

DLF Series

CW Diode Laser System (Visible Blue-IR)



Overview

The DLF Visible-IR series is a family of visible blue and infrared diode lasers that can deliver up to 8000 mW output power. The laser series features a compact design, long operating lifetime, easy operation, and FDA-compliant system with driver. The laser is widely used in scientific research, laser pointing, laser lighting show, RGB mixed laser systems, measurement, communication, spectrum analysis, and many other applications.

Features

- Wide portfolio of 11 different wavelengths
- CW operating mode
- Optical output power 100mW to 8000mW
- Ultra-compact design
- FDA compliant

Applications

- Scientific research
- Laser pointing
- Laser lighting show
- RGB mixed laser systems
- Measurement
- Communication
- Spectrum analysis

445-454 nm Specifications

Parameter	DLF445		DLF447		DLF450		DLF454
Wavelength	445 nm		447 nm		450 nm		454 nm
Wavelength tolerance	±5 nm		±5 nm		±5 nm		±5 nm
Output power	>1500 mW	>2000 mW, >3500 mW	>1500 mW	>2000 mW, >3500 mW	>1500 mW	>2000 mW, >3500 mW	>2000 mW
Operating mode	CW		CW		CW		CW
Transverse mode	Multimode		Multimode		Multimode		Multimode
Power stability (rms, over 4 hours)	<1%		<1%		<1%		<2%, <1%, <0.5%
Beam diameter at aperture (1/e ²)	~2.7x2.7 mm	~3.5x3.5 mm	~2.7x2.7 mm	~3.5x3.5 mm	~2.7x2.7 mm	~3.5x3.5 mm	~2.7x2.7 mm
Beam divergence, full angle	1.4x0.2 mrad		1.4x0.2 mrad		1.4x0.2 mrad		1.4x0.2 mrad
Polarization ratio	>50:1, Horizontal ±5 degree		>50:1, Horizontal ±5 degree		>50:1, Horizontal ±5 degree		>50:1 Horizontal ±5 degree
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
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.

460-470 nm Specifications

Parameter	DLF460	DLF462	DLF465	DLF470
Wavelength	460 nm	462 nm	465 nm	470 nm
Wavelength tolerance	±5 nm	±5 nm	±5 nm	±10 nm
Output power	>2000 mW	>2000 mW	>1000 mW, >1500 mW	>1000 mW, >1500 mW
Operating mode	CW	CW	CW	CW
Transverse mode	Multimode	Multimode	Multimode	Multimode
Power stability (rms, over 4 hours)	<2%, <1%, <0.5%	<2%, <1%, <0.5%	<2%, <1%, <0.5%	<2%, <1%, <0.5%
Beam diameter at aperture (1/e ²)	~2.7x2.7 mm	~2.7x2.7 mm	~2.7x2.7 mm	~2.7x2.7 mm
Beam divergence, full angle	1.4x0.2 mrad	1.4x0.2 mrad	1.4x0.2 mrad	1.4x0.2 mrad
Polarization ratio	>50:1, Horizontal ±5 degree	>50:1, Horizontal ±5 degree	>50:1, Horizontal ±5 degree	>50:1 Horizontal ±5 degree
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
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.

915-1850 nm Specifications

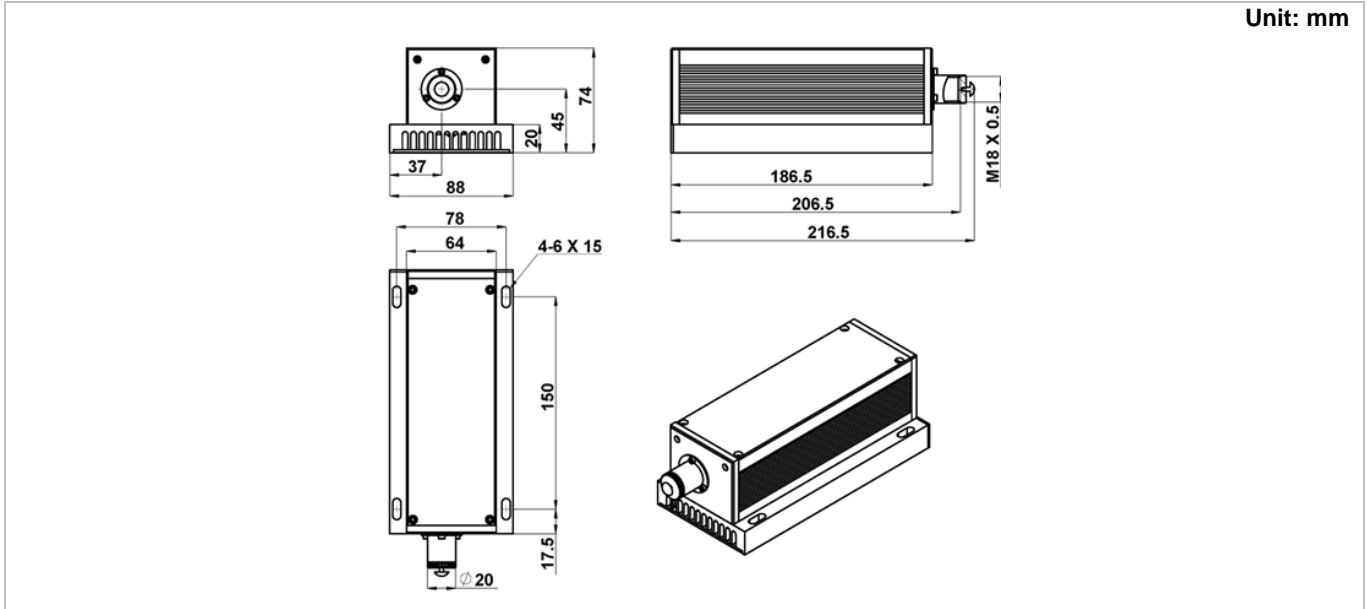
Parameter	DLF915	DLF1120	DLF1850
Wavelength	915 nm	1120 nm	1850 nm
Wavelength tolerance	±5 nm	±25 nm	±30 nm
Output power	>5000 mW, >8000 mW	>3000 mW, >4000 mW, >5000 mW	>100 mW, >200 mW, >300 mW, >500 mW
Operating mode	CW	CW	CW
Transverse mode	Multimode	Multimode	Multimode
Power stability (rms, over 4 hours)	<2%, <1%, <0.5%	<2%, <1%	<2%, <1%
Beam diameter at aperture (1/e ²)	~5x8 mm	~5x8 mm	~5x8 mm
Beam divergence, full angle	<3.0 mrad	<3.0 mrad	<3.0 mrad
Polarization ratio	/	/	/
Warm-up time	<5 min	<5 min	<5 min
Operating temperature	10-35°C	10-35°C	10-35°C
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.

DLF Series Laser Head Dimensions

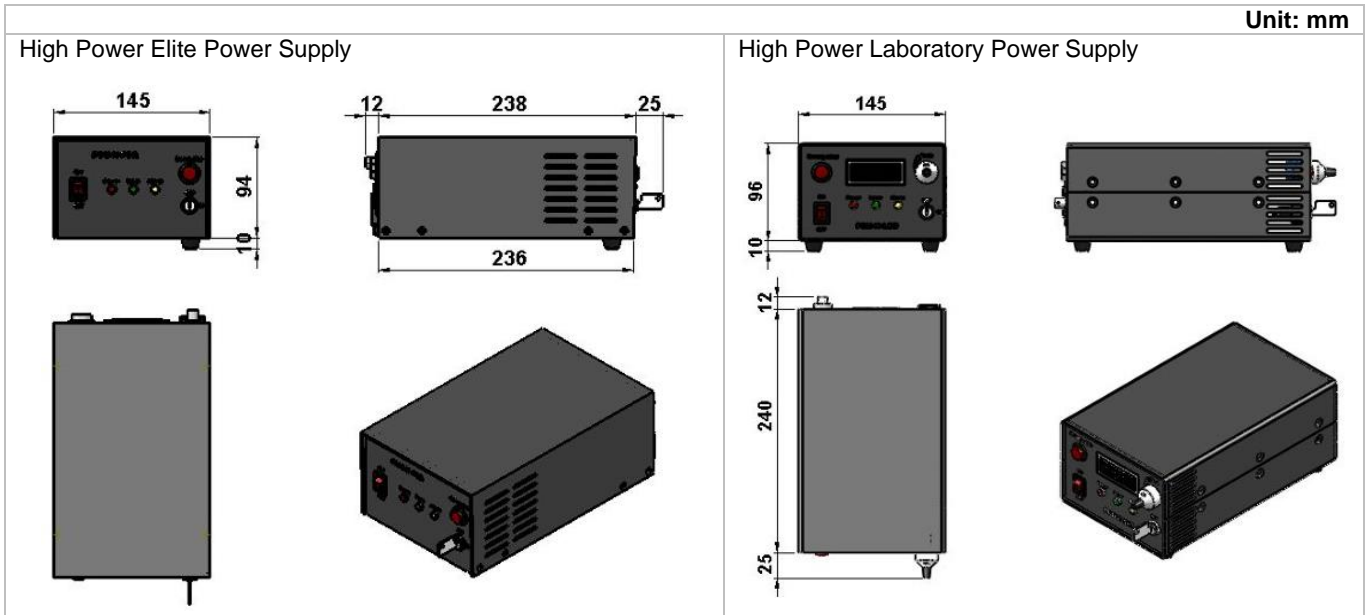
Unit: mm



Parameter	DLF Series
Dimensions	216.5(L)x88(W) x74(H) mm ³
Weight	1.4 kg
Beam height from base plate	45 mm

DLF Series Power Supply Dimensions

Unit: mm



Parameter	High Power Elite Power Supply	High Power Laboratory Power Supply
Dimensions	275(L) x145(W) x104(H) mm ³	277(L) x145(W) x106(H) mm ³
Weight	2.1 kg	2.3 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 DLF[1][2][3][4][5]					
DLF = Laser Model Series	[1] = Wavelength	[2] = Output Power	[3] = Power Supply	[4] = Power Stability	[5] = Modulation
		100= >100mW 200= >200mW 300= >300mW 500= >500mW 1W= >1000mW 1H= >1500mW 2W= >2000mW 2H= >2500mW 3W= >3000mW 3H= >3500mW 4W= >4000mW 5W= >5000mW 8W= >8000mW	H=High Power Elite Power Supply M=High Power Laboratory Power Supply	2=<2% D=<1% S=<0.5%	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

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