



## SLMFNS1053 Series Frequency Stabilized 1053nm Single Longitudinal Mode Laser System up to 200mW

### Overview

The SLMFNS1053 series frequency stabilized single longitudinal mode laser is ideal for applications that require a wavelength of 1053nm and output power levels up to 200mW. 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>SLMFNS1053-XYP</b>	
Wavelength (nm)	1053±1	
Operating mode	CW	
Output power (mW)	>100 (X=100)	>150 (X=150), >200 (X=200)
Power stability (rms, over 4 hours)	<5% (P=A), <3% (P=E), <2% (P=2), <1% (P=D)	<5% (P=A), <3% (P=E), <2% (P=2)
Transverse mode	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)	<1.5	
M <sup>2</sup> factor	<1.5	
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	
Power supply		
High Power Elite Power Supply (Y=H)	Input voltage	90-264VAC
	Dimensions	275(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	
Dimensions of Driver for heat sink	277(L)×145(W) ×106(H) mm <sup>3</sup>	
Weight of Driver for heat sink	2.6 kg	
Expected lifetime (hours)	10,000	
Warranty period	10 months	
FDA Compliance	FDA CDRH Title 21 CFR 1040.10/11 Class IV	

#### 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)**

Laser Head	High Power Elite Power Supply (Y=H)
<p>Technical drawings of the Laser Head showing front, side, and isometric views with dimensions: 70, 27.4, 50, 1.1, 62, 4-Ø4, 164, 4, 172, 197, 207, M17 X 0.5, 23.</p>	<p>Technical drawings of the High Power Elite Power Supply showing front, side, and isometric views with dimensions: 145, 94, 10, 12, 238, 25, 236.</p>
Temperature Controlled Heat Sink	Driver for Heat Sink
<p>Technical drawings of the Temperature Controlled Heat Sink showing front, side, and isometric views with dimensions: 110, 117.5, 57.3, 197, 100, 4-6.5 X 12.5, 75, 50.</p>	<p>Technical drawings of the Driver for Heat Sink showing front, side, and isometric views with dimensions: 145, 96, 10, 12, 240, 25.</p>

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