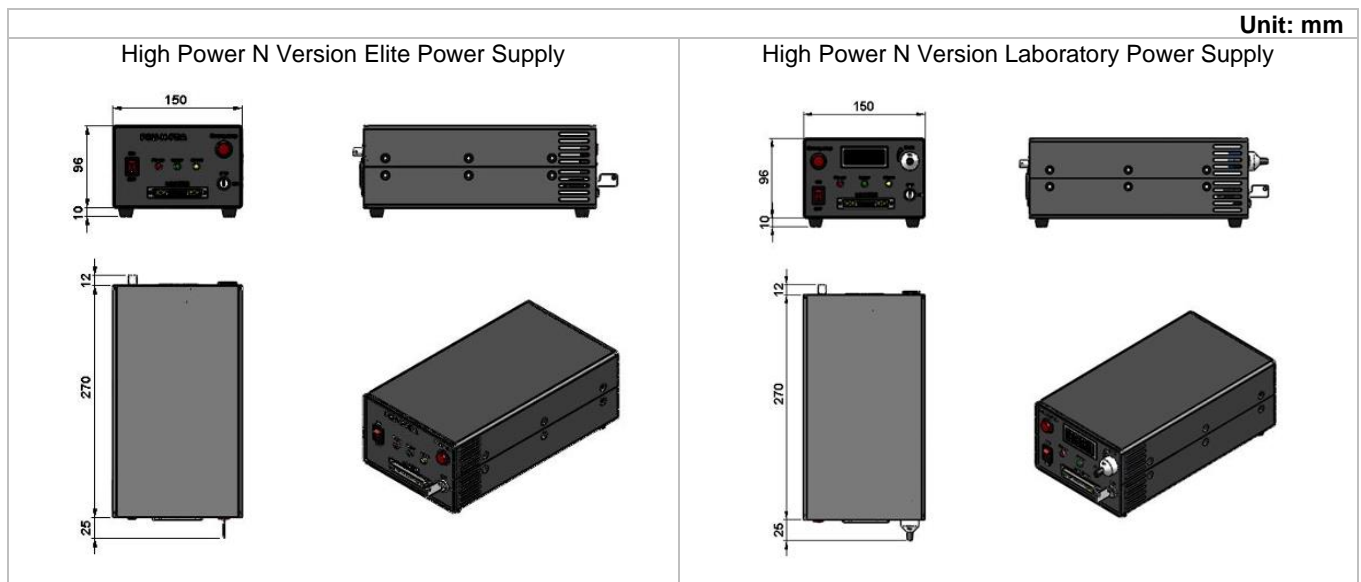
- Specifications of the CW laser is based on the laser performance at full power output after the specified warmup period. The stability of output power may change when output power is adjusted at a different power level.
- Specifications are subject to change without notice.

DLXD Series Laser Head Dimensions



Parameter	DLXD Series	DLXD Series (637, 640, 642 nm)
Dimensions	288(L)×186(W) ×124.8(H) mm ³	237(L)×150(W) ×115(H) mm ³
Weight	6.6 kg	6.6 kg
Beam height from base plate	99.8 mm	89 mm

DLXD Series Power Supply Dimensions



Parameter	High Power N Version Elite Power Supply	High Power N Version Laboratory Power Supply
Dimensions	307(L) ×150(W) ×106(H) mm ³	307(L) ×150(W) ×106(H) mm ³
Weight	3.0 kg	3.0 kg
Input voltage	100-240VAC	100-240VAC
Feature	Standard	Adjustable power

Ordering Information

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

Part Number Configuration DLXD[1][2][3][4][5][6]						
DLXD = Laser Model Series	[1] = Wavelength	[2] = Output Power	[3] = Power Supply	[4] = Power Stability	[5] = Modulation	[6] = Polarization Direction
		2W= >2000mW 3W= >3000mW 4W= >4000mW 4H= >4500mW ... 35W= >35000mW	D= High Power N Version Elite Power Supply V= High Power N Version 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.