

SLMUS457 Series Frequency Stabilized 457nm Single Longitudinal Mode Laser System up to 400mW

Overview

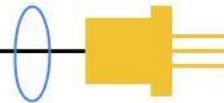
The SLMUS457 series frequency stabilized single longitudinal mode laser is ideal for applications that require a wavelength of 457nm and output power levels up to 400mW. The laser features stable frequency, low frequency noise, and FDA-compliant system with driver. The laser is widely used in scientific experiment, medical measurement, instrument, spectrum analysis and many other applications.

Specifications

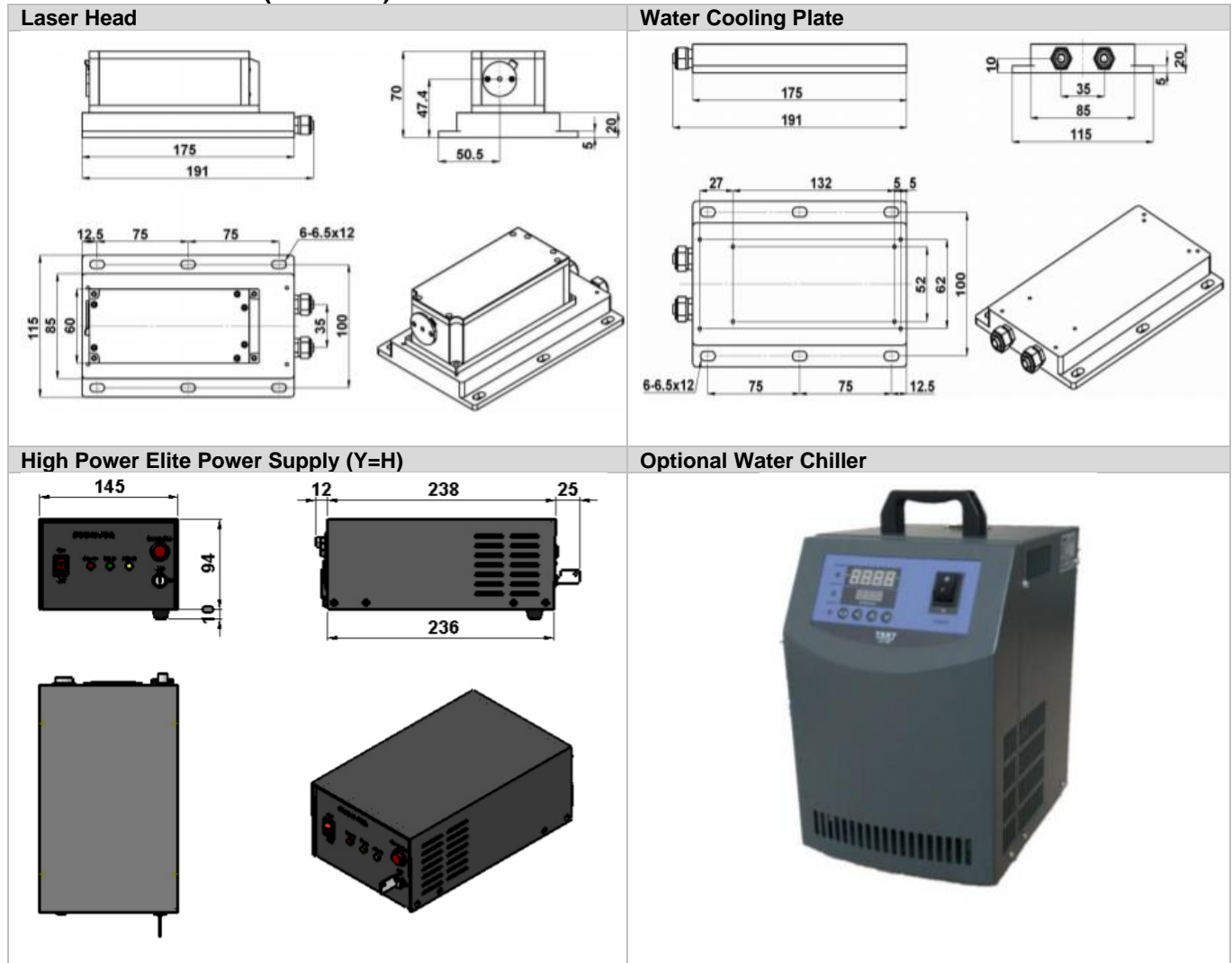
Model Number	SLMUS457-XYPZ-W	
Wavelength (nm)	457±1	
Operating mode	CW	
Output power (mW)	>30 (X=30), >50 (X=50), >100 (X=100), >150 (X=150), >200 (X=200), >300 (X=300), >400 (X=400)	
Power stability (rms, over 4 hours)	<3% (P=E), <2% (P=2), <1% (P=D)	
Transverse mode	TEM ₀₀	
Longitudinal mode	Single	
Spectral linewidth (nm)	<0.00001	
Coherent length (m)	>50	
Frequency shift over 24 hours (MHz)	<±350 (±0.25pm)	
Frequency shift over water cooling temp (pm/°C)	~0.2pm/0.1 °C	
Noise of amplitude (rms, 1Hz-20MHz)	<1% (Z=1), <0.5% (Z=L)	
Beam diameter at aperture (1/e ² , mm)	0.70±0.05	
Beam divergence, full angle (mrad)	<1.5	
M ² factor	<1.5	
Polarization ratio	>100:1, Vertical ±5 degree	
Warm-up time (minutes)	<20	
Pointing stability after warm-up (urad/°C)	<6	
Beam height from base plate (mm)	47.4	
Laser head consumption (W)	15 (typical), <25 (40°C)	
Cooled method	Water cooled	
Operating temperature (°C)	20-30	
Dimensions of laser head (mm)	142.5(L)×60(W) ×50(H) mm ³	
Weight of laser head (kg)	1.0 kg	
Dimensions of water-cooling plate (mm)	142.5(L)×60(W) ×50(H) mm ³	
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
Optional Water chiller	No (W=blank), Yes (W=C)	
Dimensions of water chiller (mm)	275(L) ×230(W) ×330(H) mm ³	
Weight of water chiller (kg)	18 kg	
Expected lifetime (hours)	10,000	
Warranty period	10 months	
FDA Compliance	FDA CDRH Title 21 CFR 1040.10/11 Class IIIb	

Remarks:

- The laser head needs to be used on a water-cooling system.
- 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.