Thulium-doped Fiber Amplifier For 2μm-band

2023 V1

For customized projects please Contact us:

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The **2μm Thulium-doped Fiber Power Amplifier (TDFA)** can pump a 1mW seed laser to 164mW output, or even larger, to meet the needs of most experimental work.

The key benefits of TDFA include a wide wavelength range, high output power and low noise. The wavelength range covers the power range from -10dBm to +10dBm, and can accept and amplify a variety of laser signals of different intensities. Its maximum saturation output power is up to 30dBm, which can provide a very powerful laser signal.

In addition, the TDFA is designed and manufactured with noise control in mind, so it has low noise characteristics, making it particularly useful in applications where high precision measurements are required.

Key Features

- Wide Wavelength Range
- High Output Power
- Low Noise

Applications

- Optical Fiber Communication
- Optical Fiber Sensing
- Fiber Laser

Specification

Optical Parameters	Unit	Typical Value	Remarks
Wavelength Range	nm	1920~2020	* Note 1
Input Power	dBm	-10~10	
Saturation Output Power	dBm	20/23/25/26/27/30	@0dBm Input
Noise Index	dB	≤5.0	@0dBm Input
Polarization Dependent Gain	dB	≤0.3	
Polarization Mode Dispersion	ps	≤0.5	
Input/Output Isolation	dB	>35	
Optical Power Monitoring	—	Output Optical Power Monitoring	
Optical Fiber	—	SM：SMF-28；SMF-1950;	
Fiber Connector	—	FC/APC	
Working Mode		Automatic Current Control (ACC)/ Automatic Power Control (APC)	* Note 2

General Parameters	Desktop Module	Module
Control Function	Keystroke	RS232 Serial Port Communication
Remote Control Port	Optional	DB9 Female
Power Supply	100~240V AC, <30W	12V DC, <60W
Dimensions	260(W)×280(D)×120(H)mm	125(W)x150(D)x31.5(H)mm
Operating Temperature	-5~+35°C	
Operating Humidity	0~70%	

Ordering Information/Product Code

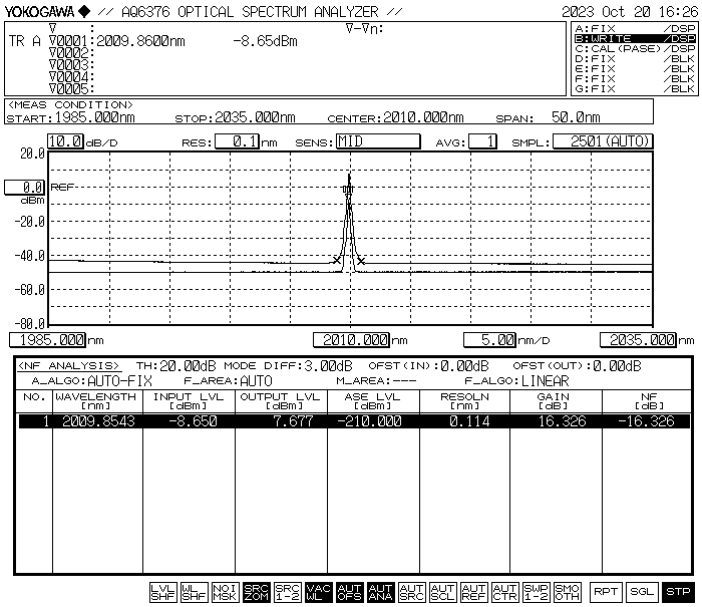
TDFA	Wavelength Range	Amplifier Type	Saturation Output Power (dBm)	Fiber Type	Packaging
	1920=1920~2020nm	BA= Power Amplifier	20/23/25/26/27/30	SM=Single-Mode Fiber	M=Module B=Table Model

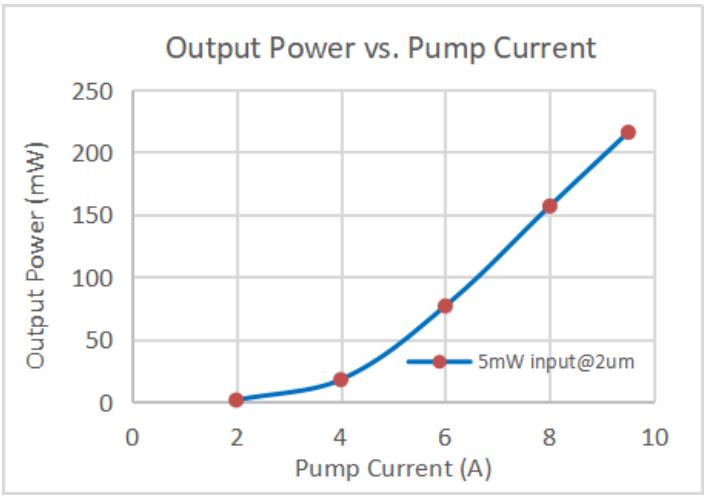
* Note 1: The standard model is designed according to 1920~2020nm, and users can propose customized wavelengths according to their needs.

* Note 2: **ACC mode - Automatic current control:** the user sets the working current of the TDFA pump, and the TDFA automatically locks it to realize the constant pump current. When the input optical power fluctuates, the output power will also fluctuate accordingly, applicable to all TDFA models, PA amplifiers only support ACC mode.

APC mode - Automatic power control: the user sets the signal optical output power of TDFA, the PD automatic monitoring and feedback output power, TDFA control and adaptive adjustment pump to achieve the stability of the output signal, the power adjustment range in APC mode is usually 10%~100%. The advantage of APC mode is that when the input optical power fluctuates, the TDFA will reduce the output power fluctuation as much as possible. It is suitable for power type and line type TDFA, but not suitable for low repetition frequency pulse signals.

Test Data





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