HWA4100 (With SNMP)

C-Band DWDM Booster EDFA (WBA-C)

PRODUCT DESCRIPTION

HWA4100 series, is designed for C-Band 44 waves or 88 waves DWDM system design power fiber 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 and excellent gain flatness characteristics.

HWA4100 mainly installed in the output end of the optical transmitter, for increasing the output power of the transmitter, to extend the signal transmission distance.

HWA4100 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.

HWA4100 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).

HWA4100 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

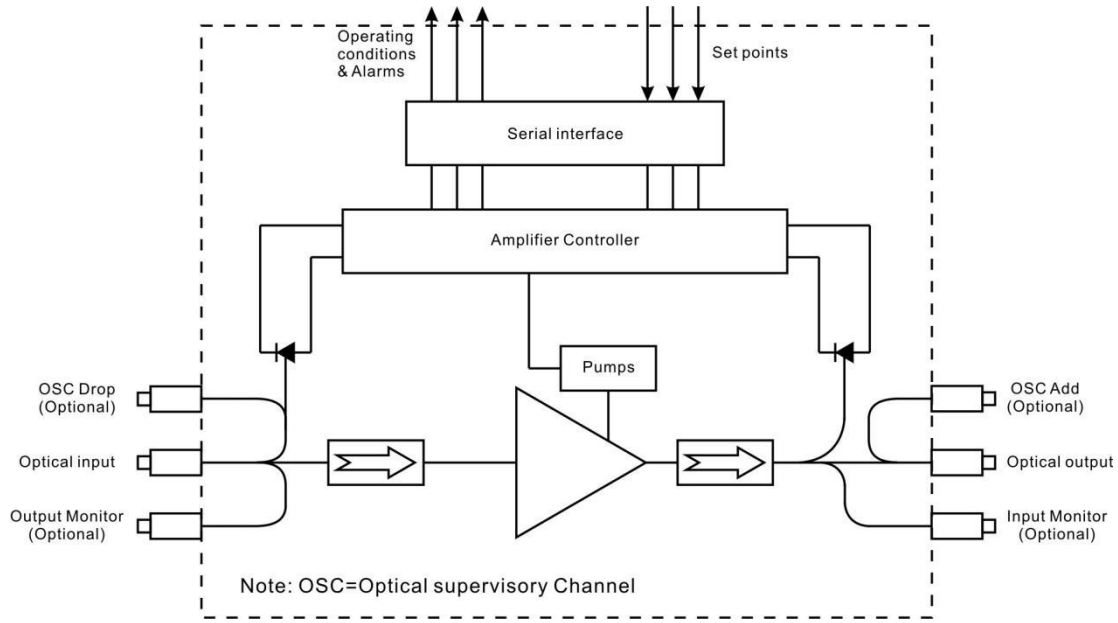
Function, Monitoring, Alarm		Standard version	Enhanced version
Functions	In-Service Firmware Upgrades	√	√
	Auto Shut Down	√	√
	Fixed Gain Mode (FGA)	√	√
	Variable Gain Control Mode (VGA, AGC)	×	√
	Variable output power control mode (VPA, APC)	×	√
	Pump Current Control Mode (ACC)	√	√
	Pump Maximum Working 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)	13		24	Customer selection
			26		28	High Power BA
	Variable output power range	(dB)	-6		0	Enhanced version
	Signal gain	(dB)	13		30	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
HWA4117-G13	17dBm (Optional18dBm)	13dB	<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
HWA4117-G17		17dB				
HWA4117-G20		20dB				
HWA4117-G22		22dB				
HWA4117-G24		24dB				
HWA4120-G17	20dBm (Optional 21dBm)	17dB	<1.0dB			
HWA4120-G20		20dB				
HWA4120-G22		22dB				
HWA4120-G25		25dB				
HWA4120-G27		27dB				
HWA4122-G17	22dBm	17dB	<1.0dB			
HWA4122-G20		20dB				
HWA4122-G22		22dB				
HWA4122-G24		24dB				
HWA4122-G27		27dB				
HWA4123-G18	23dBm	18dB	<1.0dB			
HWA4123-G20		20dB				
HWA4123-G22		22dB				
HWA4123-G23		23dB				
HWA4123-G24		24dB				
HWA4123-G27		27dB				
HWA4124-G18	24 dBm	18dB	<1.0dB			
HWA4124-G20		20dB				
HWA4124-G22		22dB				
HWA4124-G24		24dB				
HWA4124-G27		27dB				

HWA4126-G22	26 dBm	22dB	<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
HWA4126-G24		24dB				
HWA4126-G27		27dB				
HWA4126-G28		28dB				
HWA4127-G24	27 dBm	24dB	<1.0dB			
HWA4127-G27		27dB				
HWA4127-G30		30dB				
HWA4128-G24	28 dBm	24dB	<1.0dB			
HWA4128-G27		27dB				
HWA4128-G30		30dB				

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

MODEL EXPLANATION