



SLMFNS639 Series Frequency Stabilized 639nm Single Longitudinal Mode Laser System up to 300mW

Overview

The SLMFNS639 series frequency stabilized single longitudinal mode laser is ideal for applications that require a wavelength of 639nm and output power levels up to 300mW. The laser is constructed with features of stable frequency, low frequency noise, internal SLM calibration, and FDA-compliant system with driver. The laser is widely used in optical frequency standards, gravitation wave detection, tests of fundamental physics, atomic clocks, high resolution spectrum, laser radar, precision measurement and many other applications.



Specifications

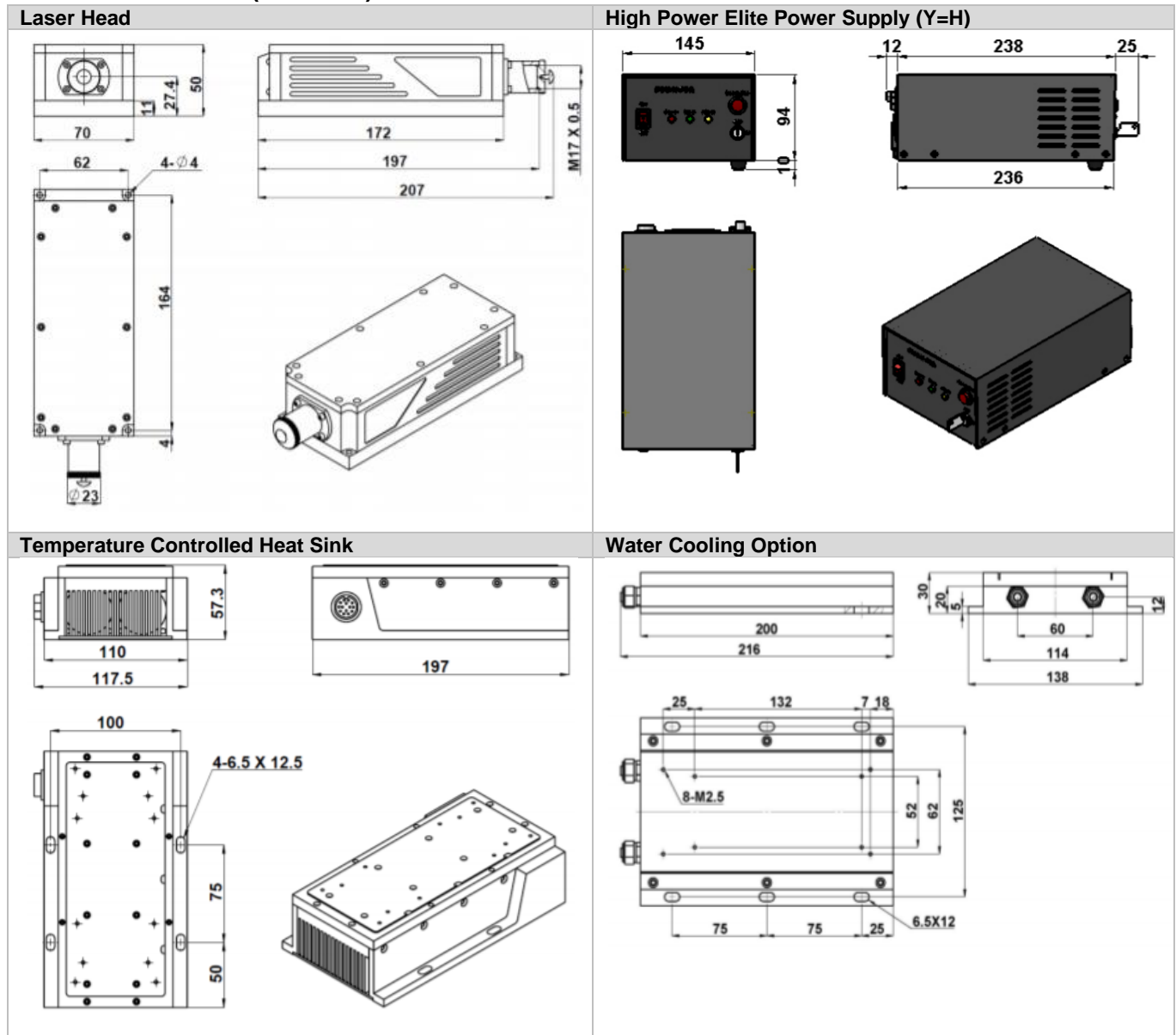
Model Number	SLMFNS639-XYP-C	
Wavelength (nm)	639±1	
Operating mode	CW	
Output power (mW)	>50 (X=50), >100 (X=100), >150 (X=150), >200 (X=200), >250 (X=250), >300 (X=300)	
Power stability (rms, over 4 hours)	<5% (P=A), <3% (P=E), <1% (P=D)	
Transverse mode	TEM ₀₀	
Longitudinal mode	Single	
Spectral linewidth (nm)	<0.00001	
Noise of amplitude (rms, 1Hz~20MHz)	<1%, typical <0.5%	
Beam diameter at aperture (1/e ² , mm)	<1.5	
Beam divergence, full angle (mrad)	<1.5	
Polarization ratio	>100:1, Horizontal ±5 degree	
M ² factor	<1.2	
Coherent length (m)	>40	
Warm-up time (minutes)	<45	
Pointing stability after warm-up (urad/°C)	6	
Frequency shift over 8 hours (MHz)	<±100 (±0.15pm)	
Frequency shift over Temp 15-40 °C (MHz/°C)	<40 (0.05pm/°C)	
Laser head consumption (W)	20 (typical), <30 (40 °C)	
Beam height from base plate (mm)	27.4	
Operating temperature (°C)	15-35	
Dimensions of laser head (mm)	197(L)×70(W) ×50(H) mm ³	
Weight of laser head (kg)	2.0 kg	
Power supply		
High Power Elite Power Supply (Y=H)	Input voltage	90-264VAC
	Dimensions	275(L) ×145(W) ×104(H) mm ³
	Weight	2.3 kg
	Notes	Fixed output power
Dimensions of Temperature controlled heat sink	197(L)×117.5(W) ×57.3(H) mm ³	
Weight of Temperature controlled heat sink	1.6 kg	
Water cooling option	No (C=blank); Yes (C=W)	
	Dimensions	216(L) ×138(W) ×30(H) mm ³
	Weight	1.2 kg
Expected lifetime (hours)	10,000	
Warranty period	10 months	
FDA Compliance	FDA CDRH Title 21 CFR 1040.10/11 Class IIIb	

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.



Outline Dimensions (unit: mm)



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