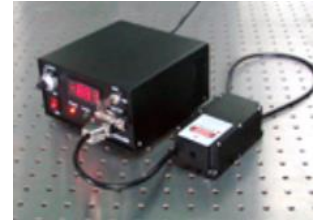




CW Diode Laser System (TEM₀₀ Mode) DLTF Series

Data Sheet



Overview

The DLTF series is a family of visible and near infrared CW diode lasers that offer TEM₀₀ mode and can deliver up to 150 mW output power. The laser series features TEM₀₀ mode, high performance, compact design, long operating lifetime, easy operation and FDA-compliant system with driver. The laser is widely used in measurement, communication, spectrum analysis, and many other applications.

Features

- Available wavelengths: 405nm, 450nm, 488nm, 520nm, 635nm, 640nm, 660nm, 685nm, 785nm, 808nm, 830nm, 1310nm, and 1550nm
- CW operating mode
- Optical output power 1mW to 150mW
- Ultra-compact design
- FDA compliant

Applications

- Measurement
- Communication
- Spectrum analysis

405-635 nm Specifications

Parameter	DLTF405	DLTF450	DLTF488	DLTF520	DLTF635
Wavelength	405±5 nm	450±10 nm	488±5 nm	520±5 nm	635±10 nm
Output power	>10 mW, >30 mW	>10 mW, >30 mW	>10 mW, >20 mW, >30 mW	>10 mW, >20 mW	>10 mW, >20 mW, >40 mW, >60 mW, >80 mW
Transverse mode	TEM ₀₀				
Operating mode	CW				
Power stability (rms, over 4 hours)	<1%	<1%	<1%	<1%	<1%
Ellipticity	>0.95	>0.95	>0.95	>0.95	>0.95
M ² factor	<1.1	<1.1	<1.1	<1.1	<1.1
Beam diameter at aperture (1/e ²)	~1.0 mm	~1.0 mm	~1.0 mm	~1.0 mm	~1.0 mm
Beam divergence, full angle	<1.5 mrad	<1.5 mrad	<1.5 mrad	<1.5 mrad	<1.5 mrad
Warm-up time	<5min				
Operating temperature	25±3°C				
Modulation option	TTL/Analog: 1Hz-1kHz, 1kHz-10kHz, 10kHz-30kHz				
Expected lifetime	10,000 hours				
Warranty period	10 months				

Remarks:

- The laser head needs to be used on a heat sink with good heat dissipation.
- 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.

640-785 nm Specifications

Parameter	DLTF640	DLTF660	DLTF685	DLTF785
Wavelength	640±5 nm	660±5 nm	685±5 nm	785±5 nm
Output power	>10 mW, >20 mW, >30 mW	>10 mW, >30 mW, >50 mW	>5 mW, >10 mW, >20 mW	>10 mW, >40 mW
Transverse mode	TEM ₀₀			
Operating mode	CW			
Power stability (rms, over 4 hours)	<1%	<1%	<1%	<1%
Ellipticity	>0.95	>0.95	>0.95	>0.95
M ² factor	<1.1	<1.1	<1.1	<1.1
Beam diameter at aperture (1/e ²)	~1.0 mm	~1.0 mm	~1.0 mm	~1.0 mm
Beam divergence, full angle	<1.5 mrad	<1.5 mrad	<1.5 mrad	<1.5 mrad
Warm-up time	<5min			
Operating temperature	25±3°C			
Modulation option	TTL/Analog: 1Hz-1kHz, 1kHz-10kHz, 10kHz-30kHz			
Expected lifetime	10,000 hours			
Warranty period	10 months			

Remarks:

- The laser head needs to be used on a heat sink with good heat dissipation.
- 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.

808-1550 nm Specifications

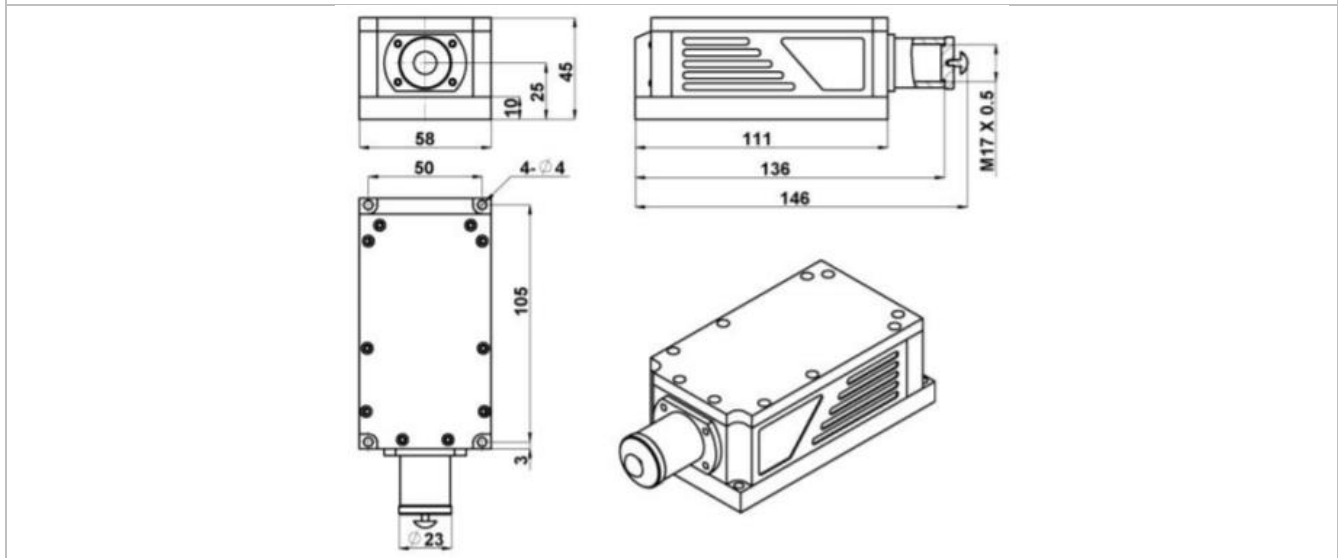
Parameter	DLTF808	DLTF830	DLTF1310	DLTF1550
Wavelength	808±5 nm	830±10 nm	1310±5 nm	1550±5 nm
Output power	>30 mW, >50 mW, >100 mW, >150 mW	>20 mW, >50 mW, >80 mW	>1 mW, >3 mW, >5 mW	>10 mW, >20 mW, >30 mW
Transverse mode	TEM ₀₀			
Operating mode	CW			
Power stability (rms, over 4 hours)	<1%	<1%	<1%	<1%
Ellipticity	>0.95	>0.95	>0.95	>0.95
M ² factor	<1.1	<1.1	<1.1	<1.1
Beam diameter at aperture (1/e ²)	~1.0 mm	~1.0 mm	~1.0 mm	~1.0 mm
Beam divergence, full angle	<1.5 mrad	<1.5 mrad	<1.5 mrad	<1.5 mrad
Warm-up time	<5min			
Operating temperature	25±3°C			
Modulation option	TTL/Analog: 1Hz-1kHz, 1kHz-10kHz, 10kHz-30kHz			
Expected lifetime	10,000 hours			
Warranty period	10 months			

Remarks:

- The laser head needs to be used on a heat sink with good heat dissipation.
- 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.

DLTF Series Laser Head Dimensions

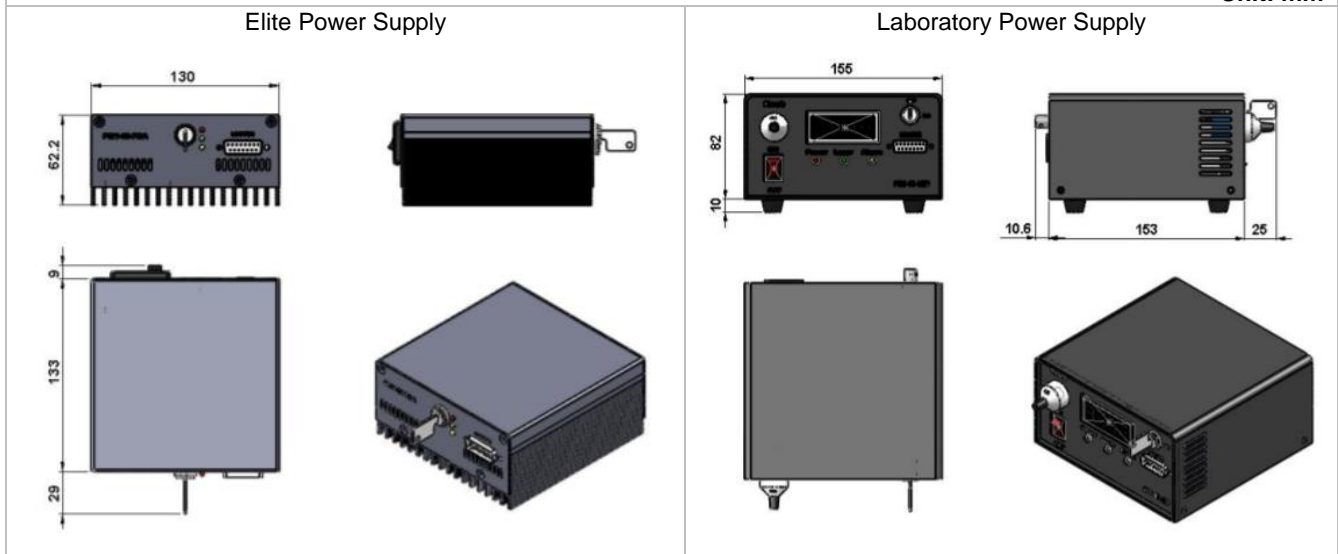
Unit: mm



Parameter	DLTF Series
Dimensions	146(L)×58(W) ×45(H) mm ³
Weight	0.7 kg
Beam height from base plate	25 mm

DLTF Series Power Supply Dimensions

Unit: mm



Parameter	Elite Power Supply	Laboratory Power Supply
Dimensions	171(L) x130(W) x62.2(H) mm ³	188.6(L) x155(W) x92(H) mm ³
Weight	1.2 kg	1.5 kg
Input voltage	85-264VAC	85-264VAC
Feature	Standard	Adjustable power

Ordering Information

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

Part Number Configuration DLTF[1][2][3][4][5]					
DLTF = Laser Model Series	[1] = Wavelength	[2] = Output Power	[3] = Power Supply	[4] = Power Stability	[5] = Modulation
		1= >1mW 3= >3mW 5= >5mW 10= >10mW 20= >20mW 30= >30mW 40= >40mW 50= >50mW 60= >60mW 80= >80mW 100= >100mW 150= >150mW	E=Elite Power Supply L=Laboratory Power Supply	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

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