

About the Product

The EDFA-R optical amplifier with redundant power supplies provides a highly stable output. The key features include a multimode pump laser, unique Automatic Power Control (APC), and an Automatic Temperature Control (ATC) circuit that ensures reliability. The unit can fit in a 19" sub-rack to occupy 1RU or 2RU. The high precision microprocessor unit (MPU) ensures intelligent and easy controls through the front panel and web interface.

The optical circuit is specially designed for CATV systems and performance. Having an extremely low noise profile, it ensures a better CNR and better BER/MER performance. The EDFA-R's spectral flatness provides a low CSO contribution and supports DWDM applications in the C-band.

The EDFA-R includes dual hot-swappable power supplies providing for a true uninterrupted redundant power source ensuring a high MTBF.

The EDFA-R employs an intelligent temperature control system by utilizing a special temperature control circuit and ventilating heat, resulting in a reduction of up to 30% in power consumption. The EDFA-R's cooling technologies provide thermal stability for the unit and helps to extend the cooling fan's lifespan.

Intelligent network management systems can communicate with the EDFA-R through the Ethernet, RS-485, or RS-232 interfaces. With Open MIB support, it can easily be integrated in to PBN's NMSE management software as well as other open standard network management systems.



19" sub-rack for 1RU

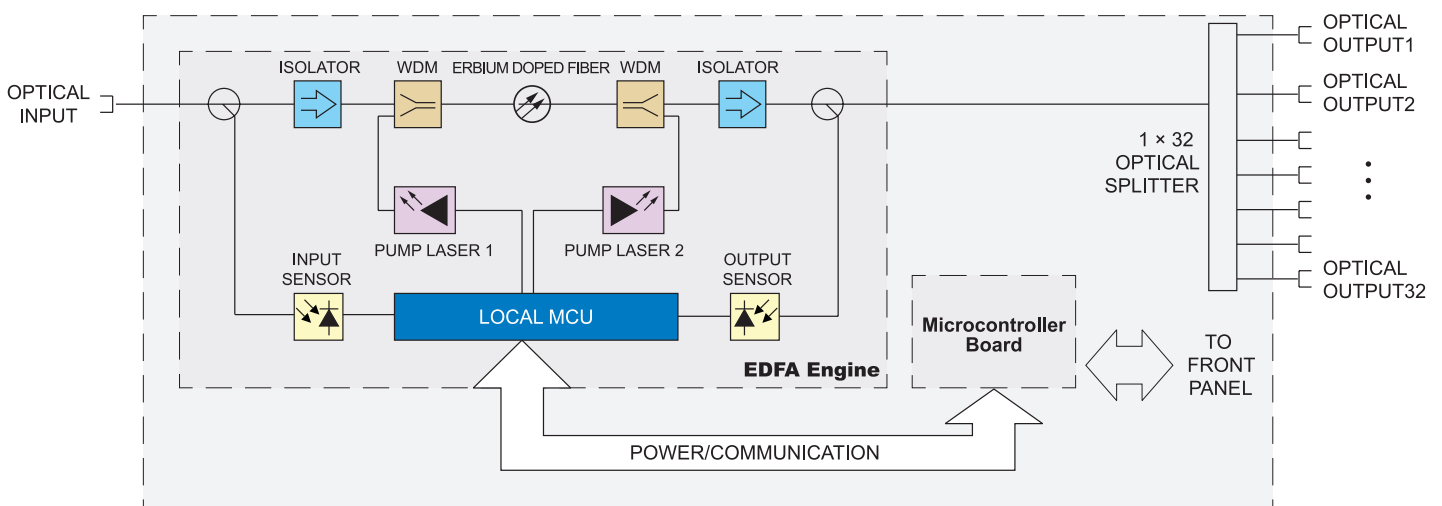


19" sub-rack for 2RU

Key Features and Functions

- Low noise signature: Typically < 4.5 dB (0 dBm input)
- Extremely low CSO distortion: < -70 dBc
- Dual redundant power supplies can use 220V mixed interpolation with 48V
- High stability and reliability: MTBF over 100,000 hours
- A variety network management interfaces: RJ-45, RS-485 and RS-232
- Supports Telnet and SNMP network management
- High precision AGC/APC circuit: accurate to ± 0.05 dB
- Intelligent temperature control system reduces power consumption and heat
- Flexible mechanical and circuit structure
- 19" sub-rack, can fit in 1RU or 2RU
- Bellcore GR-1312-CORE compliant

Structure Example



Specifications

Optical Performance

Parameters	Symbol	Min	Typ	Max	Unit
Optical wavelength	λ_c	1530	1550	1565	nm
Saturated output power ⁽¹⁾ (total power)	Posat	13	-----	32	dBm
Input power	Pi	-3	-----	+10	dBm
Gain	G	-----	20	-----	dB
Noise level ⁽²⁾	NF	-----	4.5	-----	dB
Output Power Stability	ΔP_o	-----	± 0.05	± 0.1	dB
Input Isolation	ISOi	30	-----	-----	dB
Output Isolation	ISOo	30	-----	-----	dB
Input pump leakage	PLi	-----	-----	-35	dBm
Output pump leakage	PLo	-----	-----	-45	dBm
Return Loss	RL	-----	-----	-45	dB
Polarization Dependent Gain	PDG	-----	-----	0.3	dB
PMD	PMD	-----	-----	0.5	ps
Optical connector	SC/APC, E2000/APC, FC/APC, LC/APC				

(1) Customer optional
 (2) Test at 0 dBm input

Electrical Performance

Parameters	Symbol	Min	Typ	Max	Unit
Power Supply	Vps	85/170	220	132/264	Vac
Power Consumption	P	-----	-----	18	W

General

Parameters	Symbol	Min	Typ	Max	Unit
Operation Temperature	Tw	-5	-----	60	°C
Storage Temperature	Ts	-40	-----	80	°C
Humidity ⁽³⁾	PI	10	-----	90	%
Dimensions (H x W x D)	44 x 483 x 220 mm				
Weight	6.0 kg				

Note:

- (1) 220 Vac, -48 Vdc and 220 Vac/-48 Vdc are optional
- (2) The actual power consumption is relative to output power, the operating environment, and temperature
- (3) No condensation

Order Details

EDFA-R-[U-V]-[W]-[X]-[Y]-[Z] Erbium Doped Fiber Amplifier (Optical Amplifier) with Redundant Power Supplies

EDFA-R-I-[U-V]-[W]-[X]-[Y]-[Z] Erbium Doped Fiber Amplifier (Optical Amplifier) with Redundant Power Supplies and input power threshold range of -10~+10 dBm

Options:

U-V	Number of Output Ports and Output Power
	1RU height
1-13	1 x 13 dBm (1 port, 13 dBm/per port. total 20 mw, 13 dBm), 1RU.
⋮	⋮
1-24	1 x 24 dBm (1 port, 24 dBm/per port. total 250 mw, 24 dBm), 1RU.
⋮	⋮
2-13	2 x 13 dBm (2 port, 13 dBm/per port. total 40 mw, 16 dBm), 1RU.
⋮	⋮
2-21	2 x 21 dBm (2 port, 21 dBm/per port. total 250 mw, 24 dBm), 1RU.
⋮	⋮
4-13	4 x 13 dBm (4 port, 13 dBm/per port. total 80 mw, 19 dBm), 1RU.
⋮	⋮
4-18	4 x 18 dBm (4 port, 18 dBm/per port. total 250 mw, 24 dBm), 1RU.
4-22	4 x 22 dBm (4 port, 22 dBm/per port. total 634 mw, 28 dBm), 1RU.
5-16	5 x 16 dBm (5 port, 16 dBm/per port. total 200 mw, 23 dBm), 1RU.
6-16	6 x 16 dBm (6 port, 16 dBm/per port. total 240 mw, 24 dBm), 1RU.
	2RU height⁽¹⁾
8-15	8 x 15 dBm (8 ports, 15 dBm/per port. total 256 mw, 24 dBm), 2RU.
8-16	8 x 16 dBm (8 ports, 16 dBm/per port. total 320 mw, 25 dBm), 2RU.
8-21	8 x 21 dBm (8 ports, 21 dBm/per port. total 1007 mw, 30 dBm), 2RU.
8-22	8 x 22 dBm (8 ports, 22 dBm/per port. total 1268 mw, 31 dBm), 2RU.
8-24	8 x 24 dBm (8 ports, 24 dBm/per port. total 2009 mw, 33 dBm), 2RU.
8-26	8 x 26 dBm (8 ports, 26 dBm/per port. total 3185 mw, 35 dBm), 2RU.
10-22	10 x 22 dBm (10 ports, 22 dBm/per port. total 1585 mw, 32 dBm), 2RU.
12-16	12 x 16 dBm (12 ports, 16 dBm/per port. total 480 mw, 27 dBm), 2RU.
16-16	16 x 16 dBm (16 ports, 16 dBm/per port. total 640 mw, 28 dBm), 2RU.
16-17	16 x 17 dBm (16 ports, 17 dBm/per port. total 802 mw, 29 dBm), 2RU.
16-20	16 x 20 dBm (16 ports, 20 dBm/per port. total 1585 mw, 32 dBm), 2RU.
20-20	20 x 20 dBm (20 ports, 20 dBm/per port. total 2000 mw, 33 dBm), 2RU.
20-22	20 x 22 dBm (20 ports, 22 dBm/per port. total 3170 mw, 35 dBm), 2RU.
24-8	24 x 8 dBm (24 ports, 8 dBm/per port. total 151 mw, 22 dBm), 2RU.
24-16	24 x 16 dBm (24 ports, 16 dBm/per port. total 960 mw, 30 dBm), 2RU.
24-18	24 x 18 dBm (24 ports, 18 dBm/per port. total 1585 mw, 32 dBm), 2RU.
32-17	32 x 17 dBm (32 ports, 17 dBm/per port. total 1585 mw, 32 dBm), 2RU.

W	Optical Connector
S	SC/APC
E	E2000/APC
F	FC/APC
L	LC/APC
X	Network Management
0	None
1	SNMP
Y	Power Supply Options
	AC = 90~265 Vac 50~60Hz, DC = 36~72 Vdc
1A	Single mains power supply 220 Vac
2A	Dual mains power supplies 220 Vac
1D	Single mains power supply -48 Vdc
2D	Dual mains power supplies -48 Vdc
AD	With two mains power supplies of 220 Vac and -48 Vdc
Z	Power Cable
EU	Power Cable for Europe (not for use in UK)
CN	Power Cable for China
CH	Power Cable for Switzerland
US	Power Cable for USA
UK	Power Cable for UK
AU	Power Cable for Australia

Note:

- (1) The 2RU device is used for the when more than 6 output ports are needed.

Accessories

Power Supply

EDFA-RPSAC	Mains power supply 220 Vac (AC = 90~265 Vac 50~60 Hz)
EDFA-RPSDC	Mains power supply -48 Vdc (DC = 36~72 Vdc)