

FWA22P-XGS-64xN Series, 64 ports XGS-PON&CATV WDM EDFA



1. Product Description

FWA22P-XGS series erbium and ytterbium co-doped high-power fiber amplifier is the latest optical transmission system equipment, realizing to combine optical signal OLT XPON/XGS-PON and 1550nm CATV, and amplify the CATV signal as well. The optical input number: 1 port of CATV or 2 redundant CATV inputs + 64 ports PON input ports. 64 ports outputs of 1550nm+1490nm/1310nm & 1270/1577nm combine output, of which the total output power range of 1550nm is 32 ~ 45dBm. Multiple output power can be matched according to user demand.

Fullwell's high-power WDM EDFA is well compatible with the OLT/ONU of HUAWEI, ZTE, FiberHome, etc and no data is lost, which owns high cost performance. It is mainly used for XPON / XGS-PON structure fiber to home(FTTH) and fiber to the building(FTTB).

This series product adopts JDSU, Lumentum, II-VI, IPG etc multimode high power pump laser as pump source and American OFS closed beam splitter as double-cladding synthesizer. Built-in optical power output stabilization circuit and laser thermoelectric cooler temperature stabilization control circuit ensure the best performance of the EDFA and the long-term stable operation of the laser. The microprocessor software monitors the working status of the laser, and the working parameters are displayed on the digital panel (LCD). Once the laser's working parameters deviate from the allowable range set by the software, the micro-processing will automatically turn off the laser power, and the red light flashes to alert.

2. Product feature

- ◆ Top quality: Adopt multi-mode high-power pump laser and the power is optimized through software, which makes the system achieving excellent CNR.
- ◆ Reliability: Adopt 19" 2U/3U standard chassis, built-in high performance modular switching power supply, can work in AC90 ~ 265V city network voltage. DC 48V hot-swappable power supply option is available as well. Dual hot and reserved power supply with Chassis automatic heat dissipation control.
- ◆ Intuitive: The built-in microprocessor monitors the working status of the pump laser, and the working parameters are displayed on LCD.
- ◆ Network management Interface: Web transponder is line with the national standard and compatible with the SCTE HMS standard, achieving WEB monitoring function. The red warning symbol is displayed on the web page, which is convenient for troubleshooting.
- ◆ **SNMP Support V1 & V2, support both IPv4 and IPv6.**
- ◆ Adjustable output optical power: Advanced design enables a large adjustable range of output power, and

power can be lowered by 0 ~ -3dBm.

◆ Plug-in WDM modular: Integrated FWDM module, CATV, GPON, EPON, XGS-PON. One fiber with multi-waves is convenient to use.

◆ Built-in optical switch option: There are automatic (prefer) or manual (force) switch mode when CATV signal has main path A and redundant path B optical switch input (OPT SWTTC). Automatic mode uses the main path A by default, it switches to redundant path B if A input power fails.

3. Technical Parameters

Items		Unit	Performance Index
Optical Operating Wavelength		nm	1535~1565
Input Optical Power Range		dBm	-10~+10
Noise Ratio		dB	≤5.0 (0 dBm,@1550nm)
Gain Flatness		dB	< ±0.3
Optical Power Output Stability		dB	< ±0.5
Polarization Sensitivity		dB	<0.2
Polarization Mode Dispersion		Ps	<0.5
Input End Pump Leakage Power		dB	≤-30
Output End Pump Leakage Power		dB	≤-30
Optical Input, Output Return Loss		dB	>45 (APC Stepped Face)
Pump Operating Number		PCs	2~5
Rated Output Power		dBm	32~45
Linker(IN)		-	SC/APC or LC/APC
Linker(OUT)		-	SC/APC or LC/APC
Power Supply/Consumption		V/W	AC90~265 or DC-48/20
Operating/Storage Temperature		°C	-20~65/-30~70
Operating/Storage Humidity		%	5~90
Chassis Dimension		mm	446×260×86 (3U)
Network Management Connector		/	RJ45(following national network management standard, supports WEB)
	XG(S)- PON Wavelength	nm	1310/1490 & 1270/1577
	PON Linker	/	SC/UPC or LC/UPC or SC/APC or LC/APC
	Uplink optical ports	pcs	64
	Output ports	Pcs	64
	PON Insertion Loss	dB	<1.2
	1550 Port Insertion Loss	dB	<0.7
	Optical isolation	dB	40
Optical Switch	Insertion Loss	dB	<1
	Harass	dB	<-60 (isolation between A and B)
	Switch Time	ms	<10
	Switched Power Threshold Range	dBm	-5~10

4. Product model series

Model Number	Total Output Power dBm(mW)	Output No.	Each Output Power (dBm)
FWA22P-XGS-32x15	32dBm(1600mW)	32	15
FWA22P-XGS-64x10		64	10
FWA22P-XGS-32x16	33dBm(2000mW)	32	16
FWA22P-XGS-64x11		64	11
FWA22P-XGS-32x17	34dBm(2500mW)	32	17
FWA22P-XGS-64x12		64	12
FWA22P-XGS-32x18	35dBm(3000mW)	32	18
FWA22P-XGS-64x13		64	13
FWA22P-XGS-32x19	36dBm(4000mW)	32	19
FWA22P-XGS-64x14		64	14
FWA22P-XGS-32x20	37dBm(5000mW)	32	20
FWA22P-XGS-64x15		64	15
FWA22P-XGS-32x21	38dBm(6000mW)	32	21
FWA22P-XGS-64x16		64	16
FWA22P-XGS-32x22	39dBm(8000mW)	32	22
FWA22P-XGS-64x17		64	17
FWA22P-XGS-32x22	40dBm(10000mW)	64	18
FWA22P-XGS-64x18		128	14
FWA22P-XGS-32x23	41dBm(13000mW)	64	19
FWA22P-XGS-64x19		128	15
FWA22P-XGS-64x20	42dBm(16000mW)	64	20
FWAP-XGS-128x16		128	16
FWAP-XGS-64x21	43dBm(20000mW)	64	21
FWAP-XGS-128x17		128	17
FWAP-XGS-64x22	44dBm(25000mW)	64	22
FWAP-XGS-128x18		128	18
FWAP-XGS-64x23	45dBm(32000mW)	64	23
FWAP-XGS-128x19		128	19

