HWA4200 (With SNMP)

C-Band DWDM Line Amplifier EDFA (WLA-C)

PRODUCT DESCRIPTION

HWA4200 series, is designed for C-Band 44 waves or 88 waves DWDM system design Line Amplifier gain flatness. Products using the most excellent optical performance, the most advanced electronic control technology and comprehensive software features, has a wide operating wavelength range, Low noise, excellent gain flatness characteristics and transient characteristics.

HWA4200 is mainly installed in middle of transmission line, replacing the traditional relay, to compensate the optical power loss in the line and extend the optical signal transmission distance.

HWA4200 the world's top brands of pump lasers, advanced electronic circuit design and low power consumption, which greatly reduces the overall thermal power, to ensure long life and high reliability PUMP Laser work. Front panel LCD, LED offers the work parameters and alarms. RS232 and RJ45 provides serial communications and SNMP network management interface. Optical loss, laser automatically shut down, provides laser safety protection.

HWA4200 has two kinds of function versions are available:

1. Standard version: provides a fixed gain control mode (FGA), the pump current control mode (ACC)

2. Enhanced version: In addition to the standard version with the control functions, increasing the variable gain control mode (VGA, AGC), Variable output power control mode (VPA, APC).

HWA4200 enhanced version, for 44 wave DWDM systems, providing a flexible, high-performance, low-cost networking applications.

PRODUCT FEATURES

- ▶Wide working wavelength: 1529.16~1563.86nm
- ▶Accord with the communication technology requirements of 44 channels DWDM system
- ▶Excellent gain flattened feature (GF<1.0dB)
- ▶Excellent Transient feature
- ▶Low noise figure
- ▶Carrier-class 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 optional, hot-plug function available
- ▶Low power consumption
- ▶Excellent P/P ratio in area

MAIN APPLICATION

▶44 channels DWDM system

▶Long distance trunk network

▶MAN or access network

▶All kinds of SDH/PDH transmission system

▶FTTx PON

SOFTWARE FUNCTION MONITORING AND ALARM

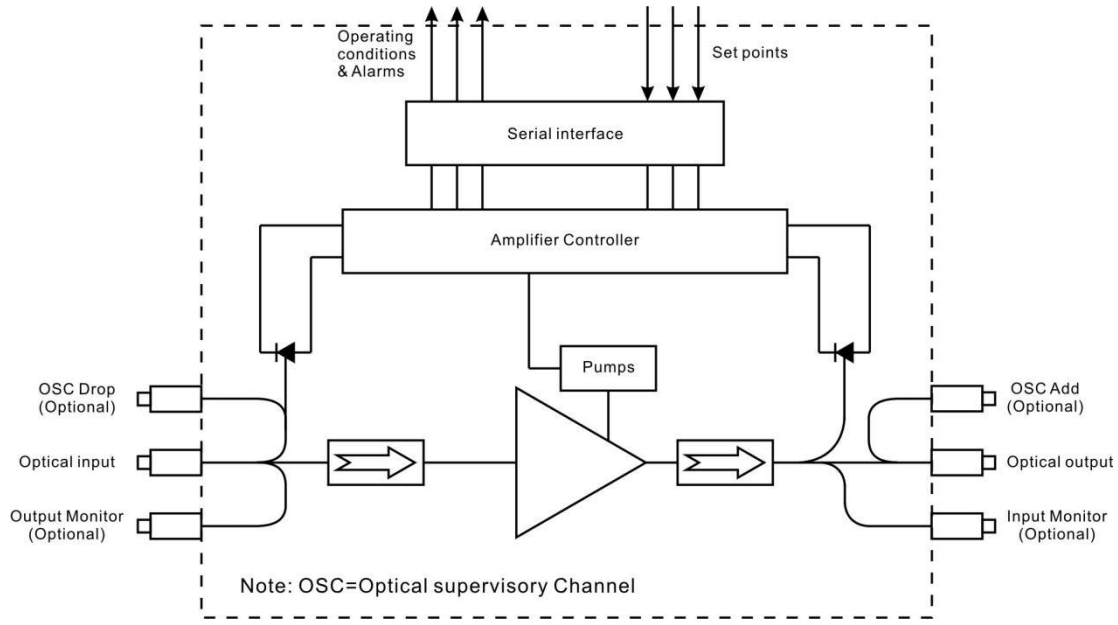
Function, Monitoring, Alarm		Standard version	Enhanced version
Functions	In-Service Firmware Upgrades	√	√
	Auto Shut Down	√	√
	Fixed Gain Mode (FGA)	√	√
	Variable Gain Control Mode (VGA, AGC)	×	√
	Variable output power control mode (VPA, APC)	×	√
	Pump Current Control Mode (ACC)	√	√
	Pump Maximum Working 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	√	√

TECHNICAL INDEX

Performace			Index			Supplement
			Min.	Typ.	Max.	
Optical feature	Working wavelength range (λ)	(nm)	1529.16		1563.86	ITU 88CH
	No. of working channel	(CH)	1	44		
	Input Optical Power (Pi)	(dBm)	-6		+6	
	Saturation output power(Po)	(dBm)	18			Customer selection
	Variable output power range	(dB)	-6		0	Enhanced version
	Signal gain	(dB)	20			Customer selection
	Variable gain range	(dB)	-12		0	Enhanced version
	Gain flatness	(dB)		0.7	1.0	Peak to Peak
	Noise figure	(dB)		5.0		Max output, max gain
	Polarization dependence Gain (PDG)	(dB)			0.3	
	Polarization mode dispersion (PMD)	(ps)			0.3	
	Polarization dependence loss (PDL)	(dB)			0.3	
	Input/Output optic isolatioin	(dB)	30			
	Pump leakage power	(dB)			-30	
	Echo loss	(dB)	45			UPC
			55			APC
	Optical Supervisory Channel Wavelength	(nm)	1500	1510	1520	
Transient feature	Transient setting time	(μs)			700	16dB Add/Drop
	Transient Overshoot	(dB)	-1.5		+1.5	16dB Add/Drop
	Transient gain changes	(dB)	-0.5		+0.5	
General feature	SNMP network management		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			

OPTO-ELECTRICAL DIAGRAM



PRODUCT SERIES

Model	Stauration power	Signal gain	Gain flatness	The Function Version	Monitor optical port mode	OSC Optical port mode
HWA4218-G20	18dBm	20dB	<1.0dB	1, FG: Standard Version (FGA) 2, VG: Enhanced Version (VGA)	1, M00: Without monitor 2, MO: With output monitor 3, MI: With input monitor 4, MIO: With input and output monitor	1, O00: Without OSC 2, OA: OSC / Add
HWA4218-G22		22dB				
HWA4218-G24		24dB				
HWA4218-G27		27dB				
HWA4220-G30		30dB				
HWA4220-G20	20dBm	20dB	<1.0dB			
HWA4220-G22		22dB				
HWA4220-G24		24dB				
HWA4220-G27		27dB				
HWA4220-G30		30dB				
HWA4222-G20	22dBm	20dB	<1.0dB			
HWA4222-G22		22dB				
HWA4222-G24		24dB				
HWA4222-G27		27dB				
HWA4222-G30		30dB				
HWA4223-G20	23dBm	20dB	<1.0dB			
HWA4223-G22		22dB				
HWA4223-G24		24dB				
HWA4223-G27		27dB				
HWA4223-G30		30dB				

Note: The signal gain and the saturation output power can be chosen by the user

MODEL EXPLANATION

HWA 4 2 □□ - G□□ - □□- □□ - □ / □□ - M□□ - O□□

Telecom DWDM Optical amplifier

Operation wavelength	
4	1529.16~1563.86nm C-Band 44 CH & 88 CH

Product type	
2	Line amplifier LA

Stauration power	
18	18dBm
20	20dBm
22	22dBm
23	23dBm

Signal gain	
20	20dB
22	22dB
24	24dB
27	27dB
30	30dB

The Function Version	
FG	Standard version FGA
VG	Enhanced Version VGA

Connncrtor	
LP	LC/UPC
LA	LC/APC
SP	SC/UPC
SA	SC/APC
FP	FC/UPC
FA	FC/APC

Power mode	
S	Single PS
P	Dual PS Hot plug

Power supply	
22	220VAC
48	-48VDC
42	-48VDC &220VAC

Monitor options	
M00	Without monitor
MO	With output monitor
MI	With intput monitor
MIO	With input & output Monitor

OSC optical port options	
O00	Without OSC
OD	OSC/Drop
OA	OSC/Add
ODA	OSC/Drop & Add