

WPA4300-FM05 Series
C-Band DWDM Optical Pre-amplifier Module
Technical Specification

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1.0 PRODUCT DESCRIPTION

Huatai WPA4300-FM05 series is a gain flatness Pre-Amplifier EDFA which is specifically designed for C-Band 44 channels optic transmission system. It adopts the most excellent optical performance, the most advanced electronic control technology and the most complete software functionalities; it is featured with wide working wavelength range, low noise and excellent gain flatness.

WPA4300-FM05 adopts the world's top class pump laser; advanced electronic circuit and low consumption design, greatly reduced the heat power consumption of complete equipment. Perfect APC, ACC and ATC control, ensures the long life and high reliability work of pump laser. RS232 offer serial communication. The laser will switch off automatically if optical power is missing, which offers security protection for the laser.

WPA4300-FM05 adopts 125×150×22mm chassis size; signal unit +5VDC power supply.

2.0 PRODUCT FEATURE

- Wide working wavelength: 1529.16~1563.86nm
- Accord with the communication technology requirements of 44 channels DWDM system
- Excellent gain flatness feature (GF<1.0dB)
- Low noise figure
- Standard RS232 communication interface
- Low power consumption
- Excellent P/P ratio in area

3.0 MAIN APPLICATION

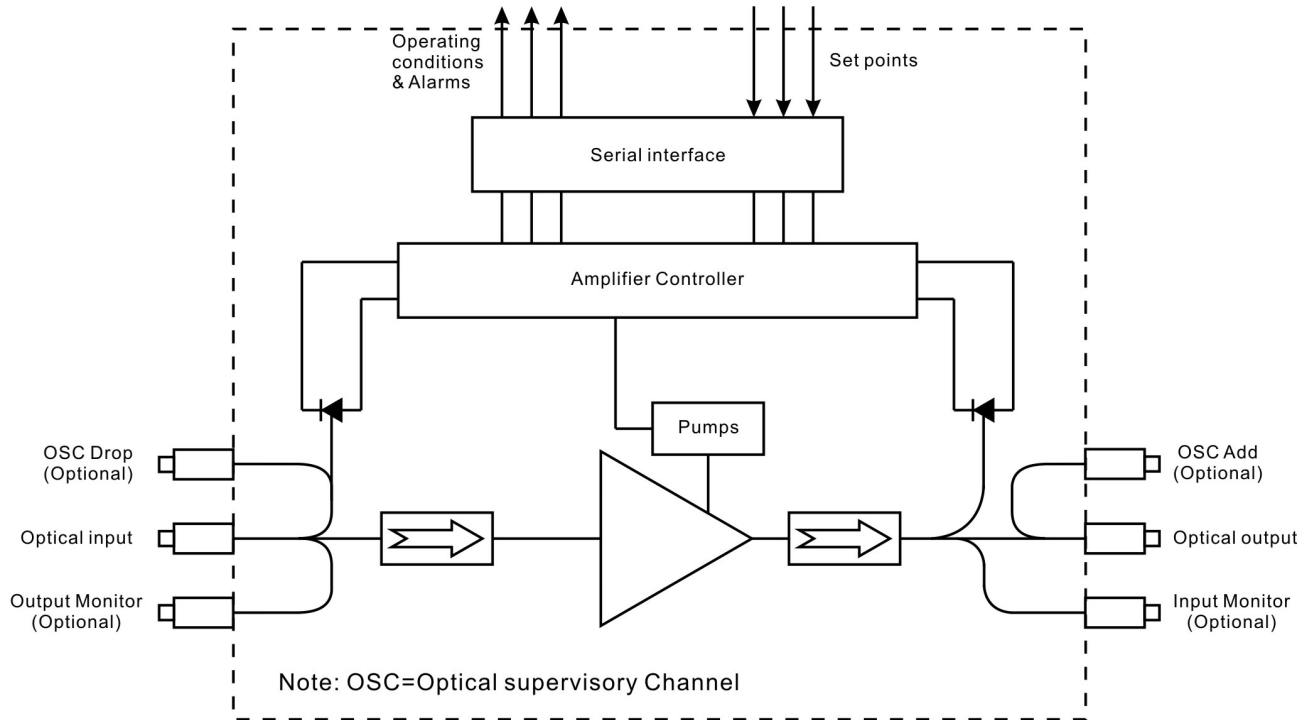
- 44 channels DWDM system
- Long distance trunk network
- MAN or access network
- All kinds of SDH/PDH transmission system
- FTTx PON

4.0 TECHNICAL INDEX

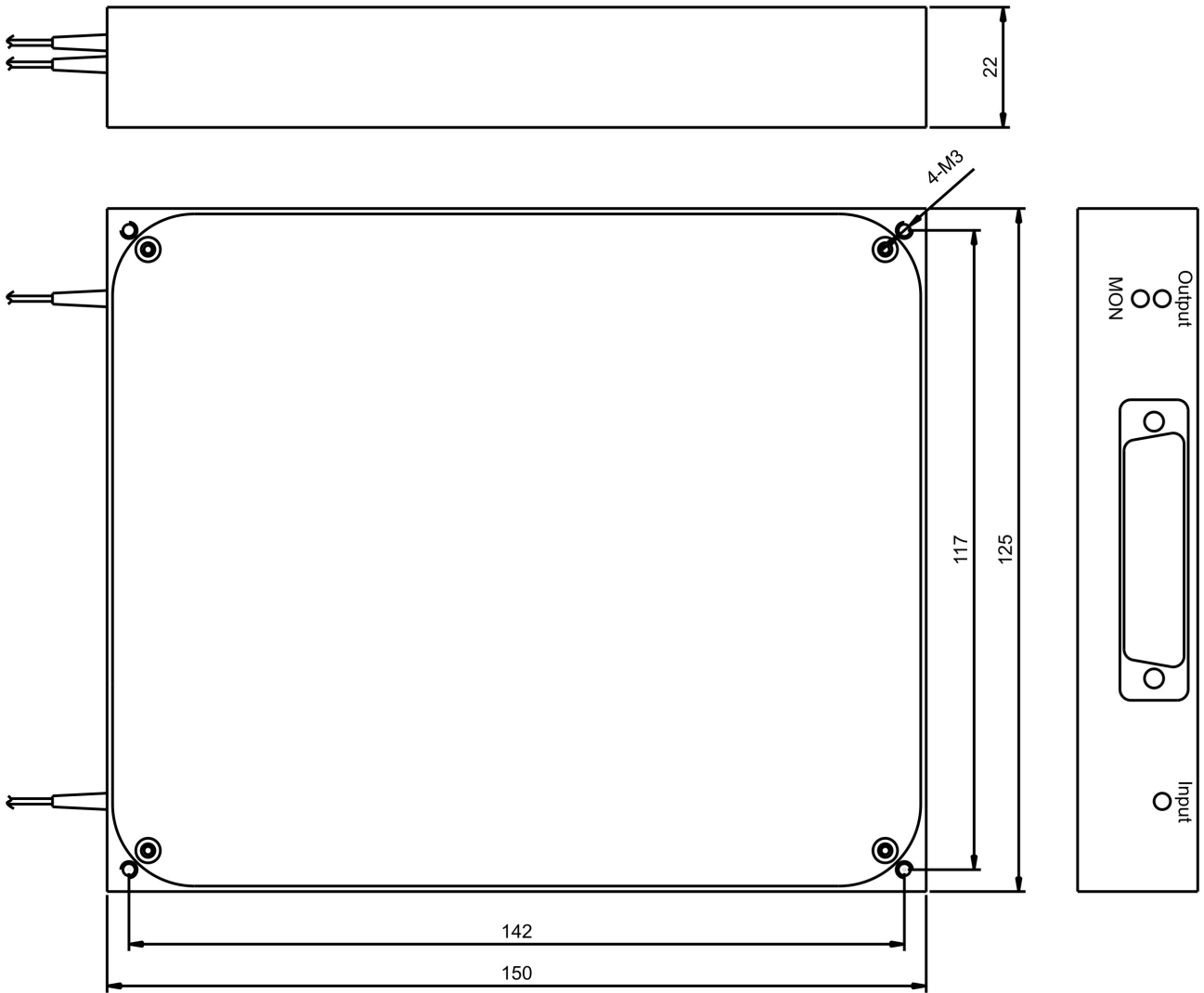
Performance		Index			Supplement		
		Min.	Typ.	Max.			
Optical feature	Work wavelength range(λ)	(nm)	1529.16		1563.86	ITU 88CH	
	No. of Working channel	(CH)	1	44			
	Input optical power range(P_i)	(dBm)	-45	-30	-20		
	Signal gain	(dB)		20			WPA4320-FM05
				25			WPA4325-FM05
				30			WPA4330-FM05
				35			WPA4335-FM05
	Gain flatness	(dB)		0.7	1.0		Value of Peak to Peak
	Noise figure	(dB)		4.5			
	Polarization dependence gain (PDG)	(dB)			0.3		
	Polarization mode dispersion (PMD)	(ps)			0.3		
	Polarization dependence loss (PDL)	(dB)			0.3		
	Input/output optic isolation	(dB)	30				
	Pump leakage power	(dBm)			-30		
Echo loss	(dB)	45				UPC	
		55				APC	
Wavelength range of optic management channel	(nm)	1500	1510	1520			
General feature	Communication interface		RS232				
	Fiber type		Coming SMF-28™ or equivalent				
	Pigtail buffer diameter	(μ m)		900			
	Pigtail length	(mm)		1000			
	Power supply	(V)	+4.75	+5	+5.25		
	Power consumption	(W)			30		
	Working temp.	(°C)	-5		+70		

Storage temp.	(°C)	-40		+85	
Working relative humidity	(%)	+5		+95	
Size (W)×(D)×(H)	(mm)	120×125×22			

5.0 OPTICAL/ELECTRICAL SCHEMATIC



6.0 MODULE CHASSIS SIZE



7.0 Electrical Pin Assignments

Pins	Description	Pins	Description
1	Power supply	2	Power supply
3	Power supply	4	Power supply
5	Output power monitor	6	Input power monitor
7	Case temperature alarm	8	Output power alarm
9	Bias current alarm	10	Pump temperature alarm
11	Reset	12	Power supply
13	Ground	14	Ground
15	Ground	16	Ground
17	Ground	18	TXD
19	Input power alarm	20	Eyesafe mode
21	Amplifier disable	22	RXD
23	NC	24	Power supply
25	Ground		

8.0 PRODUCT SERIES

Model	Signal gain (Pin=-30dBm)	Output optical power (Pin=-30dBm)	Gain flatness(dB)	Optical port monitoring mode	OSC Optical port mode
WPA4320-FM05-M00-O00	20dB	-10dBm	<1.0dB	Without	Without
WPA4325-FM05-M00-O00	25dB	-5dBm			
WPA4330-FM05-M00-O00	30dB	0dBm			
WPA4335-FM05-M00-O00	35dB	+5dBm			

Note: 1), Optical port monitoring mode options:

- 1, MO (With output monitoring optical port)
- 2, MI (With input monitoring optical port)
- 3, MIO (With input and output monitoring optical port)

2), OSC optical port mode of optical management channel:

- 1, OD (OSC/Drop)
- 2, OA (OSC/Add)
- 3, ODA (OSC/Drop & Add)

9.0 ORDERING INFORMATION

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C-Band DWDM Line EDFA Moduel	Operation wavelength		Product type		Signal gain (Pin=-30dBm)		Module type		Module size number		Connnctor		Monitoring optical port options		OSC optical port options	
	4	C-Band (1528~1564)	3	Pre amplifier(BA)	20	20dB	FM	Full function module	05	125 x 150 x 22mm	SP	SC/U/PC	M00	Without optical port monitoring	O00	Without OSC
					25	25dB					SA	SC/APC			OD	OSC/Drop
					30	30dB					LP	LC/U/PC	MO	With output optical port monitoring	OA	OSC/Add
					35	35dB					LA	LC/APC			ODA	OSC/Drop & Add
											FP	FC/U/PC	MI	With input optical port monitoring		
											FA	FC/APC				
													MIO	With input,output optical port detection		