

Product Test Sheet

Product Name: Ultra-Narrow Linewidth Fiber Laser

Product Code: STNLFL-1560-50-PM-B

Serial Number: 25101514

	Unit	Specification	Remarks
Optical Parameter			
Operating Wavelength	nm	1560.008@31°C	FBG: 20~50°C
Laser Line-width	kHz	1.84	
Output Power	mW	50	Fix Power
PER	dB	36.1	
Side Mode Suppression Ratio	dB	≥ 55	
Input/Output Isolation	dB	35	
Optical Fiber	-	PM1550,Φ3mm×1m	
Fiber Connector	-	FC/APC	
Environment and Electrical Parameters			
Control Function		Software	
Remote Control Port		DB9-RS232	
Software Version		NBL Controller-V20230605	
Operation Temperature Range	°C	-5 to +45	
Storage Temperature Range	°C	-10 to +70	
Dimensions	mm	255(W)×285(D)×115(H)	Bench-Top
Power Supply		AC 100~240V	USA Standard
Electric Power Consumption	W	10	

Note: ISO 11554-2017

8 Evaluation

8.1 General

The standard deviation, s , from n readings m_i is calculated according to

$$s = \sqrt{\frac{\sum_{i=1}^n (m_i - \bar{m})^2}{n-1}} \quad (3)$$

Where the mean value is

$$\bar{m} = \frac{\sum_{i=1}^n m_i}{n} \quad (4)$$

8.3 Power stability of cw lasers

Calculate the mean value of the power, $\bar{P}$, and the respective standard deviation, s , for the appropriate stability time domain (short-term, medium-short-term, medium-term and long-term) according to the specifications given in 7.3.

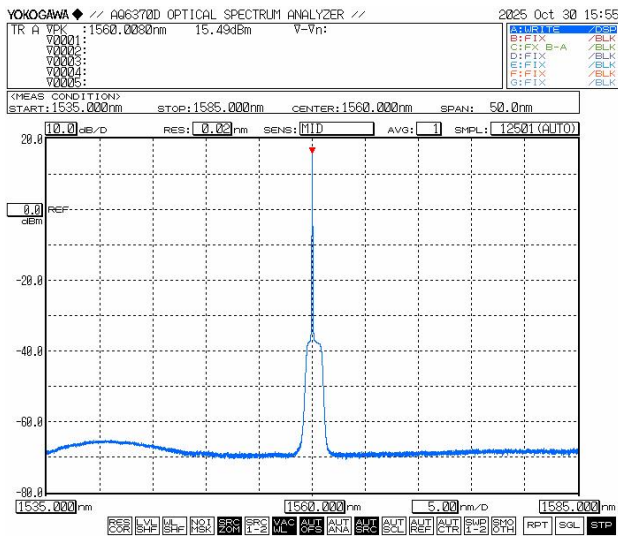
Power stability is given as the relative power fluctuation, ΔP , in the corresponding stability time domain calculated from Formula (9):

$$\Delta P = \frac{2s}{\bar{P}} \quad (9)$$

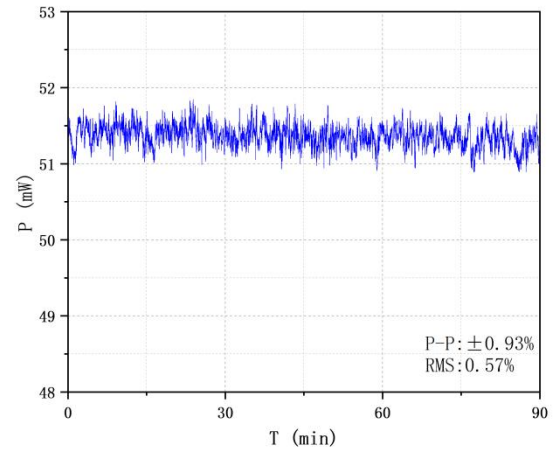
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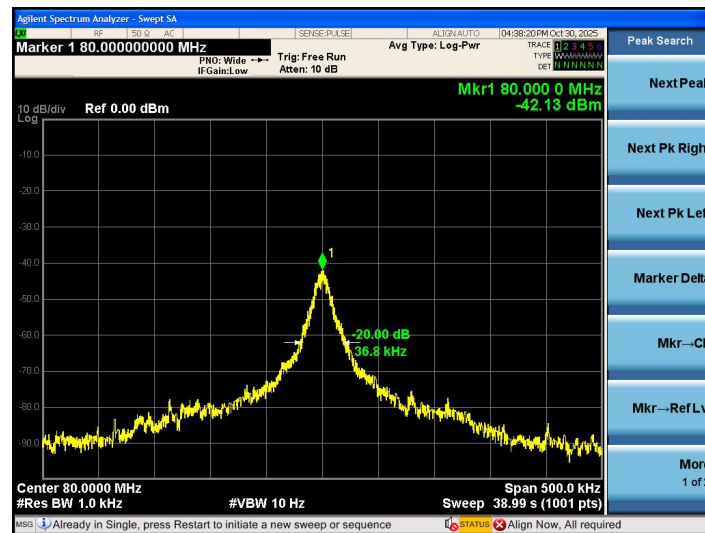




Optical Spectrum of 1560.008nm signal (FBG 31°C)



Power stability test



Line-width@3dB: 18.2kHz

FBG Temp (°C)	Wavelength (nm)
20	1559.862
30	1559.972
40	1560.082
50	1560.176

FBG Temperature-Wavelength Reference Table

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