

OA200 SERIES

Rack-mounted Optical Amplifiers



The OA200 is an Erbium-Doped Fiber Amplifier (EDFA) optimized for Passive Optical Networks (PON) and Large Distribution Systems applications. This high-performance optical amplifier provides a low-noise figure and an optimal output power at the operating wavelengths of 1545 nm to 1565 nm. The 1560 nm to 1565 nm wavelength range is ideal for narrowcast wavelength insertion.

The OA200 is a 2RU rack-mount NEBS Level 3-certified unit. Powering options include single 110/220 VAC and integrated, dual redundant, -48VDC power supplies. It is available in composite power levels from 100 to 750 mW, with 8 and 16 outputs for driver units, and 4 and 8 outputs for power units. Monitor ports for both the input and output allow testing and monitoring while in operation.

Reliable Optical Performance

The superior noise figure and gain flatness performance of the OA200 are maintained across all input powers. The erbium-doped fiber is pumped by lasers that are Telcordia qualified with a FIT rate of less than 200. This level of quality provides exceptional Mean Time Between Failures. The OA200 is polarization, modulation, and frequency independent and can be widely deployed in the PON market.

Embedded Intelligence and Network Management

The OA200 provides a 10 base T-Ethernet port for SNMP management and a serial port that may be used as an RS-232 craft port interface. The operator can commission the OA200 via the craft port or the Network Ethernet Port.

Motorola's low-noise, high-power, multiple output, Erbium-Doped Fiber Amplifier is optimized for Passive Optical Networks and Large Distribution Systems applications.

BENEFITS INCLUDE:

- Noise figure less than 5.5 dB at all input powers from 3 to 10 dBm
- Noise figure less than 6.5 dB at all input powers from 3 to 10 dBm for high output power 22.5 dBm model
- Wide input power range up from 3 to 10 dBm
- Isolated optical input and output
- Optical input and output monitor ports for ease of use
- Front-panel status LEDs
- Field-upgradeable firmware
- AC and DC powering options
- NEBS III compliant
- Highly reliable telecom grade optical components
- Low Power mode reduces the output power per port by 1.5 dB in 18.5 dBm and 22.5 dBm models, selectable from software or front panel CLI interface
- Field replaceable fan assembly



GENERAL SPECIFICATIONS

General

Source Power Voltage	
DC Version	-48 VDC, 2 Amps maximum
Range	-40 to -60 VDC
AC Version	90 - 240 VAC, 1.5 Amps maximum
Power Consumption	100 Watts maximum for 750 mW EDFA
	50 Watts maximum for 600 mW EDFA
	30 Watts maximum for 300 mW EDFA
	25 Watts maximum for 200 mW EDFA
	20 Watts maximum for 100 mW EDFA
Operating Temperature	0° - 55° C
Storage Temperature	-40° to +70° C
Dimensions	3.5" H (2RU) x 19.0" W x 11.0" D
Weight	14.5 lbs (6.6 kgs)

Communications

Local Interface	RS-232 Port
Network Interface	RJ-45 Port, 10/100 Base-T
Alarm Contact	RJ-45 Port

Optical

Wavelength Range	1545 nm to 1565 nm
Noise Figure	100 mW, 200 mW, 300 mW, 600 mW
Maximum	5.5 dB
Typical	5.0 dB at 6.0 dBm input
Noise Figure	750 mW
Maximum	6.5 dB
Typical	6.0 dB at 6.0 dBm input
Optical Input Monitor Port	-20 +/- 1 dB from main input port
Optical Output Monitor Port	-20 +/- 1 dB from main output port
Backward Spontaneous Emission	<25 dBm
Input and Output Isolation	> 30 dB
Optical Return Loss	> 27 dB
Polarization Sensitivity	< 0.5 dB
Optical Connector	SC/APC, E2000/APC

Safety

UL 1950
CAN/CSA-S22.2 No. 950
EN60950
IEC 60950
TS001
AS/NZS 3260
IEC 60825-1
IEC 60825-2
EN 60825-1
EN 60825-2
21 CFR 1040

EMC

FCC Part 15 (CFR 47) Class A
ICES-003 Class A
EN 55022 Class A
CISPR22 Class A
AS/NZS 3548 Class A
VCCI Class A
EN 55024
ETS 300 386
EN 50082-1
EN 61000-3-2
EN 61000-3-3

NEBS and ETSI (Applies to DC-powered units)

GR-63-Core NEBS Level 3 Requirements
GR-1089-Core NEBS Level 3 Requirements
ETS 300 019 Storage Class 1.1
ETS 300 019 Transportation Class 2.3
ETS 300 019 Stationary User Class 3.1

Model Number	Description
N2U-0A200B10X8-*/SCA	EDFA, 100 MW, +10 dBm, 8 ports, SC/APC connector
N2U-0A200B10X16-*/SCA	EDFA, 200 MW, +10 dBm, 16 ports, SC/APC connector
N2U-0A200B18.5X4-*/SCA	EDFA, 300 MW, +18.5 dBm, 4 ports, SC/APC connector
N2U-0A200B18.5X8-*/SCA	EDFA, 600 MW, +18.5 dBm, 8 ports, SC/APC connector
N2U-0A200B22.5X4-*/SCA	EDFA, 750 MW, +22.5 dBm, 4 ports, SC/APC connector

*Powering Options:

- D: -48VDC, front panel connector
- R: -48VDC, rear panel connector
- A: 90-240VAC, 50/60 Hz

Specifications are subject to change without notice.

MGBI



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