A-GEAR World Wide Manufacturing

Technical index

PA4300 Series

C-Band Pre-EDFA

Content

1. Product Description

PA4300 series is a C-Band (1528~1565nm) Pre-amplifier EDFA. According to the gain flatness feature, this series product can be divided into 2 types:
PA4300/SCH: single-channel pre-amplifier, do not fix on gain flatness, suitable for the application of single channel or 1~8 continuous ribbon channels (ITU wavelength).
PA4300/F05: gain-flattened pre-amplifier, realizing gain flatness (F05, ≤±0.5dB) at gain spectrum <1.0dB (Typ.<0.8dB) within whole C-band, as adopting the high-quality GFF and optimization of optical route. Meet requirement of DWDM system C-band pre-amplifier on gain flatness and high output power totally.
We are is the famous manufacturer of EDFA. PA4300 adopts the world's top class pump laser and America OFS erbium-doped optical fiber. Perfect APC, ACC and ATC control, excellent design in the ventilation and heat-dissipation ensure the long life and high reliable work of pump laser. RS232 and RJ45 offer serial commutation and SNMP network management port. The LCD at the front panel offers the work index of all equipment and warning alarm. The laser will switch off automatically if optical power is missing, which offers security protection for the laser. All the optical port can be installed in the front panel (also can be in the back panel if customers specify).

2. Product Feature

- Wide operating bandwidth (1528~1565nm)
- SCH: single channel or 1~8 continuous ribbon channels (ITU wavelength)
- F05: gain flatness ≤±0. 5dB
- Low noise, high gain
- APC, AGC, ACC controlled selection
- Powerful RS232 supervisory instruction
- Three exterior option: 1U (19" stander), 3D (12.4", 3U, Desk-type), OD (out-door) and modular
- 1U and 3D exterior, offering status appearance and diagnosing fault with LCD, standard RS232 communication interface, SNMP network management function
- OD out-door rainproof type, it is no need for generator room so that it is very convenient for the project design and operation cost.
- Application of 3D models to adapt to laboratory
- Excellent P/P ratio.

3. Main Application

- C-Band single channel pre amplification
- C-Band DWDM pre amplification
- WDM fiber CATV system pre amplification
- Laboratory application

4. Technical Index

4.1. Optical feature

Feature		Units	Index Min.	Index Typ.	Index Max.	Supplement
Operating wavelength range		(nm)	1528		1565	C-Band
Input power		(dBm)	-30		+3	
Signal Gain (Pin=-30dBm)		(dB)	20			PA4320
			25			PA4325
			30			PA4330
Output power (Pin=-30dBm)		(dBm)		-10		PA4320
				-5		PA4325
				0		PA4330
Noise figure	Pin=-30dBm	(dB)		4.5		PA4320
				4.3		PA4325
				4.0		PA4330
	Pin=-10dBm	(dB)		4.7		PA4320
				4.5		PA4325
				4.3		PA4330
Gain flatness		(dB)		Single channel		SCH
			-0.5	±0.4	+0.5	F05
Polarization dependence loss		(dB)			0.3	
Polarization dependence gain		(dB)			0.5	
Polarization mode dispersion		(ps)			0.3	
Input/output isolation		(dB)	30			
Pump power leakage		(dBm)			-30	
Echo loss		(dB)	40			UPC
			55			APC

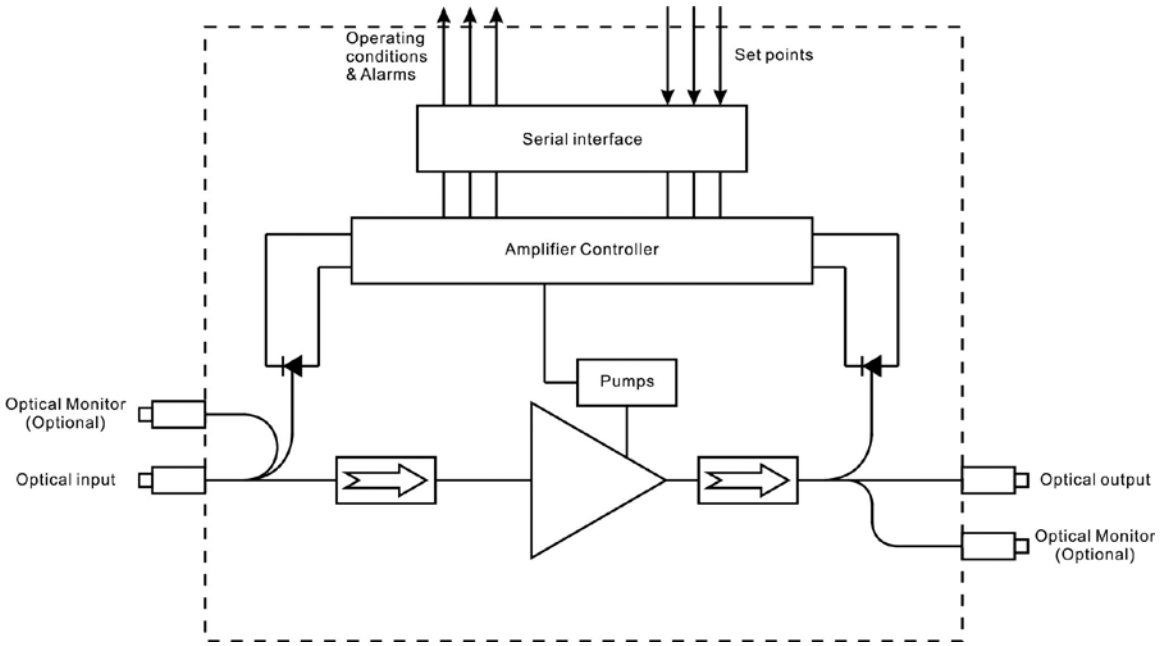
4.2. General feature

Feature	Units	Index Min.	Index Typ.	Index Max.	Supplement
SNMP network management interface		RJ45		1565	
Series interface		RS232			

Feature	Units	Index			Supplement
		Min.	Typ.	Max.	
Power supplement	(V)	90		265	220VAC
		30		72	-48VDC
Power consume	(W)			25	
Operating temp.	(℃)	-5		65	
Storage temp.	(℃)	-40		80	
Operating relative humidity	(%)	5		95	
Size (W)×(D)×(H)	(")		19×14.5×1.75		1RU (19")
	(")		12.4×15.4×5.25		3D (12.4", desk-type)
	(mm)		150×125×22		Modular

5. Optical/electrical schematic

5.1. Optical port mode M4 (with input & output monitor port)



6. Product Series

Model	Signal gain (Pin= -30dBm)	Output power (Pin= -30dBm)	Noise figure Pin= -10dBm	Noise figure Pin= -30dBm	Flatness
PA4320/SCH	20dB	-10dBm	4.7	4.5	
PA4325/SCH	25dB	-5dBm	4.5	4.3	Single channel
PA4330/SCH	30dB	0dBm	4.3	4.0	
PA4320/F10	20dB	-10dBm	4.5	4.3	
PA4325/F10	25dB	-5dBm	4.3	4.1	±0.5dB
PA4330/F10	30dB	0dBm	4.1	3.9	

Notes:

[1] Gain flatness feature F05 (≤±0.25dB) and F20 (≤±1.0dB) optional.
[2] Output power adjustable P type optional
[3] Optical ports M4 optional, with input and output supervise port
[4] 4 ports, 8 ports, 16 ports and etc multi-ports output Optional

7. Model explanation

PA 4 [3] [2 5] / [S C H] – [0] [N] – [M 2] – [1 U] – [F] / [S A] – [2 2]

Product series	Operating bandwidth		Product type		Gain		Gain flatness (dB)		Function		Network management		Number of optical port		Exterior		Optical port position		Connector		Power supply	
Amplifier of communication class	5	1540~1563nm CATV	1	BA	20	20dB	SCH	Single-channel	0	Without	0	Without	M2	2 ports, without input & output monitor	1U	19" 1RU	F	Front panel	FA	FC/APC	22	220VAC
			2	LA	25	25dB	F05	FL≤ ±0.5 GP-P≤1.0	G	Gain adj.	N	With			3D	Desk-type	B	Back panel	FP	FC/UPC	11	110VAC
	4	C-Band 1528~1565nm	3	PA	30	30dB							M4	4 ports, with input & output monitor	OD	Out-door			SA	SC/APC	48	-48VDC
			4	High Power	35	35dB									OEM	Appearance user customized			SP	SC/UPC		
	6	L-Band 1570~1610nm	5	VGA															LA	LC/APC		
			7	MSA											ML	Modulator			LP	LC/UPC		
	7	C+L-Band	8	FTTP with CWDM, for FTTx PON																		
	8	Bi-direction EDFA																				