C-band compact EDFA Erbium-doped fiber amplifier module 1528-1564nm

Product Description

Idealphotonics' Technology Co., Ltd. EDFA series is a low-noise, high-performance, cost-effective EDFA module designed for CATV systems. GM is a gain block module without electronic control circuit FM is a full-function module with electronic control circuit EDFA is a full-function module with a 70X90X15mm MSA compact package and a single-channel narrow bandwidth standard version. A standard 30-pin electrical connector provides simple electrical connections. The module uses a

high-performance cooled pump laser with a maximum optical output of 24dBM.

Product features

With electronic control circuit (full function)、 70X90X15mmMSA compact package 、 TTL standard communication interface 、 Excellent optical performance、 Low noise figure, suitable for various CATV applications、 Low power consumption、 Wide operating temperature range

Part Number

MP-EDFA-C-200-SA

Application area

CATV、 FTTxPON、 Other single-channel optical communication systems

Core parameters

Wavelength Range	Output Power	Connector
1528-1564nm	24dBm	FC/APC

General Parameters

Parameters

Performance		Unit	Min.	Typical	Max.	Note
Optical characteristic	Operating wavelength range	nm	1528		1564	
	Typical applications	nm	1540		1564	
	Input optical power (Pin)	dBm	-10		10	
	Total output power @Pin=0dBm	dBm	13		24	
	Noise figure	dB		4	5	
	Polarization dependent gain (PDG)	dB			0.3	
	Polarization mode dispersion (PMD)	ps			0.3	
	Polarization dependent loss (PDL)	dB			0.3	
	Pump power leakage	dB			-30	
	Output/input optical isolation	dB	30			
	Reflection loss	dB	45			UPC

	Fiber type		55			APC
	Connector		SMF-28,900um loose tube			
	Connector polishing		FC			
	Performance		APC			
General Characteristics	Communication interface		TTL			
	Power supply voltage	V	3.3	5	5.5	
	Power consumption	W		1	2	Uncooled laser
				2	10	Cooled laser
	Operating temperature	℃	-5		70	
	Storage temperature	℃	-40		85	
	Relative humidity	%RH	5		95	
	Dimensions (W) x (L) x (H)	mm	70X90X15			

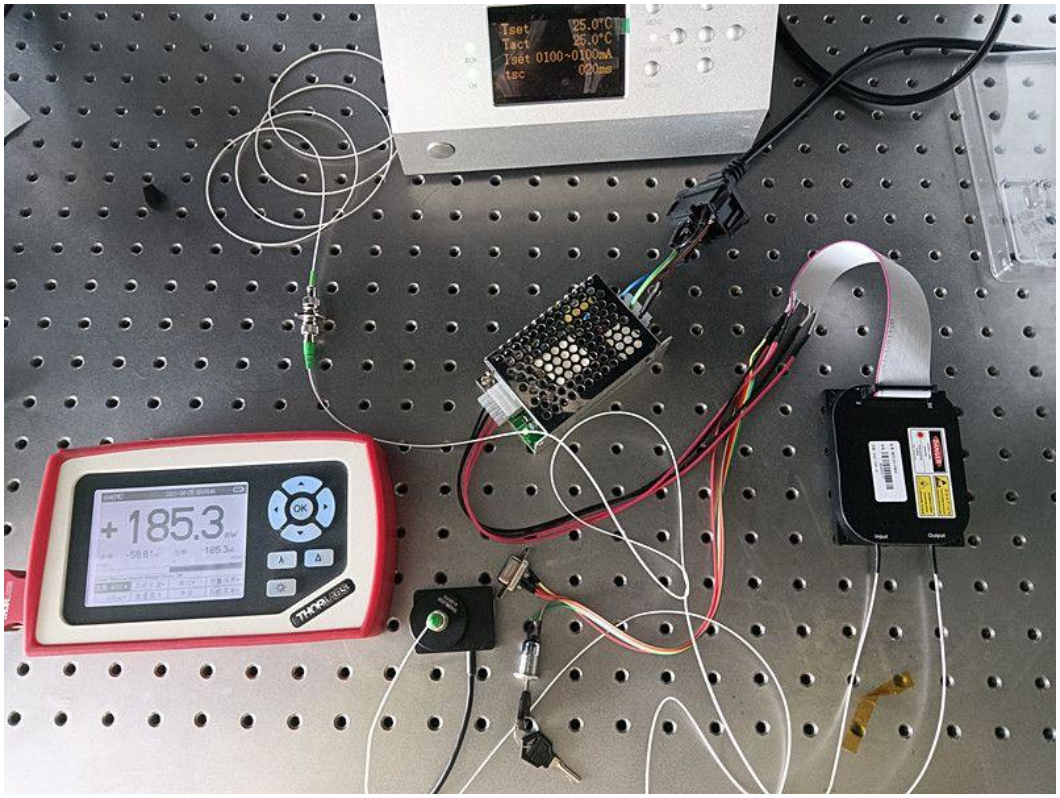
Note: Applicable to working at 20℃ -30℃.

Electrical interface definition

Pin	definition	Pin	definition
1	+5.0	2	+5.0
3	/	4	/
5	GND	6	GND
7	TTL receive	8	TTL launch
9	GND	10	GND
11	/	12	/
13	Amplifier switch (enable) input, low level enables	14	/
15	/	16	/
17	/	18	/
19		20	/
21	GND	22	GND
23	/	24	/
25	GND	26	GND
27	/	28	/
29	+5.0	30	+5.0

note：30-Pin type:HIROSEDF11-30DP-2DSA

Experimental testing



1. Connect the power supply of the fiber amplifier

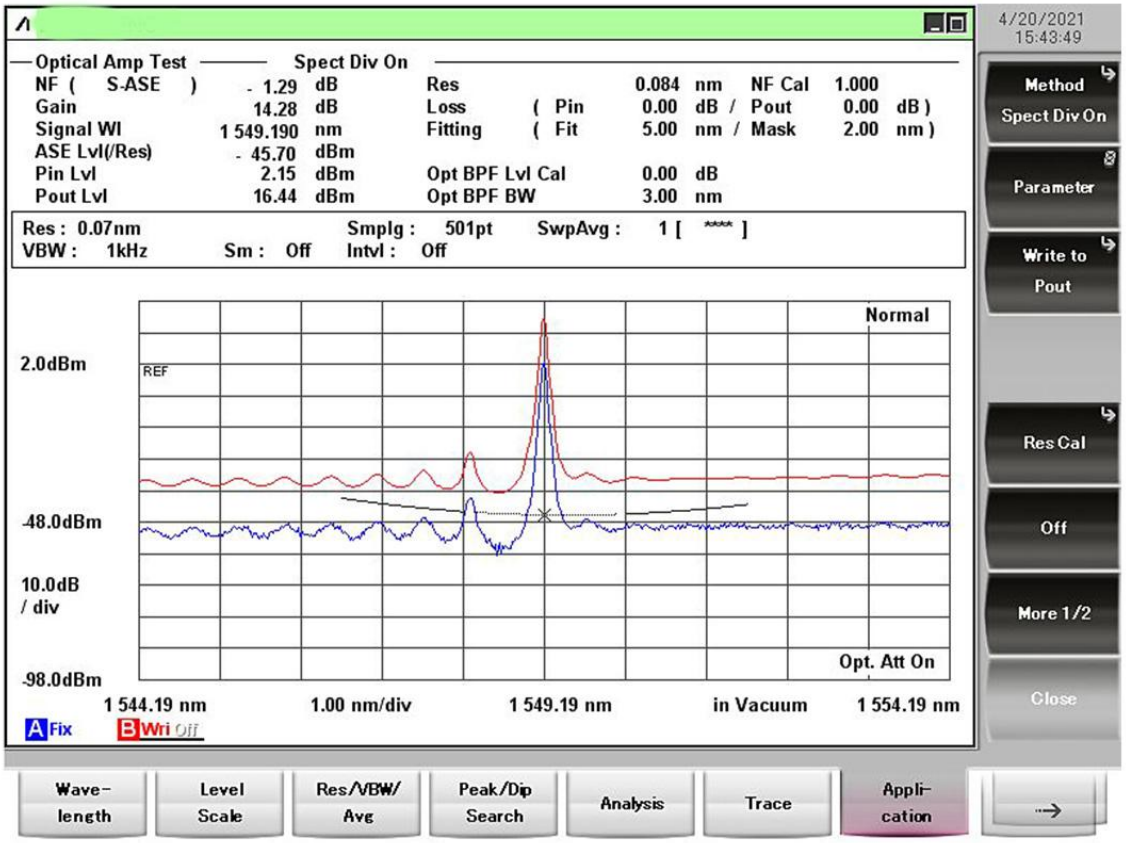
2. Use flange to connect the 1550nm laser output fiber and the fiber amplifier input fiber

3. Connect the output fiber of the fiber amplifier to the power meter

4. Turn on the seed source, turn on the key switch of the fiber amplifier, and check the amplified output power

5. Connect the output fiber of the fiber amplifier to the spectrometer and check the amplified spectrum

Fiber amplifier spectrum comparison test (blue is the seed source spectrum, red is the spectrum after amplification)



Ordering Information

Model: MP-EDFA-C-M-23-SA

C: Working wavelength range: C band 1528-1564nm

M: Modular design

23：Output power 23dBm

SA: Fiber Optic Types and Connectors：SMF-28+FC/APC

Product range

PN#	Input power range (dBm)	Output power (dBm) (Pin=0dBm)	Noise Figure (dB)
MP-EDFA-C-13dBm	-10~+10	13	<4.0
MP-EDFA-C-14dBm	-10~+10	14	<4.0
MP-EDFA-C-15dBm	-10~+10	15	<4.0
MP-EDFA-C-16dBm	-10~+10	16	<4.0
MP-EDFA-C-17dBm	-10~+10	17	<4.0
MP-EDFA-C-18dBm	-10~+10	18	<4.0
MP-EDFA-C-19dBm	-10~+10	19	<4.5
MP-EDFA-C-20dBm	-10~+10	20	<4.5
MP-EDFA-C-21dBm	-10~+10	21	<4.5
MP-EDFA-C-22dBm	-10~+10	22	<5.0
MP-EDFA-C-23dBm	-10~+10	23	<5.0
MP-EDFA-C-24dBm	-10~+10	24	<5.0