

1550nm Ultra-narrow Linewidth Single-Frequency Laser module (FL-0)



1. Features

- Ultra-narrow linewidth (<1 kHz)
- Central wavelength 1550 nm, or other C&L-band wavelengths
- High optical power output and good wavelength stability
- Compact size and low power dissipation
- Easy to set-up and operate

2. Applications

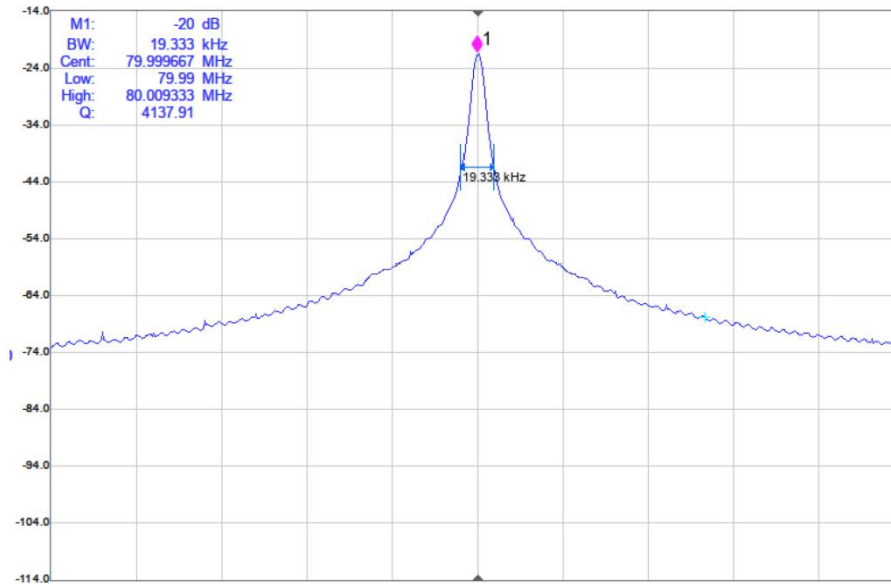
- Fiber optical sensing: DAS,DVS,BOTDR etc
- LiDAR and industrial metrology
- Optical measurements and instrumentation

3. Specifications

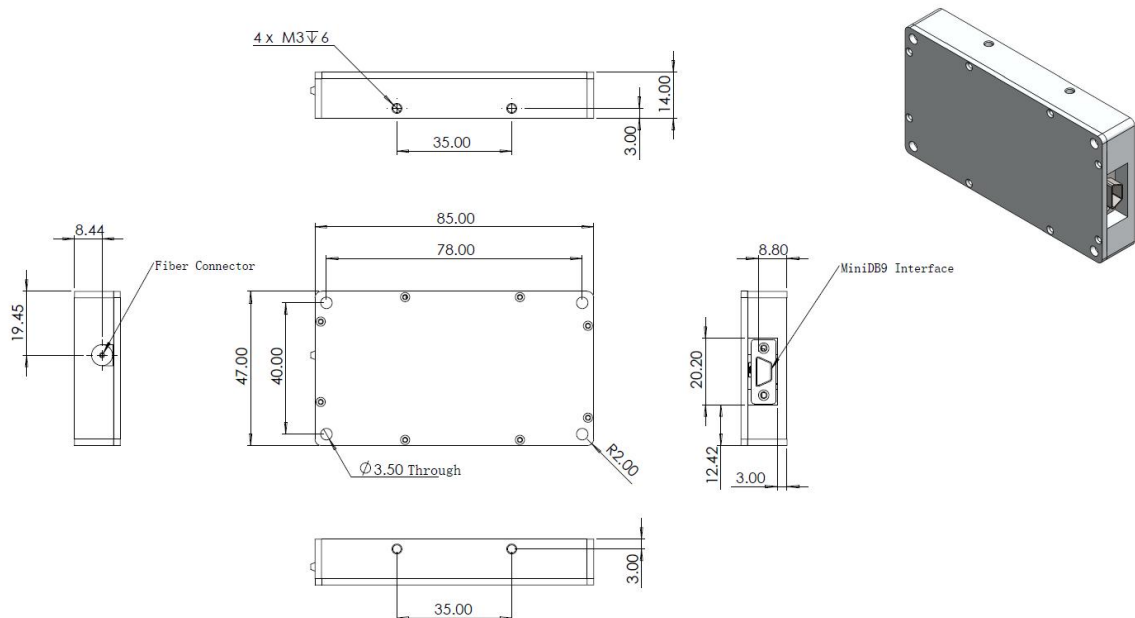
Parameters and performance

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Central Wavelength	λ_c	CW	1550 nm or customized in C-band			
Linewidth (Lorentzian)	FWHM	CW			1	kHz
Fiber Power Output	P_f	CW		10		mW
Side Mode Suppression	SMSR	CW		60		dB
Polarization Extinction Ratio	PER	CW	20			dB
Random Intensity Noise	RIN	CW		-145		dB/Hz
Optical Isolation	ISO	CW		50		dB
Operating Temperature	T_o	CW	-10		60	°C
Storage Temperature	T_s		-40		85	°C
Operating Humidity	%	CW	5		85	

Lorentzian Linewidth (0.96kHz)



4. Mechanical structure



Dimensions	L×W×H=85×47×14mm
Fiber Type	PMF
Fiber Connector	FC/APC
Communication Interface & Power Supply	Mini-DB9 for RS232 & DC5V/2A
Safety Control	Interlock

5. Warnings

- Make sure to wear protective goggles while operating as high-power laser could be harmful to eyes.
- Nearby operators should wear protective goggles to avoid harms from the reflection of the laser.
- Smart Technology reserves the right to modify this document without notice.

Ordering Information

	Wavelength	Power	Line width	Fiber type	Fiber connector	Dimensions
SM-SCLNL	1550=1550nm	10=10mW	1k=1kHz	PM=PMF SM=SMF	FA=FC/APC FU=FC/UPC	M1=85×47×14mm