2U High Power OFA for FTTH

HFA225 Series

Product Features

- Suitable for CATV, PON system or video combiner. (Optional)
- Redundancy Hot Swap Power module：support 110 / 220 VAC and - 48 VDC power mixed plug
- All optical and management ports front panel access, and works for 19’ or 21’ racks
- The Fan and power supplies can be plugged in 2U rack, which is very convenient to maintain
- LCD display shows and controls the system parameters, LED status indication shows the alarm status
- Support ETH, RS232
- Network Management interface supporting SNMP via ETH port.
- APC（Automatic Power Control）optical output
- High power components, high reliability, low noise

Application

- **Analog CATV Transmission**
- **FTTH Optical Access**
- **Optical Distribution**
- **Free Space Optical**



Figure 1. Product Diagram

Order Information

Model	Application	Output Port	Ports	Power	IN Port	COM Port	OLT Port
HFA225	2:EYDFA	17:17dBm ... 22:22dBm	16: 16 ports 32 :32 ports 64: 64 ports	3:dual 100~240VAC 4:dual -48VDC	2:SC/APC	2:SC/APC 6:LC/APC	NC:without 1:SC/UPC 5:LC/UPC

Product Introduction

The product is a high output power C-Band Er-Yb co-doped double cladding optical fiber amplifier. A proprietary ATC (Automatic Temperature Control) and an APC (Automatic Power Control) circuit ensure the high stability and reliability output power, and the unique optical circuit design ensures the excellent optical performance. The high stability and high precision MPU system ensure the control, adjustment and display are intelligent and user-friendly.

The product can realize different service wavelength (GPON/XGPON1/OTDR and CATV) multiplexing in FTTX network to maximize the value of optical distribution network (ODN). To suit multiple application scenarios, the GPON ports are compatible with the XGPON1 and OTDR wavelength.

Optical Characteristics

No.	Item	Min.	Typ.	Max.	Unit
1	**CATV EDFA Optical Specifications**				
1.1	CATV Port Wavelength Range(λ1)		1545- 1565		nm
1.2	Input Power	-10	0	10	dBm
1.3	Output Power (Every Port)			22	dBm
1.4	Total Output Power			40	dBm
1.5	Numbers of Output[1]			64	
1.6	Output Power Uniformity (among Output Ports)		± 1 dB		dB
1.7	Output Power Stability	-0.5		0.5	dB
1.8	NF (In=0dBm, λ=1550nm)		5.5	6.0	dB
1.9	Pump leakage @ Input/output port			-30	dBm

No.	Item		Min.	Typ.	Max.	Unit
1.10	Isolation @ Input/output port		30			dB
1.11	PMD (Polarization Mode Dispersion)				0.5	ps
1.12	PDG (Polarization dependent gain)				0.5	dB
1.13	RL (Optical Return Loss)		50			dB
1.14	Output Power Adjustable Range				5	dB
2	**Built-in WDM Specifications**					
2.1	CATV Port Wavelength Range (λ1)		1545- 1565			nm
2.2	PON Port wavelength Range (λ2)		1260-1360&1480-1500 &1575 - 1581 &1616 -1660			nm
2.3	Insertion Loss	Pass Band			1.2	dB
		Reflection Band			1.2	dB
2.4	PDL (Polarization Dependent Loss)				0.1	dB
2.5	PMD (Polarization Mode Dispersion)				0.1	Ps
2.6	Isolation (Com→PON@λ1)		15			dB
2.7	Isolation (Com→CATV@λ2)		40			dB
2.8	Directivity (P↔R)		50			dB
2.9	PON Signal that passes through when EDFA is turned off		1577, 1270&1310,1490 &1625/1650			nm
2.10	Power Tolerance				26	dBm
2.11	Constant Output		@ variable input: -6 ~ +8 dBm			

(1)：Maximum number of output ports: 64; maximum input port of PON signal: 64;16/32port(input and output) equipment is optional.

Electrical Characteristics

Parameters	Min.	Typ	Max.	Unit
Power supply	-72	-48	-36	VDC
	90		240	VAC
Consumption	0		30	W
communication interface	RS-232, RJ45			

Mechanical interface specification

Parameters	Min.	Typ	Max.	Unit
Dimension	2U H×D×W≤88x236x483			mm
Weight	-----	-----	6	Kg
Refrigeration mode	Air cool fans			

Environmental Characteristics

Parameter	Min.	Typ.	Max.	Unit
Operation Temperature	-5	------	+60	℃
Storage Temperature	-40	------	+80	℃
Operation Humidity	5	------	95	%
Storage Humidity	5	------	95	%

Interface Definition



NU	Function	Remark
1	Hanger	M5
2	SNMP、RS232 Port	RJ45
3	OLED Display	
4	LED Indicators	4
5	Press key	6
6	CATV Input Port	SC/APC
7	PON Input Port	SC/PC(16/32 Ports) LC/PC(64 Ports)
8	Output Port	SC/APC(16/32 Ports) LC/APC(64 Ports)

Mechanical Dimensions

Size:483*240*88mm

