

# HSA4200 (With SNMP)

## C-Band Single Channel Line Amplifier EDFA (SLA)

### PRODUCT DESCRIPTION

HSA4200 series is a line EDFA designed specifically for single wavelength optic transmission system. It is installed in the middle of the transmission line, replacing the traditional relay station, to compensate the optical power loss in the line and extend the signal transmission distance.

HSA4200 adopts the world's top class pump laser. Its excellent optic performance, advanced electronic circuit and low consumption greatly reduced the heat power consumption of whole unit. Perfect FGC, ATC control, excellent design in the ventilation and heat-dissipation, ensures the long life and high reliability work of pump laser. The LCD at the front panel offers

the work index and warning alarm of all equipment. RS232 and RJ45 offer serial commutation and SNMP network management port. 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.



### PRODUCT FEATURES

- ▶ Covered full C-Band.
- ▶ High gain, low noise.
- ▶ Telecommunication-grade security and reliability, and network management function.
- ▶ The LCD, LED at the front panel offers the work index and warning alarm of all equipment.
- ▶ Standard RS232 communication interface.
- ▶ 10/100M Ethernet interface supports SNMP and WEB remote network management.
- ▶ 1+1 powers supply back up ,hot-plug function available.
- ▶ Low power consumption.
- ▶ Excellent P/P ratio in area.

### MAIN APPLICATION

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

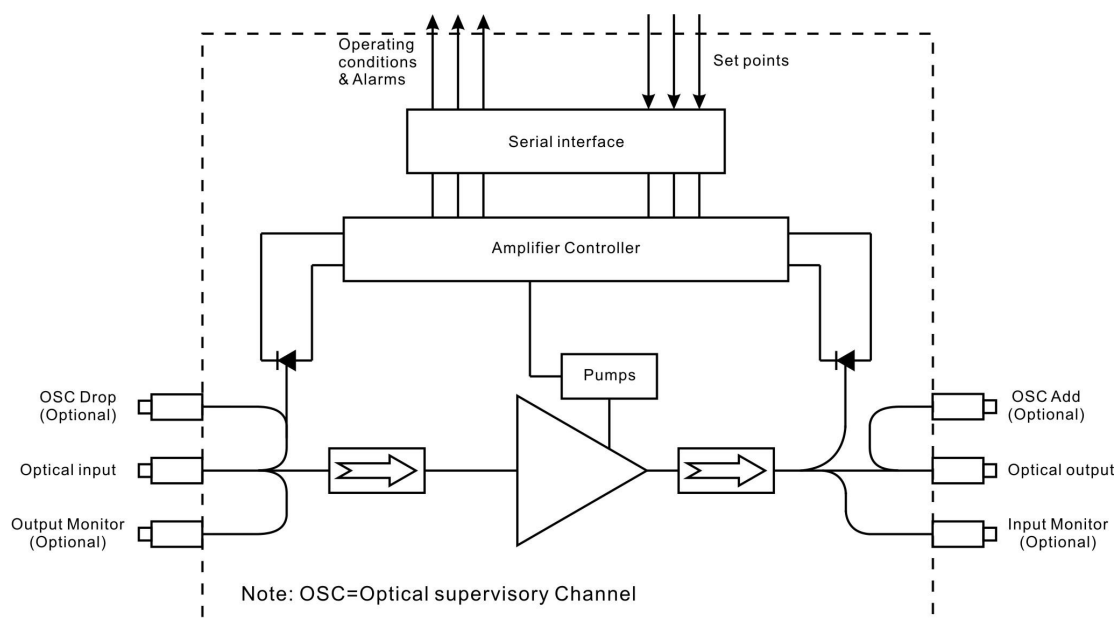
## TECHNICAL INDEX

Performance			Index			Supplement
			Min.	Typ.	Max.	
Optic feature	Working wavelength range	(nm)	1528		1564	C-Band
	Input optical power ( Pi )	(dBm)	-25		-10	
	Output optical power ( Po )	(dBm)	13		23	
	Noise figure	(dB)		5.0		Max output, max gain
	Polarization dependence loss (PDL)	(dB)			0.3	
	Polarization dependence gain (PDG)	(ps)			0.3	
	Polarization mode dispersion (PMD)	(dB)			0.3	
	Input/output optical isolation	(dB)	30			
	Pump power leakage	(dBm)			-30	
	Echo loss	(dB)	45			UPC
			55			APC
	Optical supervisory channel wavelength ranges	(nm)	1500	1510	1520	
General feature	SNMP network management interface		RJ45			
	Communication interface		RS232			
	Power supply	(V)	90		265	220VAC
			30		72	-48VDC
	Power consumption	(W)			30	
	Working temp.	(°C)	-5		+70	
	Storage temp.	(°C)	-40		+85	
	Working relative humidity	(%)	+5		+95	
	Size (W)×(D)×(H)	(mm)	483×205×44			

## SOFTWARE FUNCTION MONITORING AND ALARM

Functions	In-Service Firm ware Upgrades
	Auto Shut Down
	Fixed Gain Control mode and Power limiting (AGC)
	Output Power Control Mode (APC)
	Pump Current Control Mode (ACC)
	Pump Maximum Working Current limit Protection
Monitors	Total Input Power
	Total Output Power
	Pump Status
	Chassis Temperature
Alarms	Loss-of-Signal Alarm
	Chassis Temperature Alarm
	Pump Temperature Alarm
	Pump Bias Alarm

## OPTO-ELECTRICAL DIAGRAM



## PRODUCT SERIES

Model	Max Output power(dBm) (Pin=0dBm)	Wavelength (nm)	Monitor optical port mode	OSC Optical port mode
HSA4213-M00-O00	13	1528~1564 C-Band	Without	Without
HSA4217-M00-O00	17			
HSA4218-M00-O00	18			
HSA4219-M00-O00	19			
HSA4220-M00-O00	20			
HSA4223-M00-O00	23			

Note :1) Monitor optical port mode options :1 . MO ( With output monitor optical port )

2 . MI ( With input monitor optical port )

3 . MIO ( With input and ouput monitor optical port )

2) OSC Channel optical port light management: 1 . OD ( OSC / Drop )

2 . OA ( OSC / Add )

3 . ODA ( OSC / Drop & Add )

## MODEL EXPLANATION

Telecom single-channel EDFA		Operation wavelength		Product type		Saturation output power		Chassis Length		Connector		Power Mode		Power Supply		Monitor Optical ports options		OSC optical port options mode		
		4	C-Band (1528~1564)	2	Line Amplifier	13	13dBm	D20	205mm	SP	SC/UPC	S	Single PS	22	220VAC	M00	Without Monitor optical ports	O00	Without OSC	
						17	17dBm	D25	250mm	SA	SC/APC	P	Dual PS Hot Plug	48	-48VDC			OD	OSC/Drop	
						18	18dBm	D30	300mm	LP	LC/UPC			42	-48VDC &220VAC	MO	With output optical ports monitor	OA	OSC/Add	
						19	19dBm			LA	LC/APC							ODA	OSC/Drop & Add	
						20	20dBm			FP	FC/UPC									
						22	22dBm			FA	FC/APC									
						23	23dBm													
																	MIO	With input,output optical ports monitor		