Product Test Sheet

Product Name: Erbium-Doped Fiber Amplifier
Product Code: EDFA-C-BA-23-SM-M2
Serial Number: 25051203

Specification	Unit	Min	Test Value	Max	Remarks
Operating Wavelength	nm	1530	1550	1565	
Optical Input Power	dBm	-6		-3	CW
Optical Output Power	dBm		23.2	23	@ -3dBm input
Output Power Stability	-		P-P: ±0.42% RMS: 0.28%		@ -3dBm input,23dBm, 60min
Noise Figure	dB		3.9	5	
Polarization dependent Gain	dB			0.3	
Polarization mode Dispersion	ps			0.5	
In /Out port Isolation	dB	35			
Operation Temperature Range	°C	-5		+45	
Operation Humidity Range	%			70	
Fiber Connector		FC/APC			
Input / Output Fiber Type		SMF-28e, Φ2mm×1m			
Power Supply	-	DC 5V			E.U Standard
Dimensions	mm	125(W)×150(D)×20(H)			Module
Remote Control Port	-	RS232-DB9			
Software Version		AmplifierController-V20240219			
Control Mode	-	ACC: Automatic Pump Current		Current Tuning Range: 0~1030mA	
		APC: Automatic Power Control		Power Tuning Range: 13~23dBm	
		AGC: Automatic Gain Control		Gain Tuning Range: 10~25dB	

*Note: 1. If the input signal is a pulsed laser with a repetition frequency <300kHz, do not use the APC mode, only the ACC mode.
2. The AGC mode only takes effect within the power range defined by the APC mode.

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

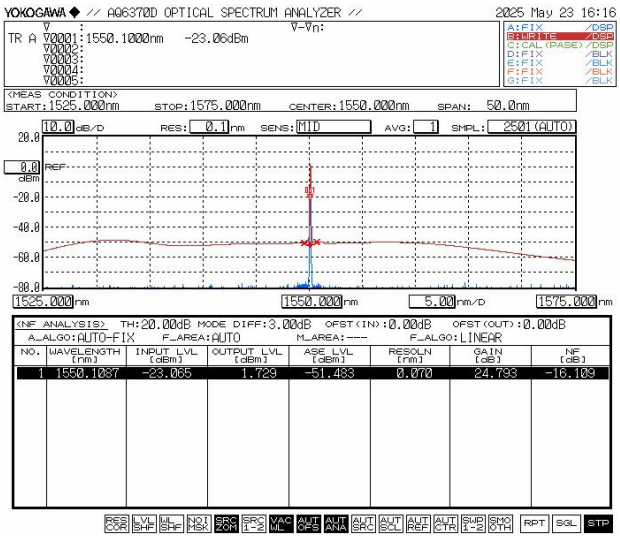
$$\bar{m}=\frac{\sum_{i=1}^{n}m_i}{n} \quad (4)$$

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.

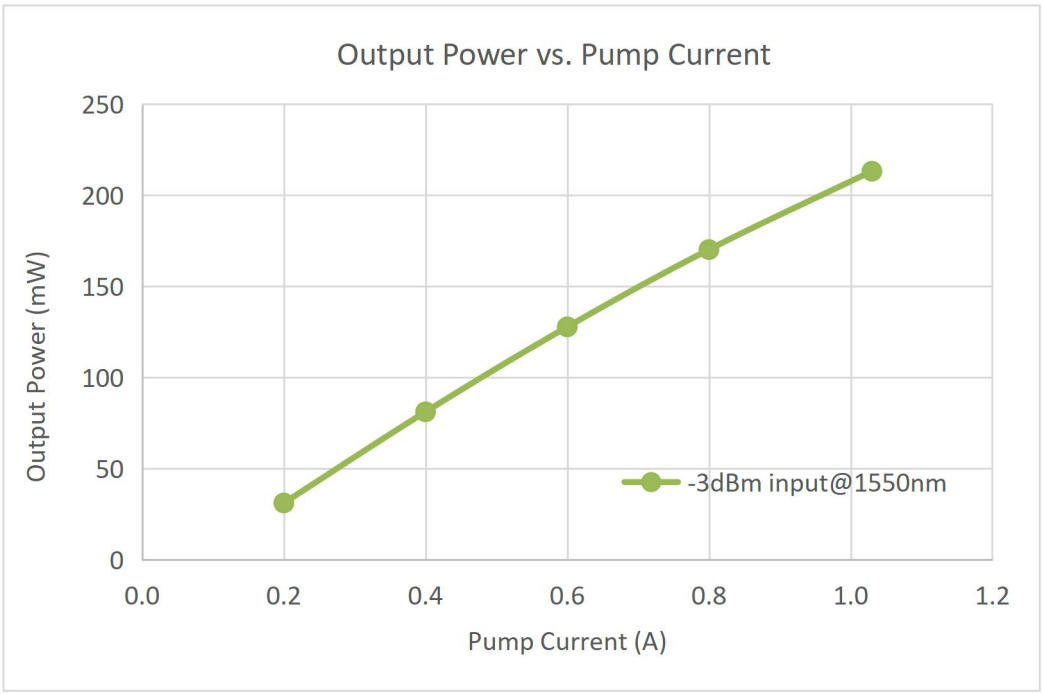
Power stability is given as the relative power fluctuation, ΔP, in the corresponding stability time domain calculated from Formula (9):

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

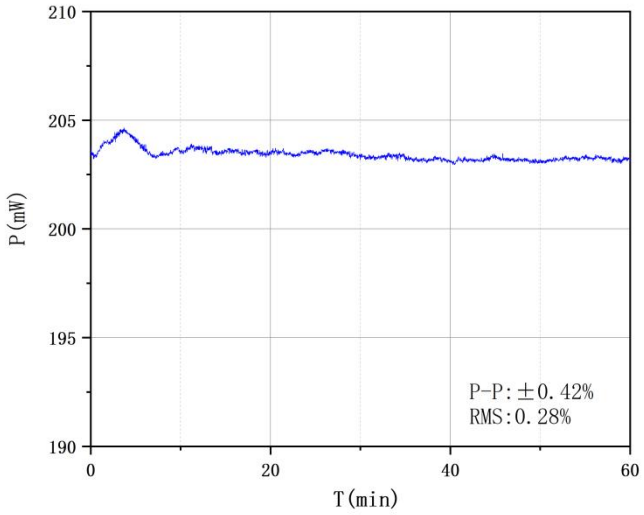


Optical Spectrum of Amplified 1550.12nm signal

(-3dBm input power @1.03A current)



Output Power vs. Pump Current Curve



Power stability test @200mW, -3dBm input, APC mode

Passed By:_____Date: 2025-05-23