



Water Cooled Single Frequency Laser System

SLMR Series

Data Sheet

Overview

The SLMR series is a family of visible and infrared CW lasers with single frequency and delivers up to 10000mW output power. The laser series features narrow spectral linewidth, long coherent length, long lifetime, easy operating, and FDA-compliant system with driver. The laser is widely used in DNA sequencing, flow cytometry, cell sorting, optical instrument, spectrum analysis, interference, measurement, holography, physics experiment, and many other applications.

Features

- Available wavelengths: 457nm, 532nm, 639nm, 1064nm, and 1342nm
- Single frequency / single longitudinal mode
- CW operating mode
- Optical output power 500mW to 10000mW
- Water-cooled
- FDA compliant

Applications

- DNA sequencing
- Flow cytometry
- Cell sorting
- Optical instrument
- Spectrum analysis
- Interference
- Measurement
- Holography
- Physics experiment

457-1342 nm Specifications

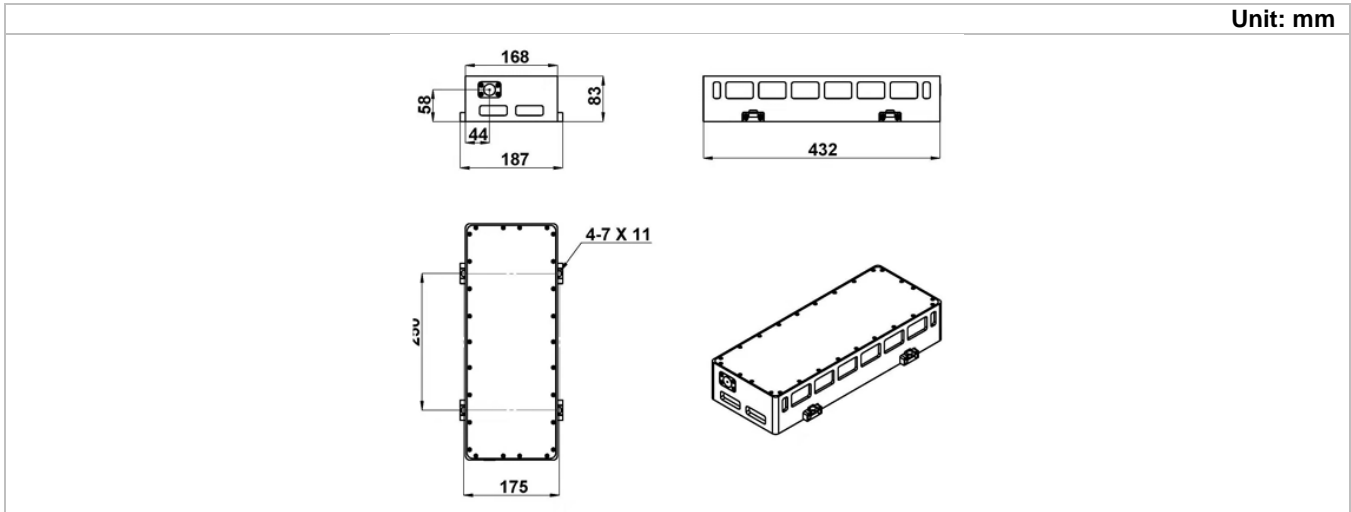
Parameter	SLMR457	SLMR532	SLMR639	SLMR1064	SLMR1342
Wavelength	457±1 nm	532±1 nm	639±1 nm	1064±1 nm	1342±1 nm
Operating mode	CW	CW	CW	CW	CW
Output power	>500 mW, >1000 mW, >1500 mW, >2000 mW	>1000 mW, >2000 mW, >3000 mW, >4000 mW, >5000 mW, >8000 mW, >10000 mW	>1000 mW, >1500 mW, >2000 mW, >3000 mW	>1000 mW, >2000 mW, >5000 mW, >8000 mW, >10000 mW	>500 mW, >1000 mW, >2000 mW, >3000 mW, >4000 mW, >5000 mW
Power stability (rms, over 4 hours)	<3%, <1%	<3%, <2%, <1%	<3%, <2%, <1%	<5%, <3%, <2%, <1%	<5%, <3%, <2%, <1%
Transverse mode	TEM ₀₀	TEM ₀₀	TEM ₀₀	TEM ₀₀	TEM ₀₀
Longitudinal mode	Single	Single	Single	Single	Single
Spectral linewidth	<0.00001 nm	<0.00001 nm	<0.00001 nm	<0.00001 nm	<0.00001 nm
Coherent length	>50 m	>50 m	>50 m	>50 m	>50 m
Noise of amplitude (rms, 20Hz-20MHz)	<1%	<1%	<0.5%	<0.5%	<0.5%
Beam diameter at aperture (1/e ²)	<1.5 mm	<1.5 mm	~1.5 mm	~1.5 mm	~1.5 mm
Beam divergence, full angle	<1.5 mrad	<1.5 mrad	<1.5 mrad	<1.5 mrad	<1.5 mrad
M ² factor	<1.5	<1.2	<1.5	<1.5	<1.5
Polarization ratio	>100:1	>100:1	>100:1	>100:1	>100:1
Warm-up time	<15min	<15min	<15min	<15min	<15min
Pointing stability after warm-up	<0.05 mrad	<0.05 mrad	<0.05 mrad	<0.05 mrad	<0.05 mrad
Operating temperature	20-25°C	20-25°C	20-30°C	20-30°C	20-30°C
Cooling method	Water cooled	Water cooled	Water cooled	Water cooled	Water cooled
Expected lifetime	10,000 hours	10,000 hours	10,000	10,000 hours	10,000 hours
Warranty period	10 months	10 months	10 months	10 months	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.

SLMR Series Laser Head Dimensions

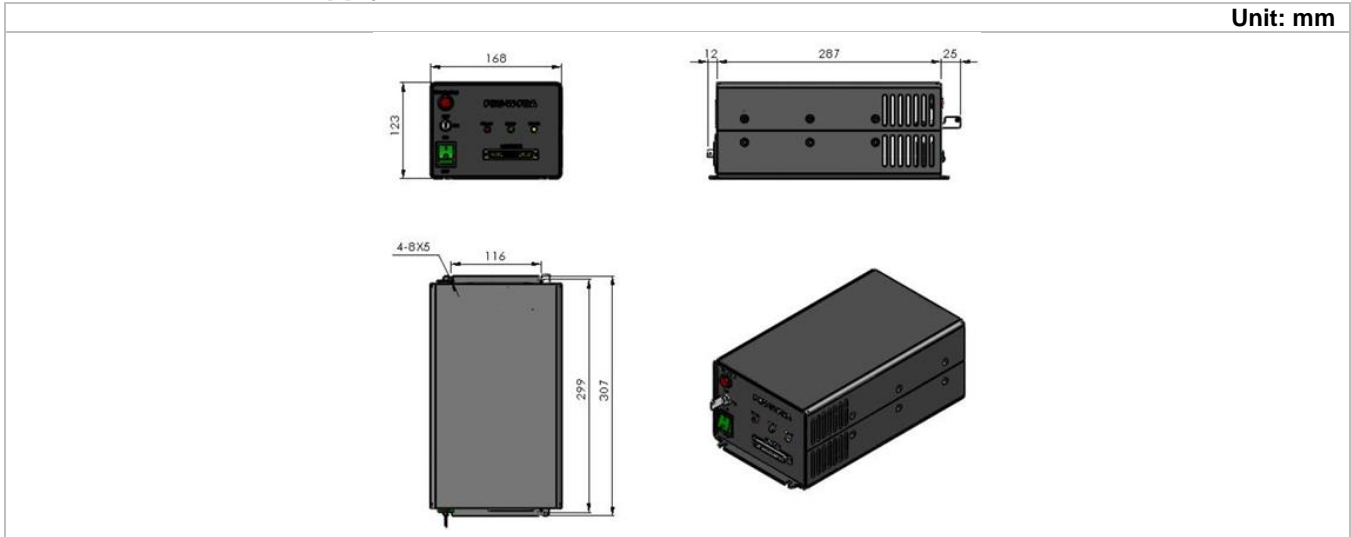
Unit: mm



Parameter	SLMR Series
Dimensions	432(L)×187(W) ×83(H) mm ³
Weight	11.5 kg
Beam height from base plate	58 mm
Beam exit (from side)	44 mm

SLMR Series Power Supply Dimensions

Unit: mm



Parameter	High Power W Version Elite Power Supply
Dimensions	324(L) x168(W) x123(H) mm ³
Weight	4.0 kg
Input voltage	90-264VAC

SLMR Series Chiller Dimensions

		Unit: mm
457 nm	532, 639, 1064, 1342 nm	
		

Parameter	457 nm	532, 639, 1064, 1342 nm
Dimensions	197(L)x279(W) x343(H) mm ³	253.2(L)x363.8(W) x240.6(H) mm ³
Weight	10 kg	11 kg

Ordering Information

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

Part Number Configuration SLMR[1][2][3][4][5]					
SLMR = Laser Model Series	[1] = Wavelength	[2] = Output Power	[3] = Power Supply	[4] = Power Stability	[5] = Water Chiller
	457= 457nm 532= 532nm 639= 639nm 1064= 1064nm 1342= 1342nm	500= >500mW 1W= >1000mW 1H= >1500mW 2W= >2000mW ... 10W= >10000mW	W= High Power W Version Elite Power Supply	A= <5% E= <3% 2= <2% D= <1%	Blank = No C = Yes

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