



DLXS450 Series 450nm Laser Diode Modules with Shutter

With Shutter as Safety Feature, Built-in TEC Cooler, ACC Circuit Design, and Optional TTL or Analog Modulation

Overview

The DLXS450 series laser diode module is a diode laser designed for applications that require a wavelength of 450nm and output power up to 30mW. The diode laser features integrated electronics, shutter for protection, built-in TEC cooler, Automatic Current Control (ACC) circuit design, plug and play, good beam profile, miniaturization, international standard interface and optional TTL or Analog modulation. The laser is the ideal solution for a wide range of applications, including life sciences, environmental monitoring, inspection, and machine vision.

Features

- Integrated electronics
- Plug and play
- Good beam profile
- Miniaturization

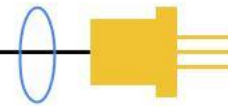


Specifications

Model Number		DLXS450-PFIDQ
Wavelength (nm)		450±5
Output power (mW)		>30 (P=30)
Transverse mode		Near TEM ₀₀
Operating mode		CW
Power stability (rms, over 4 hours)		<1%
Noise of amplitude (rms, 20Hz-20MHz)		<1% **<0.5% may be available upon request.
M ² factor		<1.2
Beam diameter at aperture (1/e ² , mm)		~1.2
Beam divergence, full angle (mrad)		<1.0
Polarization ratio		>50:1, Horizontal ±5 degree
Warm-up time (minutes)		<5
Beam height from base plate (mm)		19
Operating temperature (°C)		10 to 35
Laser module	Dimensions	74.4(L) x40(W) x40(H) mm ³
	Weight	0.2 kg
Operating voltage		12VDC 4A
Modulation	None	None (Q=0)
	TTL	1Hz-1kHz (Q=T1), 1kHz-10kHz (Q=T2), 10kHz-30kHz (Q=T3), 30kHz-100kHz (Q=T4), 100kHz-300kHz (Q=T5), 300kHz-500kHz (Q=T6), 500kHz-1MHz (Q=T7)
	Analog	1Hz-1kHz (Q=A1), 1kHz-10kHz (Q=A2), 10kHz-30kHz (Q=A3), 30kHz-100kHz (Q=A4)
Optional AC adapter (Part No. AC12DC)	Input voltage	100-240VAC
	Dimensions	121(L) x50(W) x30.8(H) mm ³
	Weight	0.3 kg
Expected lifetime (hours)		10,000
Warranty		10 months

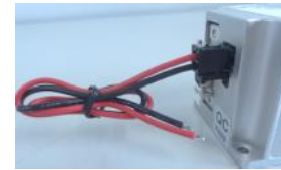
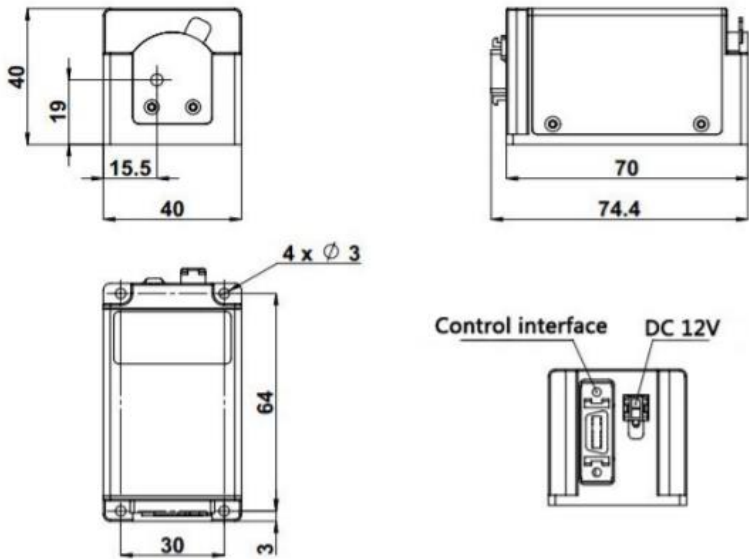
Remarks:

1. The stability of output power may change when you adjust the output power.
2. The laser head needs to be used on a heat sink with good heat dissipation.

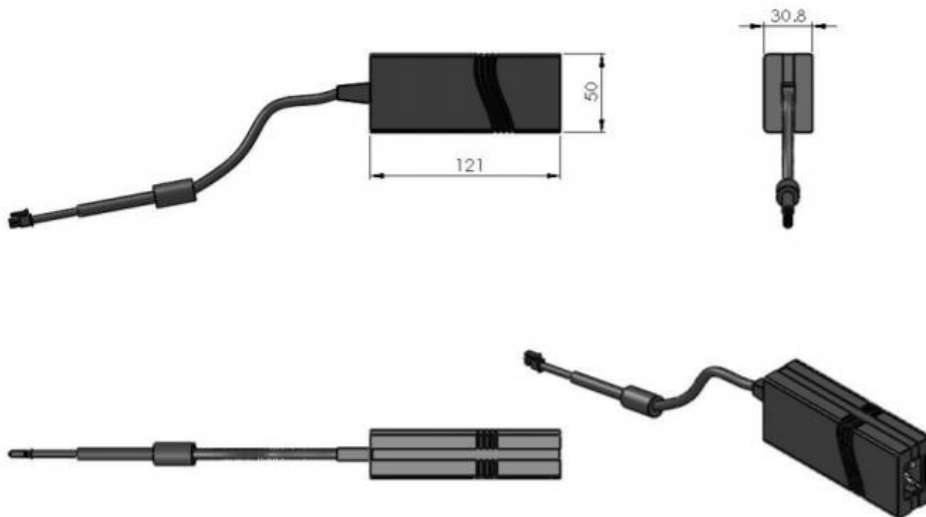


Outline Dimensions (unit: mm)

Laser Module



Optional AC Adaptor (Part No. AC12DC)



Additional Notes

- The DLXS450 series laser modules are designated solely as OEM components for incorporation into the customer's end products. Therefore, it is the customer's responsibility to comply with the appropriate requirements of FDA 21CFR, section 1040.10 and 1040.11 for complete laser products. For the code of FDA regulations, please refer to [FDA Performance Standards for Light-Emitting Products](#) for detailed information.
- Additional heat sink may be needed if the laser module is operated continuously for a long period of time.
- Specifications are subject to change without notice.