Shanghai Fiblaser technology Co., Ltd
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Narrow Linewidth Module

Key Features

- High Power Single Mode Output
- Ultra-Narrow Spectral linewidth
- Stabilized Spectrum
- Low noise
- Free Space or Fiber Coupled Output
- USB or Local control

Applications

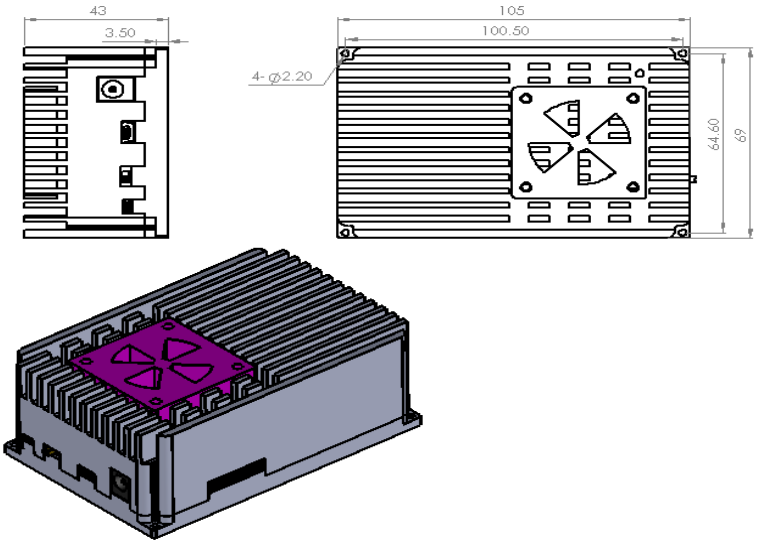
- Raman Spectroscopy
- .Seed Light Source
- Biomedicine Research
- Inspection & Metrology
- Confocal Microscopy

The narrow linewidth laser module features ultra-narrow spectral bandwidth and a diffraction limited output beam. Designed to replace expensive DFB, DBR and external cavity lasers, the Single-Mode Spectrum Stabilized Laser offers superior wavelength stability over time, temperature, and vibration, and is manufactured to meet the most demanding wavelength requirements.

Module features very low M^2 value Gauss beam output with excellent beam pointing stability at a wide temperature dynamic range. The special designed electrical driver enable this optical engine has the lowest power consumptions compare to the similar product in the industry.

This component does not comply with the Federal Regulations (21 CFR Subchapter1) as administered by the Center for Devices and Radiological health. Purchaser acknowledges that his/her products must comply with these regulations before they can be sold to a customer. The output light from this product is harmful to a human body even if it is invisible. Avoid looking at the output of this product directly, or through a lens during operation. Observance of operation should be through a TV camera or related equipment. Refer to IEC 825-1 and 21 CFR 1040.10-1040.11 as a radiation safety standard for laser products.

Dimensions Diagram



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Specifications

Optical Performance	Condition	Min	Typ	Max	Unit
Wavelength	T=25 °C	Refer to wavelength list			nm
Output Power	T=25 °C, CW	Refer to wavelength list			mW
Noise(RMS)	10 ~ 20MHz			0.3	%
Power stability	8hrs @ T=25 °C			1	%
Polarization Extinction Ratio	@PM		20		dB
Linewidth (FWHM)	@3dB	Refer to wavelength list			nm
Wavelength stability range		15		45	°C
Side mode suppression			45		dB
Collimated Beam Parameters	For Free Space Module				
M2				~1.1	
Beam size	1/e2	~1.0			mm
Beam divergence	Full angle			2	mrad
Fiber Parameter	For Fiber Coupled Module				
Mode Field Diameter		4~9 (SM) / 105 (MM)			um
NA		0.12(SM) / 0.22(MM)			
Protect Loose Tube		0.9 / 3.0			mm
Fiber Terminal		FC-PC/ FC-APC / SMA			
Electronics					
Power Supply			5		V
Power Consumption			3	10	W
Current(TEC)				2	A
Current(LD)				500	mA
Temperature Stability			0.2		°C
Control	ACC				
Power setting	0% ~ 100% output				
Environmental Conditions					
Storage Temperature		0		50	°C
Operation Temperature		10		40	°C
Operation Humidity	Non condensing				
Dimensions	105mmX69mmX43mm				

*The mechanical tolerance should be +/-0.2mm on all package dimensions unless otherwise custom specified

Wavelength List

Wavelength	Power	Line width	Wavelength	Power	Line Width	Wavelength	Power	Line width
405nm (SM)	40mW	<100MHz, <0.2 pm	660nm (SM)	50mW	<100MHz, <0.2 pm	830nm (MM)	300mW 500mW	<0.15nm
532nm (SM)	50, 100 200mW	<100MHz, <0.1 pm	671nm (SM)	100,200 500mW	<100MHz, <0.1 pm	976nm (PM fiber)	200,500 750mW	<100MHz, <0.2 pm
457nm (SM)	100,200 500mW	<100MHz, <0.1 pm	785nm (SM)	100mW 300mW	<100MHz, <0.2 pm	976nm (MM fiber)	4000mW 6000mW	<0.15nm
473nm (SM)	20,50 100mW	<100MHz, <0.1 pm	785nm (MM)	300mW 600mW	<0.15nm	1053nm (PM fiber)	100mW 300mw	<100MHz, <0.2 pm
633nm (SM)	30mW, 50mW	<100MHz, <0.2 pm	808nm (SM)	50mW 100mW	<100MHz, <0.2 pm	1064nm (PM fiber)	100mW 300mW	<100MHz, <0.2 pm
638nm (SM)	30mW, 50mW	<100MHz, <0.2 pm	808nm (MM)	300,500, 3000mW	<0.15nm	1064nm (MM fiber)	300mW 600mW	<0.15nm
647nm (MM)	150mW	<0.15nm	830nm (SM)	50mW 100mW	<100MHz, <0.2 pm	1064.Xnm (PM fiber)	50, 100, 300mW	<100kHz

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Ordering Information

For more information of our products, please contact factory directly or your local distributor via E-mail or phone.