

HA5100 1550nm Erbium Doped Fiber Amplifier

PRODUCT DESCRIPTION

HA5100 series is a CATV booster optical amplifier with gain spectrum band within 1540~1563nm. This kind of optical amplifier is designed for the application of single channel or 1~8 continuous ribbon channels (ITU wavelength). Generally, fiber CATV system operates in single wavelength that has no strict requirement on gain flatness. HA5100 booster amplifier is featured with low NF, high-saturated output power. It is applicable for central bureau, sub-bureau and line relay, as well as other optical communication network.

HA5100 is applied most commonly and widely compared with other optical amplifier in CATV system.

Guangtai is the famous manufacturer of optical amplifier. HA5100 optical amplifier 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 of optical amplifier 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
- ▶ Low noise, high output, high reliability
- ▶ APC、ACC、ATC controlled selection (HA5100/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

- ▶ AM CATV
- ▶ Digital CATV
- ▶ DBS & MMDS
- ▶ FTTP
- ▶ FTTx PON
- ▶ Laboratory application

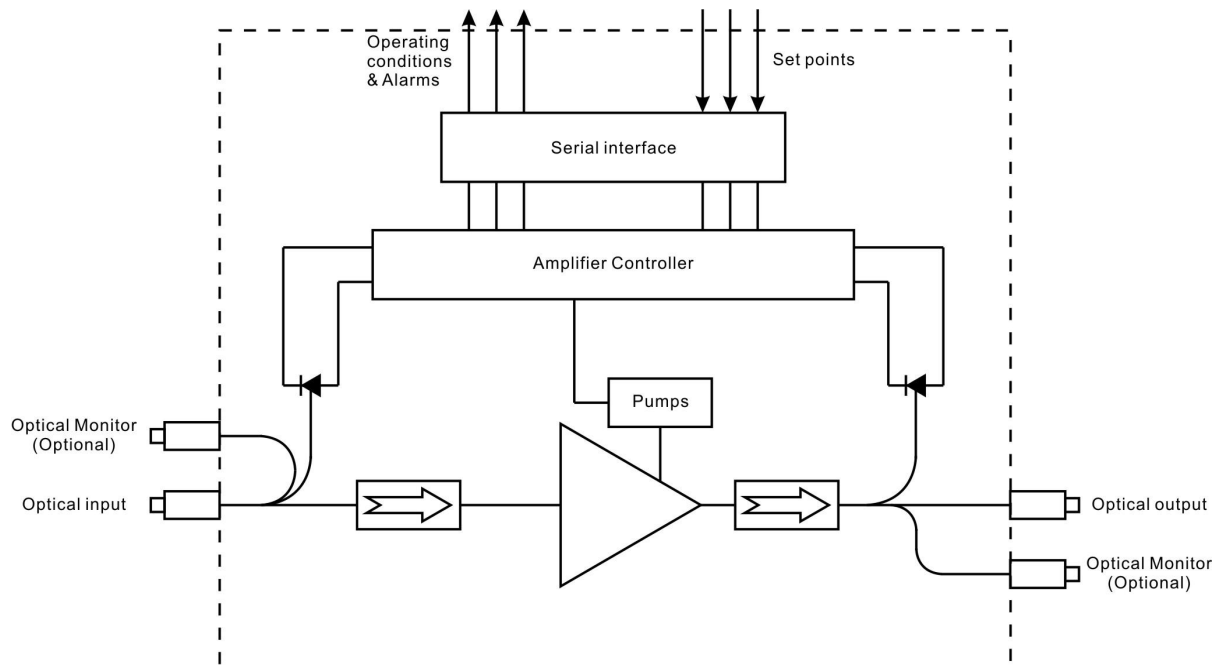
TECHNIQUE INDEX

Performance			Index			Supplement
			Min	Typ	Max	
Optic feature	Operation wavelength range (λ)	(nm)	1540		1563	CATV
	Input power	(dBm)	-10		+10	
	Maximim output power ¹⁾	(dBm)	+10		+26	Pin=0dBm
	Output power adjustable range	(dBm)	-6		0	HA5100/P
	Number of output ports		1		8	SC/APC
			1		16	LC/APC
	Difference of each output power	(dB)	-0.5		+0.5	
	Noise figure (Pin=0dBm)	(dB)			6.3	HA5126
	Polarization dependence loss	(dB)			0.3	
	Polarization dependence gain	(dB)			0.3	
	Polarization mode dispersion	(ps)			0.3	
	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.	(°C)	-5		65	
	Storage temp.	(°C)	-40		80	
	Relative humidity	(%)	5		95	
	Size (W)×(D)×(H)	(mm)	483×368×44			1RU (19")
			315×391×133			3D (12.4", desk-type)
			399×244×165			Out-door

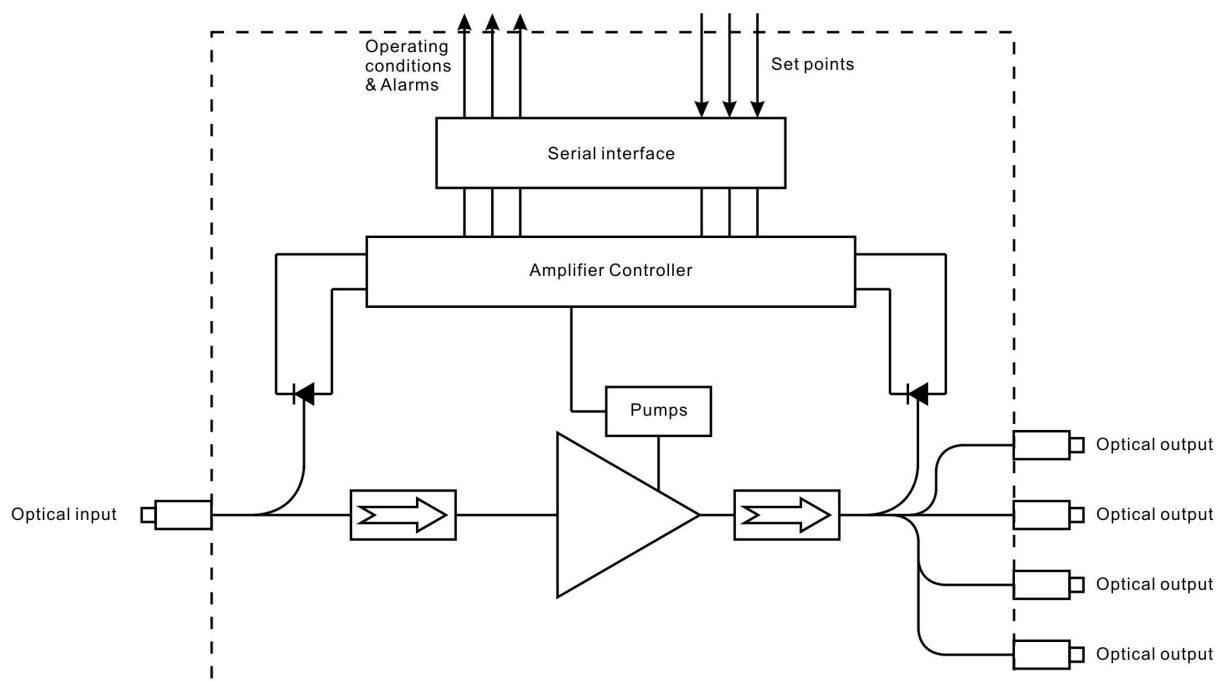
Remark: Output power can be customized by user

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) Pin=0dBm	Noise figure (dB) Pin=0dBm	Input power range (dBm)			Function
			Min.	Typ.	Max.	
HA5113/ON	≥13	4.0	-10	0	+10	With SNMP network management, output power is not adjustable
HA5114/ON	≥14	4.1				
HA5115/ON	≥15	4.2				
HA5116/ON	≥16	4.3				
HA5117/ON	≥17	4.5				
HA5118/ON	≥18	4.8				
HA5119/ON	≥19	5.0				
HA5120/ON	≥20	5.3				
HA5121/ON	≥21	5.5				
HA5122/ON	≥22	5.8				
HA5123/ON	≥23	6.0				
HA5124/ON	≥24	6.3				
HA5125/ON	≥25	6.5				
HA5126/ON	≥26	6.8				
HA5120/PN	≥20	5.3	-10	0	+10	With SNMP network management, the output optical power adjustable 0~ -6dB
HA5121/PN	≥21	5.5				
HA5122/PN	≥22	5.8				
HA5123/PN	≥23	6.0				
HA5124/PN	≥24	6.3				
HA5125/PN	≥25	6.5				
HA5126/PN	≥26	6.8				

MODEL EXPLANATION

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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	1 BA	13 13dBm	0 Without	0 Without	01 1 port	1U 19" 1RU	F Front panel	FA FC/APC 22 220VAC
			2 LA	14 14dBm	P Optical power adj.	N With	02 2 ports	3D Desk-type	B Back panel	FP FC/UPC 11 110VAC
	4	C-Band 1528~1565nm	3 PA	15 15dBm	G Gain adj.		04 4 ports	OD Out-door		SA SC/APC 48 -48VDC
			4 High Power	16 16dBm			08 8 ports	OEM Appearance user customized		SP SC/UPC
	6	L-Band 1570~1610nm	5 VGA	17 17dBm			16 16 ports			LA LC/APC
			7 MSA	18 18dBm						LP LC/UPC
	7	C+L-Band	8 FTTP with CWDML for FTTx PON	19 19dBm		M2 2 ports, without input & output monitor	2U 19" 2RU			
	8	Bi-direction EDFA		20 20dBm			ML Modulator			
				21 21dBm		M4 4 ports, with input & output monitor				
				22 22dBm						
				23 23dBm						
				24 24dBm						
				25 25dBm						
				26 26dBm						