1550nm Wavelength-Swept Narrow-Linewidth Laser Module

SemiNex CORPORATION

Part Number: ECL-310-S1

External Cavity Laser Module
Sweeping Wavelength, Narrow Linewidth
1550nm C-Band

Features

- Ultra narrow linewidth (<10 kHz)
- Central wavelength 1550 nm or C band
- Low power dissipation
- Fast sweep rate with ultra-high linearity
- **SemiNex ROSA and SOA chips Inside**

Applications

- Fiber optical sensing
- LiDAR and industrial metrology
- Optical measurements and instrumentation

CERTIFIED QUALITY ISO 9001:2015 MANAGEMENT SYSTEM

SemiNex delivers the highest available power at infrared wavelengths between 12xx and 19xx nm. When necessary, we will further optimize the design of our InP & GaSb laser chips to meet our customers' specific optical and electrical performance needs. Diodes, bars and packages are tested to meet customer and market performance demands. Typical results and packaging options are shown. Contact SemiNex for additional details or to discuss your specific requirements.

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Specification ECL-310-S1

Optical	Symbol	Min.	Typ.	Max.	Units
Center Wavelength	λ_c		1550 or C band		nm
Wavelength Tuning Range	$\Delta\lambda$	1		10	GHz
Swept Rate	F	0		300	kHz
Sweep Linearity			99.9999		%
Linewidth (Lorentzian)	FWHM		10		kHz
Fiber Output Power*	P_f		20 or 200		mW
Side Mode Suppression	SMSR		55		dB
Random Intensity Noise	RIN			-145	dB/Hz
Operating Temperature	T_0	-10		60	°C
Storage Temperature	T_s	-40		85	°C
Operating Humidity	%	5		85	

*Output power options

Suffix	Description
-020	20mW output power
-200	200mW output power

*Specified values are rated at a constant heat sink temperature of 20°C.
**High temperature operation will reduce performance and MTTF.
Unless otherwise indicated all values are nominal.

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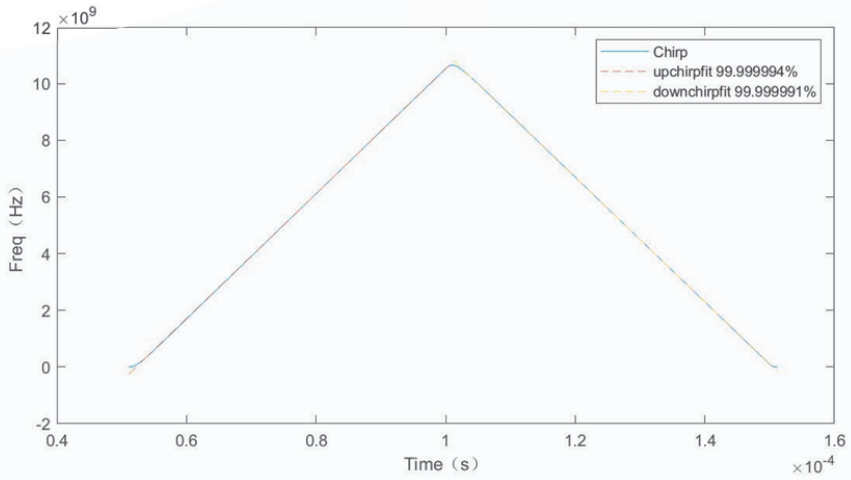
Graphs & Data

Measured Sweep Linearity:＞99.9999%



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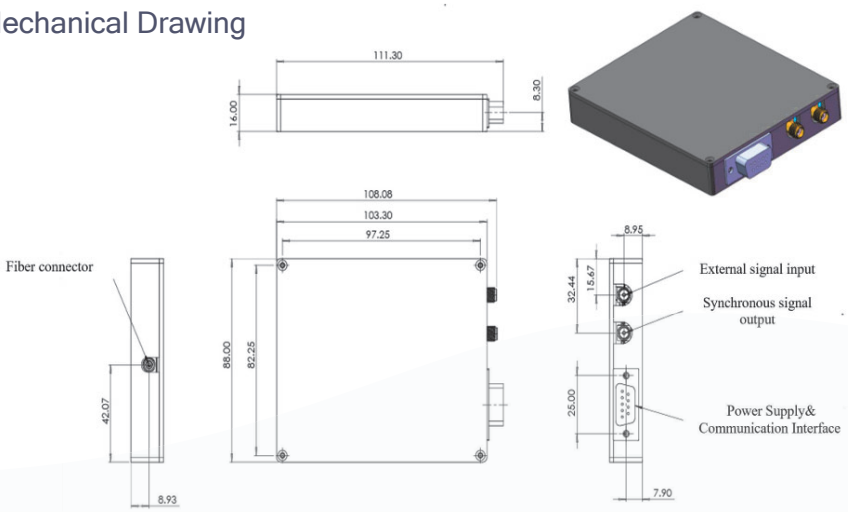
ECL-310-S1
Mechanical Drawing



Dimensions	L×W×H=111.3×88×16mm
Fiber Type	PMF
Fiber Connector	FC/APC
Power Supply& Communication Interface	DB9
Synchronous signal output	OUT(SMA)
External signal input (Optional)	IN(SMA)

Warnings:
Make sure to wear protective goggles while operating high power laser that could be harmful to eyes. Nearby operators should wear protective goggles to avoid harms from the reflective of the laser. SemiNex reserves the right to modify this document without notice.

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