



SLMFS1342 Series Frequency Stabilized 1342nm Single Longitudinal Mode Laser System up to 200mW

Overview

The SLMFS1342 series frequency stabilized single longitudinal mode laser is ideal for applications that require a wavelength of 1342nm 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

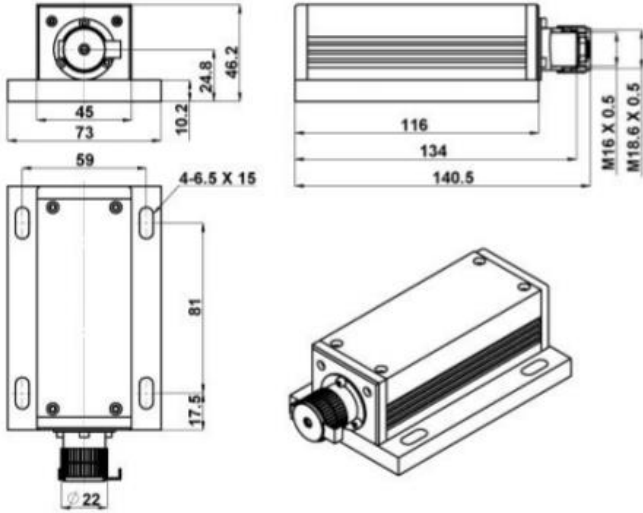
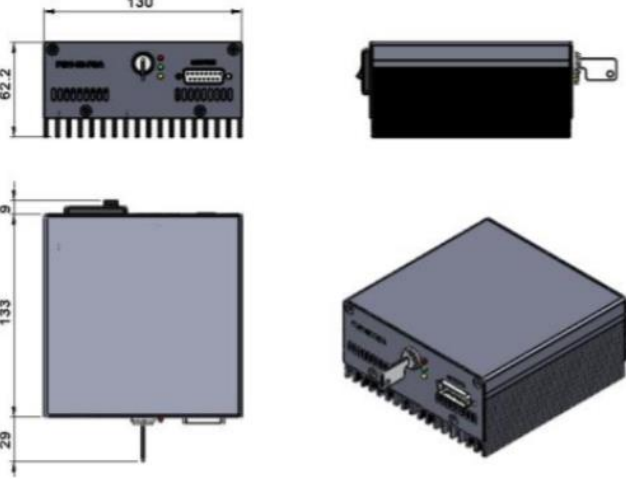
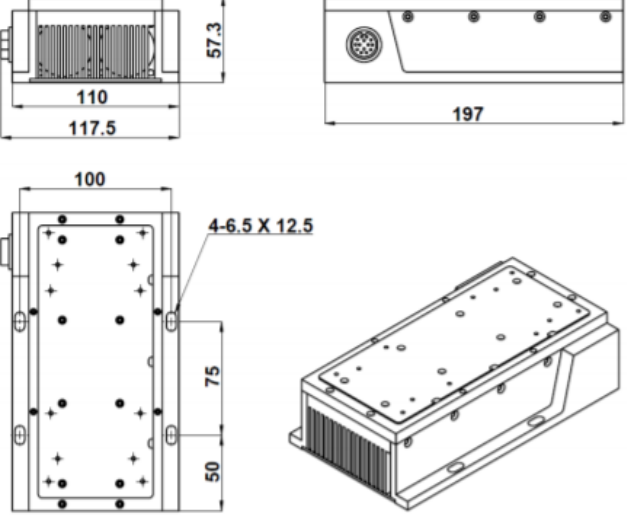

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|---|---|---|--|
| Model Number | SLMFS1342-XYP | | |
| Wavelength (nm) | 1342±1 | | |
| Operating mode | CW | | |
| Output power (mW) | >50 (X=50), >100 (X=100) | >150 (X=150), >200 (X=200) | |
| Power stability (rms, over 4 hours) | <5% (P=A), <3% (P=E), <1% (P=D) | <5% (P=A), <3% (P=E) | |
| 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) | <2.0 | | |
| Beam divergence, full angle (mrad) | <1.5 | | |
| M ² factor | <2.0 | | |
| Polarization ratio | >100:1 Horizontal ±5 degree | | |
| 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) | 140.5(L)×73(W) ×46.2(H) mm ³ | | |
| Weight of laser head (kg) | 0.6 kg | | |
| Power supply | | | |
| Elite Power Supply (Y=E) | Input voltage | 90-264VAC | |
| | Dimensions | 171(L) ×130(W) ×62.2(H) mm ³ | |
| | Weight | 1.2 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 | | |
| Dimensions of Driver for heat sink | 277(L)×145(W) ×106(H) mm ³ | | |
| 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 | Elite Power Supply (Y=E) |
|--|---|
|  |  |
| Temperature Controlled Heat Sink | Driver for Heat Sink |
|  |  |

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