

IWA4718 C-Band DWDM Variable Gain EDFA with Mid-Stage Access



Description

Idealphotonics IWA4718 series is a new generation C-Band DWDM variable gain EDFA with mid-stage access bandwidth 1528~1564nm. It combines best-in-class optical performance, state-of-art electronics, a feature-rich control language, and an extremely compact form factor to create the most versatile performance-oriented amplifier on the market. Third generation control electronics simplify complex optical functions such as tilt compensation. It is composed of variable gain pre-amplifier (PA) and variable gain booster amplifier (BA). The gain of these two amplifiers can be set in a certain range. There are access connectors between the two amplifiers which can be used to access OADM, DCM and other optical modules.

HA4720 VGA with MSA output power up to 18dBm , Gain range 16~28dB , mid stage loss range 0~8.5dB . HA4720 can meet the C-Band 44 channels wavelength DWDM channel systems and various technical requirements, can be widely used in DWDM systems Intelligent Optical (ASON), optical add-drop Multiplexing (OADM), and long lines of dispersion compensation.

Feature

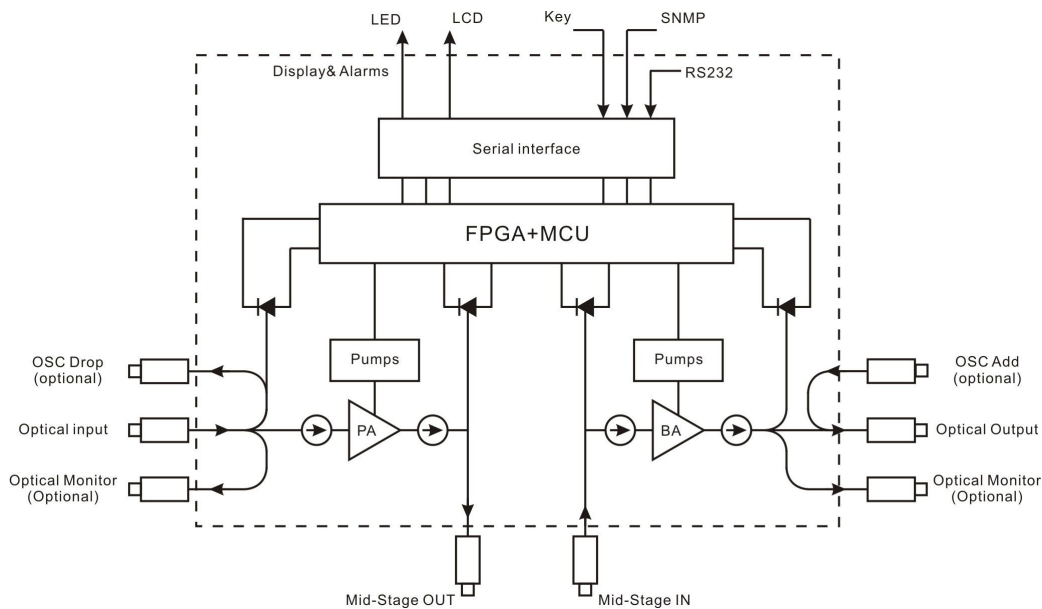
- Variable gain EDFA with mid-stage access
- Accord with various technical requirements of C-Band 44 channels wavelength DWDM

- Fully integrated electronic control with latest electronic surge suppressor control
- Output power >18dBm
- AGC, APC operation modes
- SNMP network management function,
- RS232 command interface
- Front panel with LCD, provide status monitor, fault diagnosis, alarm and safe power off
- Optional optical supervisory channel Add/Drop
- Telecommunication-grade security and reliability and network management
- 1+1 powers supply back , up hot-plug function available
- Excellent P/P ratio

Application

- OADM
- DCM in over long trunk
- ASON
- Reconfigurable optical add/drop multiplexer (ROADM)
- Long-distance or ultra-long haul network between the city
- Line amplifier, Pre-amplifier, Booster, Add/Drop amplifier

OPTICAL/ELECTRICAL SCHEMATIC



SOFTWARE FUNCTIONS, MOITORS AND ALARMS

Functions	In service firmware upgrades
	Auto shut down
	Gain control mode with automatic power limiting
	Gain tilt control
	Independent stage mode (on variants with Mid-stage access)
	Output power control mode
	Pump current control mode
	Eye-safe power mode
Monitors	Non-volatile event log
	Total input power
	Total output power
	Optical backreflection
	Pump status
Alarms	Module temperature
	Loss-of-signal alarm
	Low output power alarm
	Module temperature alarm
	Pump temperature alarm
	Pump bias alarm
	Excess backreflection alarm (optional)

Specification

Performance		Index			Supplement
		Min.	Typ.	Max.	
Operating wavelength range	(nm)	1528		1564	
Input power range	(dBm)	-29		+2	
Gain range	(dB)	16		28	

	Mid-stage loss range	(dB)	0		8.5	
	Max. output power	(dBm)			18	
	Gain flatness	(dB)		0.7	1.0	Peak-to-peak
	Noise figure	(dB)		5.5	5.9	max gain
	Polarization dependence loss	(dB)			0.3	
	Polarization dependence gain	(dB)			0.4	
	Polarization mode dispersion	(ps)			0.5	
	Pump power leakage	(dBm)			-30	
	OSC wavelength ranges ¹⁾	(nm)	1500	1510	1520	
	Return loss ²⁾	(dB)	40			U
	Transient setting time	(μs)			500	16dB Add/Drop
	Transient over /under shoot	(dB)	1.5		1.0	16dB Add/Drop
	Transient offset	(dB)			0.5	
General feature	SNMP network management interface		RJ45			
	Serial interface		RS232			
	Power supply	(V)	90		265	220VAC
			30		72	-48VDC
	Power consume	(W)			25	
	Operating temp.	(°C)	0		65	
	Storage temp.	(°C)	-40		+85	
Operating relative humidity	(%)	5		95		

Remark 1: OSC=Optical Supervisory Channel

2: Optional APC, Return loss >50dB

Product series

Model	Max. Output power	Gain range	Mid-stage loss	Optical power monitoring mode	OSC optical monitoring
IWA4718-M00-S00	18dBm	16~28dB	0~8.5dB	Without	Without
IWA4720-M00-S00	20dBm	14~33dB	0~10.0dB		
IWA4723-M00-S00	23dBm	24~41dB	0~12.5dB		

Note: 1), Optical port monitoring mode options:

- 1, MO (With output monitoring optical port)
- 2, MI (With input monitoring optical port)
- 3, MIO (With input and output monitoring optical port)

2), OSC optical port mode of optical management channel:

- 1, OD (OSC/Drop)
- 2, OA (OSC/Add)
- 3, ODA (OSC/Drop & Add)

Ordering information

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Telecom DWDM EDFA	Operation wavelength		Product type		Max. output power		Chassis Length		Connector		Power Mode		Power Supply		Monitor Optical ports options		OSC optical port options mode		
	4	C-Band (1528~1564)	7	VGA with MSA	18	18dBm	D20	205mm	SP	SC/UPC	S	Single PS	22	220VAC	M00	Without Monitor optical ports	O00	Without OSC	
20					20dBm	D25	250mm	SA	SC/APC	D	Dual PS	48	-48VDC	OD			OSC/Drop		
23					23dBm	D30	300mm	LP	LC/UPC	P	Dual PS Hot Plug	42	-48VDC & 220VAC	MO			With output optical ports monitor		
5			VGA without MSA							LA	LC/APC					MI	With input optical port monitor	OA	OSC/Add
										FP	FC/UPC							ODA	OSC/Drop & Add
										FA	FC/APC								
												MIO	With input, output optical ports monitor						