



## SLMFNS457 Series Frequency Stabilized 457nm Single Longitudinal Mode Laser System up to 300mW

### Overview

The SLMFNS457 series frequency stabilized single longitudinal mode laser is ideal for applications that require a wavelength of 457nm and output power levels up to 300mW. The laser is constructed with features of stable frequency, low frequency noise, 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

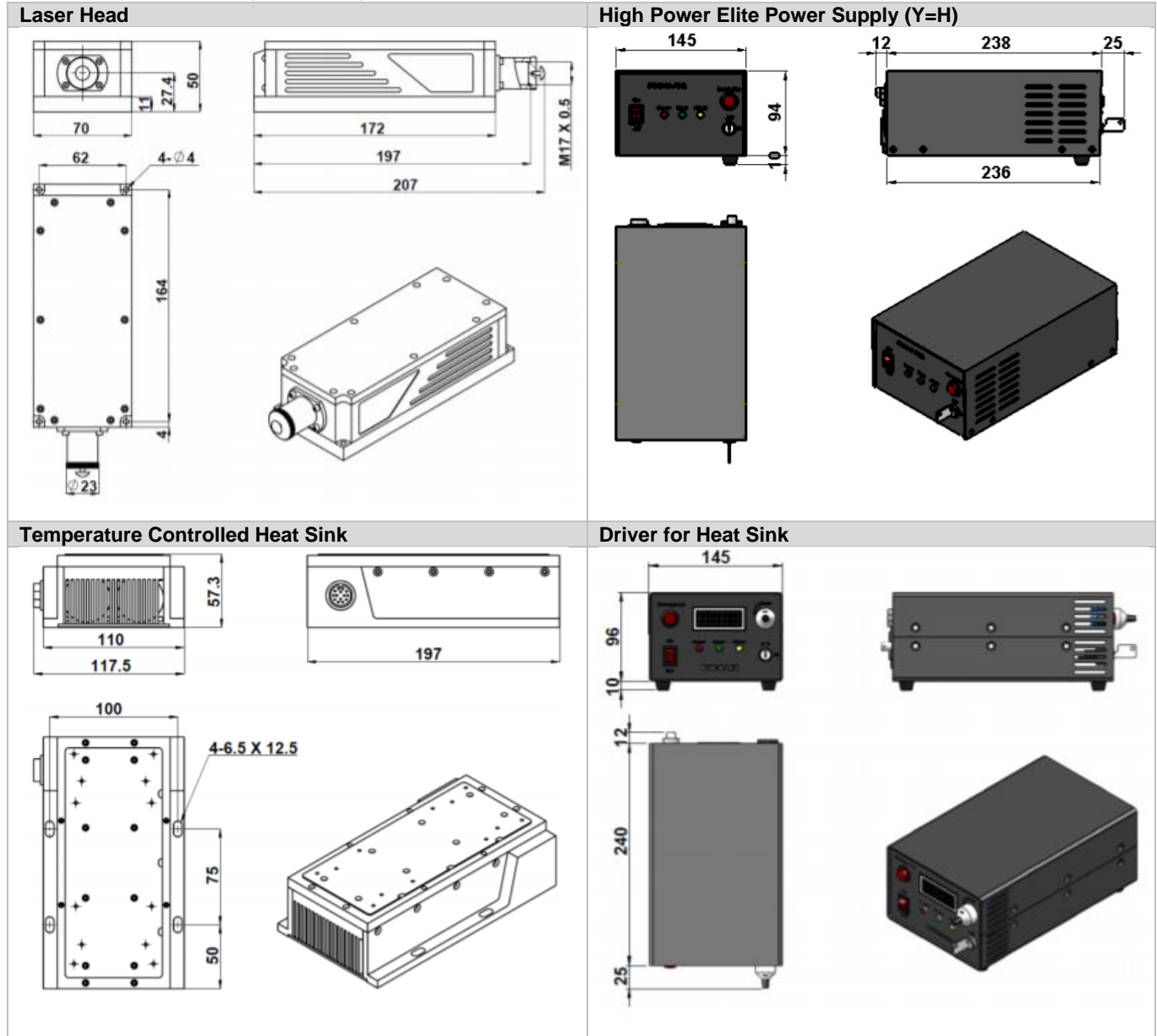
<b>Model Number</b>		<b>SLMFNS457-XYP</b>	
Wavelength (nm)		457±1	
Operating mode		CW	
Output power (mW)		>30 (X=30), >50 (X=50), >100 (X=100)	>150 (X=150), >200 (X=200), >300 (X=300)
Power stability (rms, over 4 hours)		<5% (P=A), <3% (P=E), <1% (P=D)	<5% (P=A), <3% (P=E)
Transverse mode		TEM <sub>00</sub>	Near TEM <sub>00</sub>
Longitudinal mode		Single	
Spectral linewidth (nm)		<0.00001	
Noise of amplitude (rms, 1Hz~20MHz)		<1% (typical <0.5%)	
Beam diameter at aperture (1/e <sup>2</sup> , mm)		<2.0	
Beam divergence, full angle (mrad)		<1.2	
Polarization ratio		>100:1, Vertical ±5 degree	
M <sup>2</sup> factor		<1.2	
Coherent length (m)		>50	
Warm-up time (minutes)		<10	
Pointing stability after warm-up (mrad)		<0.05	
Frequency shift over 8 hours (MHz)		<±200	
Frequency shift with Temp (MHz/°C)		<200	
Dimensions of laser head (mm)		197(L)×70(W) ×50(H) mm <sup>3</sup>	
Weight of laser head (kg)		2.0 kg	
<b>Power supply</b>			
<b>High Power Elite Power Supply (Y=H)</b>	Input voltage	90-264VAC	
	Dimensions	236(L) ×145(W) ×104(H) mm <sup>3</sup>	
	Weight	2.3 kg	
	Notes	Fixed output power	
Dimensions of Temperature controlled heat sink		197(L)×117.5(W) ×57.3(H) mm <sup>3</sup>	
Weight of Temperature controlled heat sink		1.6 kg	
Driver for heat sink	Input voltage	90-240VAC	
	Dimensions	277(L)×145(W) ×106(H) mm <sup>3</sup>	
	Weight	2.6 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.