



Low Noise DPSS Laser System

DPLH Series

Data Sheet



Overview

The DPLH series is a line of diode pumped solid state (DPSS) lasers in the near infrared spectral range with less than 1% noise that can provide output power levels up to 3000mW. The DPLH laser series features a compact design, low noise, long lifetime, easy operation, and FDA-compliant system with driver. The DPLH series laser is used in scientific experiment, optical instrument, optical sensor, measurement, communication, spectrum analysis, and many other applications.

Features

- Infrared at 914nm, 946nm, 1040nm, 1047nm, 1053nm, 1064nm, 1313nm, 1319nm and 1342nm
- CW operating mode
- Optical output power 30mW to 3000mW
- Low noise
- Ultra-compact design
- FDA compliant

Applications

- Scientific experiment
- Optical instrument
- Optical sensor
- Communication
- Spectrum analysis

914-1040 nm Specifications

Parameter	DPLH914	DPLH946	DPLH1040	DPLH1047	DPLH1053	DPLH1064
Wavelength	914±1 nm	946±1 nm	1040±1	1047±1 nm	1053±1 nm	1064±1 nm
Output power	>100 mW, >200 mW, >300 mW, >500 mW, >800 mW	>100 mW, >300 mW, >500 mW, >800 mW	>30, >50, >80, >100	>100 mW, >300 mW, >500 mW, >800 mW, >1000 mW	>300 mW, >500 mW, >800 mW, >1000 mW, >1500 mW	>2000 mW, >3000 mW
Transverse mode	TEM ₀₀					
Operating mode	CW					
Noise of amplitude (rms, 1Hz-20MHz)	<1%	<1%	<3%	<1%	<1%	<1%
Power stability (rms, over 4 hours)	<5%, <3%, <2%, <1%	<5%, <3%, <2%, <1%	<5%, <3%	<5%, <3%, <2%	<5%, <3%, <2%, <1%	<3%, <2%, <1%
Spectral linewidth	<0.2 nm	<0.2 nm	<0.2 nm	<0.2 nm	<0.2 nm	<0.2 nm
M ² factor	<2.0	<2.0	<1.2	<2.0	<2.0	<2.0
Beam diameter at aperture (1/e ²)	~1.5 mm	~1.5 mm	~1.5 mm	~1.5 mm	~1.5 mm	~1.5 mm
Beam divergence, full angle	<2.0 mrad	<2.0 mrad	<2.0 mrad	<2.0 mrad	<2.0 mrad	<2.0 mrad
Polarization ratio	/	/	>3:1 (Arbitrary degree)	>100:1	>100:1	>100:1
Warm-up time	<5 min	<5 min	<5 min	<5 min	<5 min	<5 min
Pointing stability after warm-up	<0.05 mrad	<0.05 mrad	<0.05 mrad	<0.05 mrad	<0.05 mrad	<0.05 mrad
Operating temperature	10-35°C					
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.

1313-1342 nm Specifications

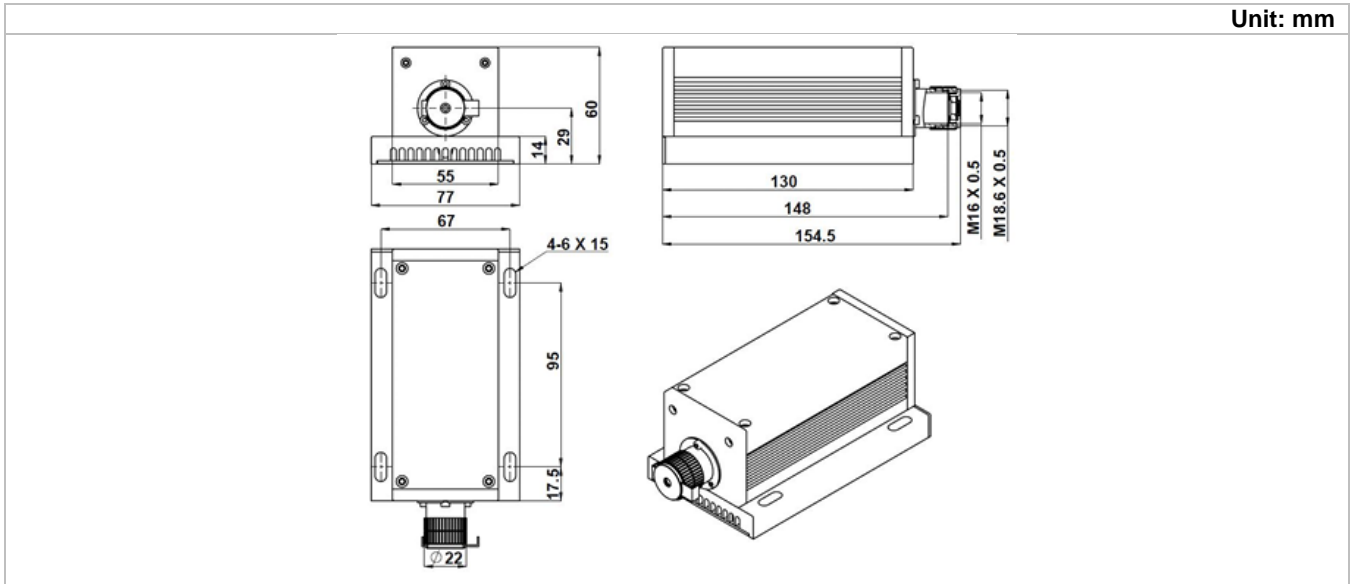
Parameter	DPLH1313	DPLH1319	DPLH1342
Wavelength	1313±1 nm	1319±1 nm	1342±1 nm
Output power	>100 mW, >300 mW, >500 mW, >800 mW	>1500 mW	>1500 mW, >2000 mW
Transverse mode	TEM ₀₀	TEM ₀₀	TEM ₀₀
Operating mode	CW	CW	CW
Noise of amplitude (rms, 1Hz-20MHz)	<1%	<1%	<1%
Power stability (rms, over 4 hours)	<3%, <2%, <1%	<5%, <3%, <2%	<5%, <3%, <2%, <1%
Spectral linewidth	<0.2 nm	<0.2 nm	<0.2 nm
M ² factor	<2.0	<2.0	<2.0
Beam diameter at aperture (1/e ²)	~1.5 mm	~1.5 mm	~1.5 mm
Beam divergence, full angle	<2.0 mrad	<2.0 mrad	<2.0 mrad
Polarization ratio	>100:1	>100:1	>100:1
Warm-up time	<5 min	<5 min	<5 min
Pointing stability after warm-up	<0.05 mrad	<0.05 mrad	<0.05 mrad
Operating temperature	10-35°C		
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.

DPLH Series Laser Head Dimensions

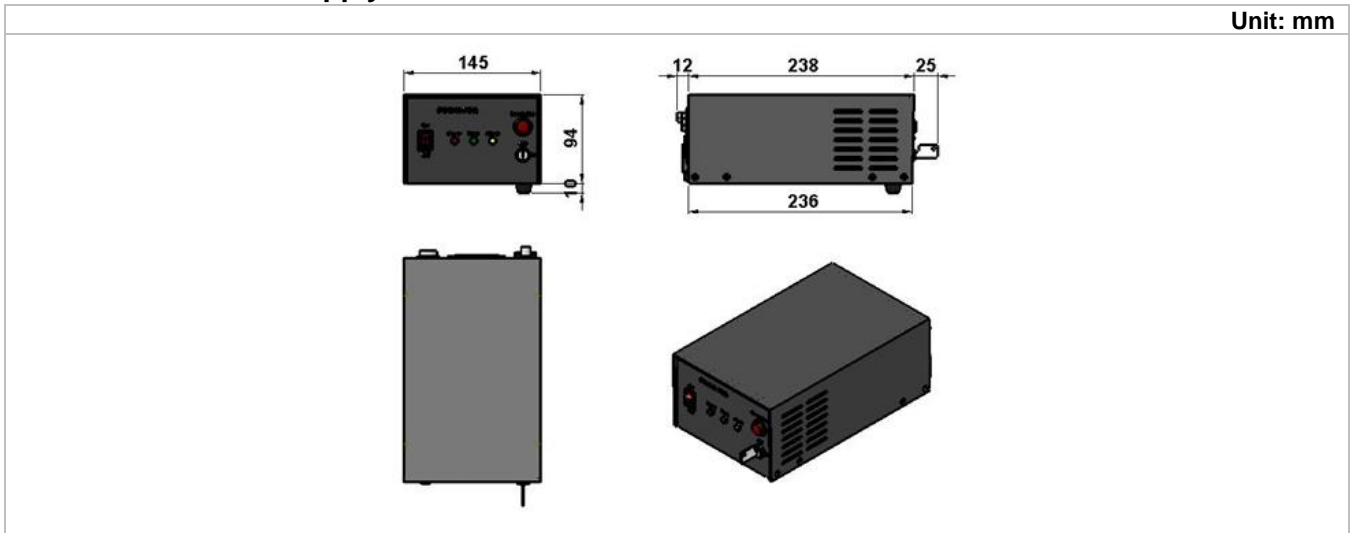
Unit: mm



Parameter	DPLH Series
Dimensions	154.5(L)×77(W) ×60(H) mm ³
Weight	0.9 kg
Beam height from base plate	29 mm

DPLH Series Power Supply Dimensions

Unit: mm



Parameter	High Power Elite Power Supply
Dimensions	275(L) ×145(W) ×104(H) mm ³
Weight	2.3 kg
Input voltage	90-264VAC

Ordering Information

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

Part Number Configuration DPLH[1][2][3][4][5][6]						
DPLH = Laser Model Series	[1] = Wavelength	[2] = Output Power	[3] = Power Supply	[4] = Power Stability	[5] = Noise of Amplitude	[6] = Spectral Linewidth
	914= 914nm 946= 946nm 1040= 1040nm 1047= 1047nm 1053= 1053nm 1064= 1064nm 1313= 1313nm 1319= 1319nm 1342= 1342nm	30= >30mW 50= >50mW 100= >100mW ... 1W= >1000mW 1H= >1500mW 2W= >2000mW 3W= >3000mW	H=High Power Elite Power Supply	A=<5% E=<3% 2=<2% D=<1%	1= <1%	K=<0.2nm

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