HA5200 1550nm Erbium Doped Fiber Amplifier

PRODUCT DESCRIPTION

HA5200 series C-Band line-amplifier EDFA (also knows as relay EDFA), is designed for the application of single channel or 1~8 continuous ribbon channels (ITU wavelength). Fiber CATV system operates generally in single wavelength that has no strict requirement on gain flatness. In order to reduce the effect of CNR deterioration caused by EDFA, input power should be as high as possible to make EDFA operate in saturated output power. The typical value of input power is >+3dBm.

HA5200 relay EDFA (Low-Input type) adopts noise filtration technology in the optic path, and can filter spontaneous radiation effectively. When the input is 0dBm, its CNR can reach 49.5dBm, applied in sub head-end and line relay.

Guangtai is the famous manufacturer of EDFA. HA5200 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 commutate ion and SNMP network management port. The LCD at the front panel offers the work index of all equipment and warning alarm. Optical loss and laser closing automatically provide safe protect of the laser. All the optical port can be installed in the front panel (also can be in the back panel if customers specify).

Guangtai product, for its high quality, high reliable and high cost performance, is the ideal choice of the system integration and system operation.

PRODUCT FEATURE

- ▶1540~1563nm operating bandwidth
- ▶Extra low noise index
- ▶High output, high reliability
- ▶APC、ACC、ATC controlled selection（HA5200/P）
- ▶Powerful RS232 supervisory instruction
- ▶Three exterior option: 1U (19” stander), 3D (12.4”, 3U, Desk-type) and modulator
- ▶1U and 3D exterior, offering status appearance and diagnosing fault with LCD, standard RS232 communication interface, SNMP network management function
- ▶Application of 3D models to adapt to laboratory
- ▶Excellent P/P ratio in area.

MAIN APPLICATION

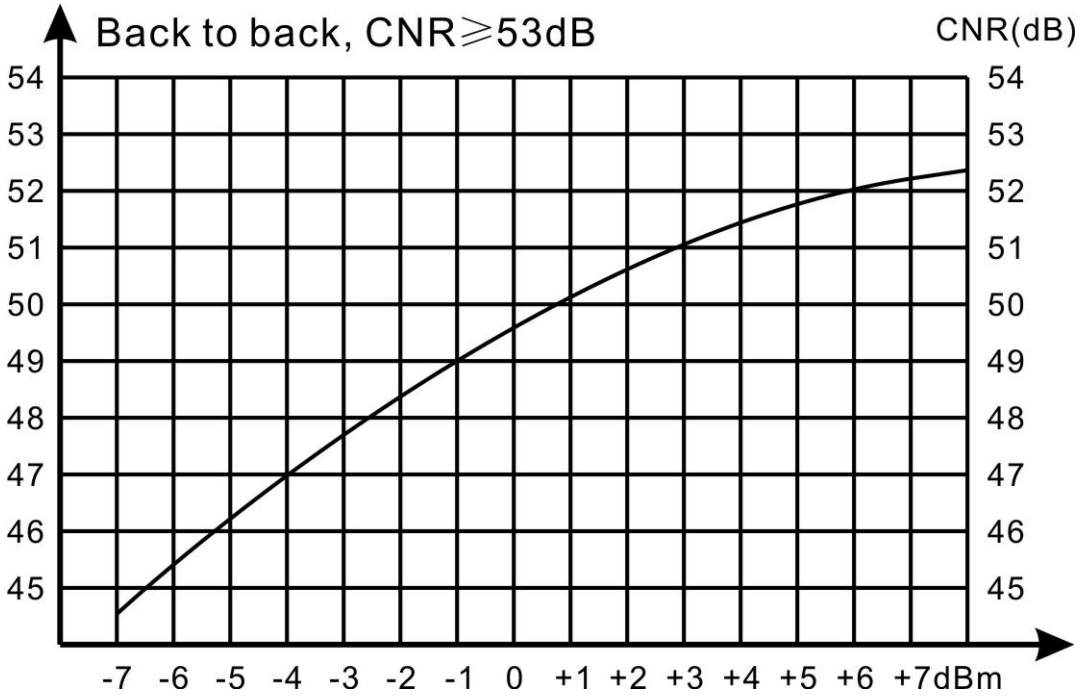
- ▶In the original 1550nm optical system, all 1310nm optical transmitters can be cancelled in the second grade service area with 0dBm receiving power. Instead, HA5200 can be adopted to carry out full optic relay and then achieve large acreage cover of all the service area.
- ▶Over-long trunk with low-input
- ▶AM CATV
- ▶Digital CATV
- ▶DBS & MMDS
- ▶FTTx PON
- ▶Laboratory application

TECHNIQUE INDEX

Performance			Index			Supplement
			Min	Typ	Max	
Optic feature	Operating wavelength range(λ)	(nm)	1540		1563	CATV
	Input power	(dBm)	-15		+10	
	Maximum output power [1)]	(dBm)	+10		+26	Pin=0dBm
	Output power adjustable range	(dBm)	-6		0	HA5200/P
	Number of output ports		1		8	FC/APC, SC/APC
			1		16	LC/APC
	Difference of each output power	(dB)	-0.5		+0.5	
	Noise figure (Pin=0dBm)	(dB)			6.3	HA5226
	Polarization dependence loss	(dB)			0.3	
	Polarization dependence gain	(dB)			0.4	
	Polarization mode dispersion	(ps)			0.5	
	Input/output isolation	(dB)	30			
	Pump power leakage	(dBm)			-30	
	Echo loss	(dB)	55			APC
General feature	SNMP network management interface		RJ45			
	Communication interface		RS232			
	Power supply	(V)	90		265	220VAC
			30		72	-48VDC
			23		25	+24VDC
	Power consume	(W)			50	
	Work temp.	(℃)	-5		65	
	Storage temp.	(℃)	-40		80	
	Relative humidity	(%)	5		95	
	Size (W)×(D)×(H)	(mm)	483×368×44			1RU (19")
			315×391×133			3D (12.4", desk-type)
			150×125×22			Modulator

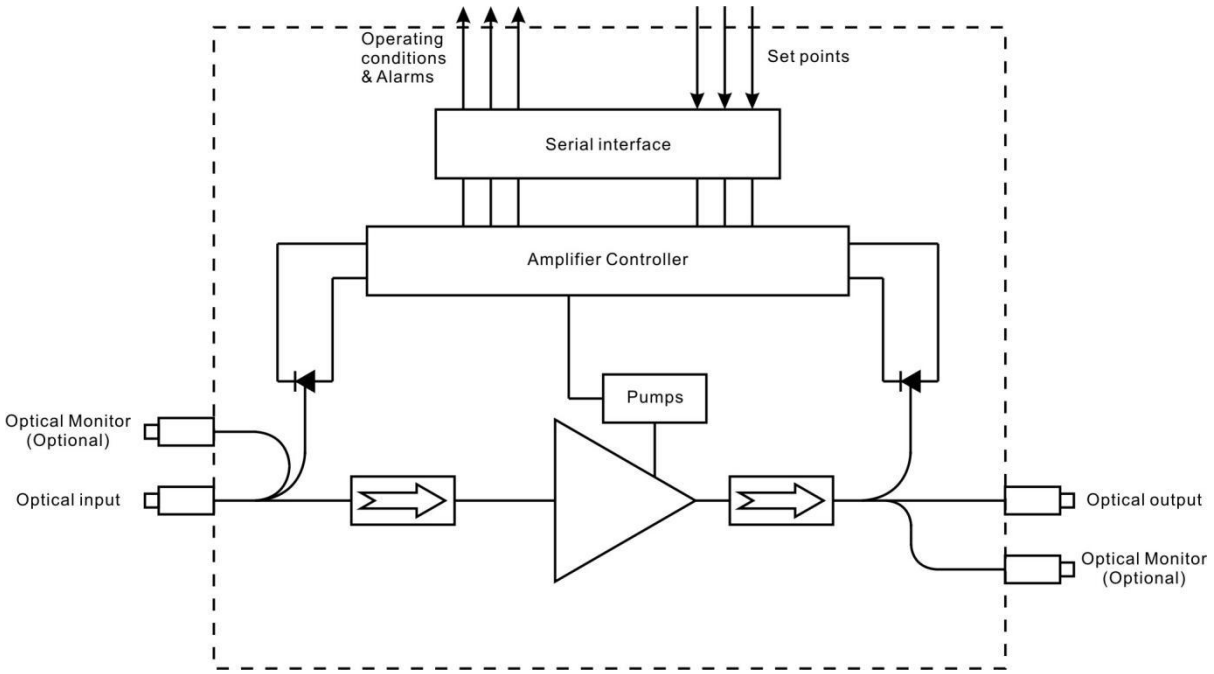
Remark: Output power can be customized by user.

CNR DEGRADATION CURVE TABLE

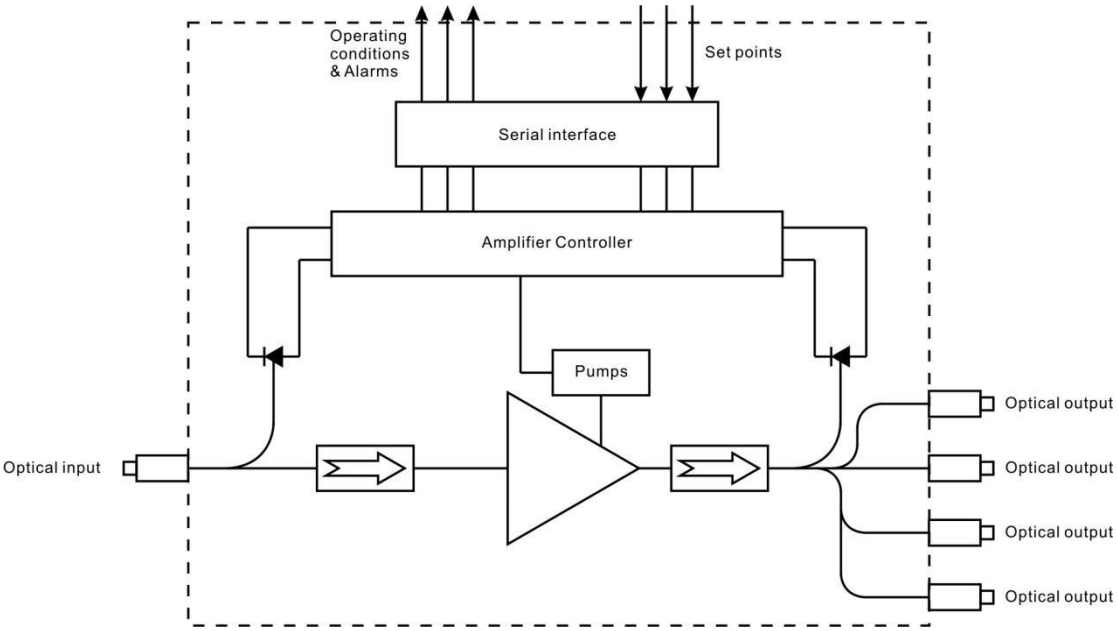


OPTICAL/ELECTRICAL SCHEMA

Optical port mode M4 (With input & output monitor port)



Optical mode O4 (Four ways optical output)



PRODUCT SERIES

Model	Output power Max (dBm)	Noise figure (dB) Pin=0dBm	Input power range (dBm)			Function
			Min.	Typ.	Max.	
HA5213/ON	≥13	4.0	-15	0	+10	With SNMP network management, output power is not adjustable
HA5214/ON	≥14	4.1				
HA5215/ON	≥15	4.2				
HA5216/ON	≥16	4.3				
HA5217/ON	≥17	4.5				
HA5218/ON	≥18	4.8				
HA5219/ON	≥19	5.0				
HA5220/ON	≥20	5.3				
HA5221/ON	≥21	5.5				
HA5222/ON	≥22	5.8				
HA5223/ON	≥23	6.0				
HA5224/ON	≥24	6.3				
HA5225/ON	≥25	6.5				
HA5226/ON	≥26	6.8				
HA5220/PN	≥20	5.3	-15	0	+10	With SNMP network management, the output optical power adjustable 0~ -6dB
HA5221/PN	≥21	5.5				
HA5222/PN	≥22	5.8				
HA5223/PN	≥23	6.0				
HA5224/PN	≥24	6.3				
HA5225/PN	≥25	6.5				
HA5226/PN	≥26	6.8				

MODEL EXPLANATION

HA 5 [2] [2][0] /[0] [N]– [M][2] – [1][U] – [F] / [S][A] – [2][2]

Product series	Operating bandwidth		Product type		Saturation output power		Function		Network management		Number of optical port		Exterior		Optical port position		Connector		Power supply	
Amplifier of communication class	5	1540~1563nm CATV	2	LA	13	13dBm	0	Without	0	Without	M2	2 ports, without input & output monitor	1U	19" 1RU	F	Front panel	FA	FC/APC	22	220VAC
					14	14dBm	P	Optical power adj.	N	With					B	Back panel	FP	FC/UPC	11	110VAC
					15	15dBm					M4	4 ports, with input & output monitor					SA	SC/APC	48	-48VDC
					16	16dBm	G	Gain adj.									SP	SC/UPC		
					17	17dBm					02	2 ports					LA	LC/APC		
					18	18dBm					04	4 ports					LP	LC/UPC		
					19	19dBm					08	8 ports								
					20	20dBm					16	16 ports								
					21	21dBm														
					22	22dBm														
					23	23dBm														
					24	24dBm														
					25	25dBm														
					26	26dBm														