Product Test Sheet

Product Information

Product Name	Single-wavelength Laser
Product Code	FLH-1550-30-PM-M3
Serial Number	26010402
Test Date	2026/01/20
Test Result	Pass
Tested by	CY

Optical Parameters

Parameter	Unit	Requirement	Test Value	Test Result
Operating Wavelength	nm	1550±0.5	1549.62	√ Pass ☐ Fail
Output Power	W	0.1~1,adjustable	0.1~1,adjustable	√ Pass ☐ Fail
Laser Linewidth@3dB	MHz	⩽3	0.67	√ Pass ☐ Fail
Power Peak stability (P-P)	-	No requirement	±0.89%@1W，60min	√ Pass ☐ Fail
Power stability (RMS)	-	No requirement	0.47%@1W，60min	√ Pass ☐ Fail
Output Port Isolation	dB	No requirement	35	√ Pass ☐ Fail
Polarization Extinction Ratio	dB	No requirement	28	√ Pass ☐ Fail

Product Specifications

Operation Temperature Range	℃	-5~+50	
Operation Humidity Range	%	0~70	
Storage Temperature Range	℃	-40~+85	
Power Supply	-	AC 100-240V	USA Standard
Electrical Power Consumption	W	10	25℃
Fiber Connector	-	FC/APC	
Input/Output Fiber Type	-	PM1550 Single Mode Fiber	Φ2mm×1m
Optical Fiber Sleeve	-	Loose tube(Φ=2mm), yellow color	
Dimensions	mm	125(W)×150(D)×31.5(H)	Module
Remote Control Port	-	RS232-DB9	
Software Version	-	LaserController-dBm-V20250222	

Power Instability: 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

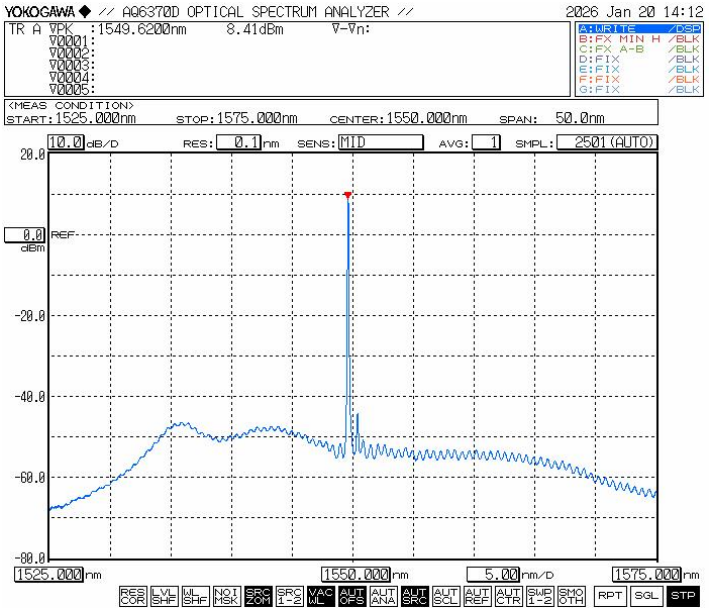
$$\bar{m}=\frac{\sum_{i=1}^{n}m_i}{n} \quad (4)$$

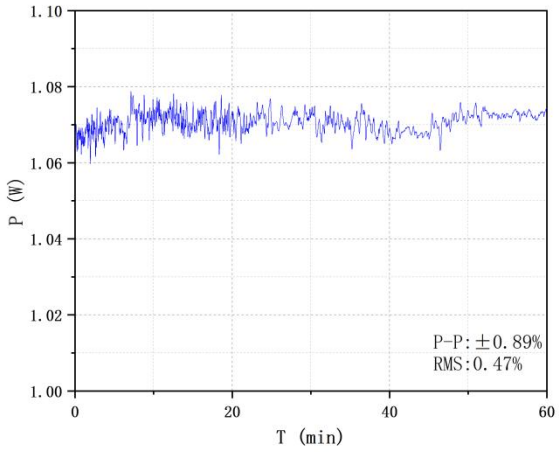
8.3 Power stability of cw lasers

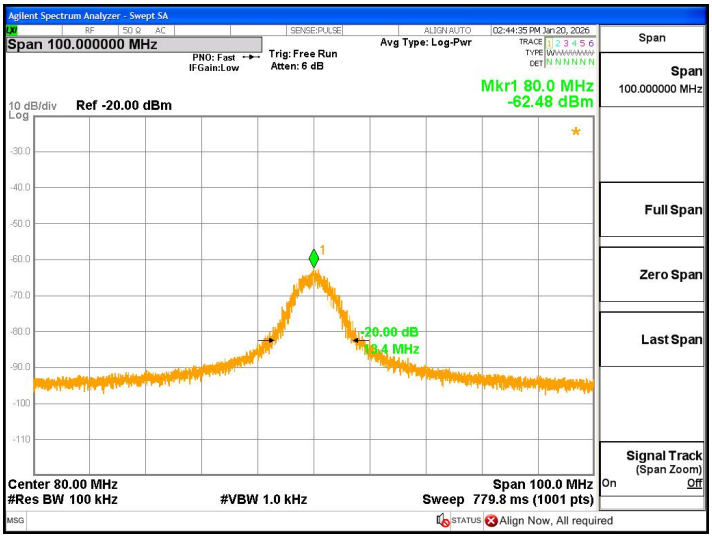
Calculate the mean value of the power, $\bar{P}$, and the respective standard deviation, s, for the appropriate stability time domain (short-term, medium-short-term, medium-term and long-term) according to the specifications given in 7.3.

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

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

Spectral Test	
Test Item	The spectrum of the Laser
Test Method	After 20dB attenuation,access to the spectrometer for measurement
Measurement Equipment	YOKOGAWA AQ6370D
Measurement Results	 Optical Spectrum@1W

Power Stability Test	
Test Item	Laser Power and Power Stability
Test Method	Direct Measurement with Optical Power Meter
Measurement Equipment	Thorlabs PM100D/S146C Power Meter
Measurement Results	 Power Stability Test@1W

Laser Linewidth	
Test item	Laser Linewidth
Test method	Delayed selfie method for measuring photocurrent spectrum
Equipment	KEYSIGHT MXA Signal Analyzer N9020A
Test result	 Laser Linewidth@3dB: 0.67MHz

Inspection of the fiber optic connector end face	
Test item	Integrity and cleanliness of optical fiber connector face
Test method	The optical fiber end face mirror is directly observed with a magnification of 400x.
Equipment	Hand-held End Face Detector/DL-AutoGet-V2
Test result	The output fiber end face is intact, free from scratches, and clean without dust or contamination, meeting all requirements.