

OMNISTAR GX2-OA508B21

OPTICAL AMPLIFIER FOR HFC NETWORKS

The GX2-OA508B21 Optical Amplifier employs a proprietary erbium-doped fiber formulation that provides a flat gain low-noise performance.

Product Overview

Motorola's OmniStar GX2-OA508B21 erbium-doped optical amplifier serves multiple applications for HFC networks for downstream multi-wavelength applications.

The GX2-OA508B21 Optical Amplifier is designed for use with the OmniStar® GX2 1550 nm DWDM transmitters. With adjustable output powers available, the GX2-OA508 EDFA accommodates a range of link budgets and launch powers. Its three operating modes can satisfy a wide range of system design requirements: Constant Output Power mode to maintain exact optical levels; Constant Pump Power mode to optimize noise figures; and Constant Gain mode for DWDM applications. The GX2-OA508B21 Optical Amplifier employs a proprietary erbium-doped fiber formulation that provides low-noise performance, along with the most reliable 980 nm pump lasers available in the industry. Other user benefits offered as part of the OmniStar GX2 platform include: higher density, SNMP interface for network management, and Quick-Swap module capability.

Benefits Include:

- Low Noise Figure
- Nominal output power of +21dBm
- User-settable optical power alarm
- Flat gain for DWDM applications from 1549 nm to 1562 nm
- Constant Output Power, Constant Gain, and Constant Pump Power Modes
- Front Panel Key Switch for pump on/off control
- Quick-Swap capability allows replacement modules to be automatically configured to prestored settings
- Operating temperature range from 0°C to +50°C
- Ethernet SNMP status monitoring through OmniStar GX2 control module



System Applications

This is an example of a system configuration that can be achieved using the GX2-OA508B21 Optical Amplifier for HFC Networks.

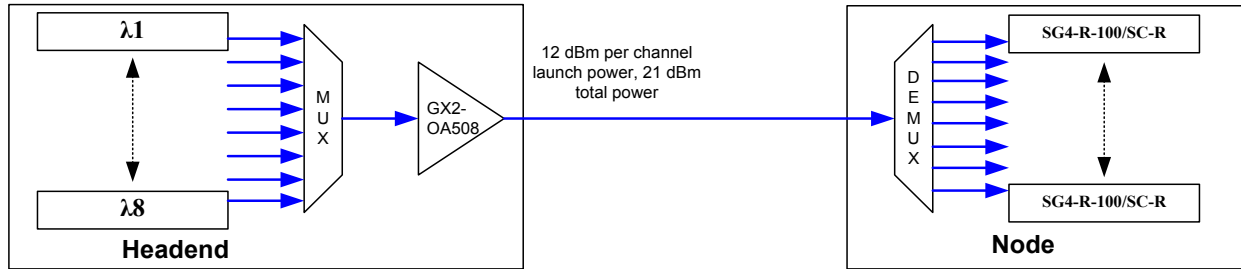


Figure 1 - Multi-Wavelength Gain Flattened optical amplification.

Ordering Information

Order Number	Model Name	Description
581141-001-00	GX2-OA508B21	GX2-OA508B21, AMPLIFIER, EDFA, 8DB NOMINAL GAIN, 21DBM MAX OUTPUT, DWDM FLAT GAIN, SC/APC CONNECTORS, FINISHED GOOD

Specifications

OPTICAL

Optical Wavelength 1530 nm to 1562 nm

Operating Input Power +6 to +13 dBm

Output Power Stability over temperature
± 0.25 dB

Gain Adjustment Range (Constant Gain Mode)
5.0 to 10.0 dB

Output Power Variation with single tone, saturated
± 0.125 dB Max

Optical Return Loss 50 dB Minimum

Optical Connector Type SC/APC

PERFORMANCE*

Preset Optical Output Power +21.3 ± 0.3 dBm

Optical Power Adjustment Range (Constant Output Power Mode)
-2 dB to 0 dB

Optical Noise Figure 6 dB

Preset optical Gain + 8.0 dB

Multitone Gain Flatness ± 0.25 dB (Ch 21 - Ch35)

*@Pin + 12 dBm (Total Power)

GENERAL

Dimensions	1.0 in W x 5.9 in H x 15.0 in D (2.5 cm x 15.0 cm x 38.0 cm)
Weight	2 lbs (1 kgs)
Mounting	GX2-HSG Equipment Shelf
Operating Temperature Range	0° C to 50° C (32° F to 122° F)
Storage Temperature Range	-40° C to 80° C (-40° F to 176° F)
Power Consumption	14 W max
Visual Interface	Tri-Colored Module Status LED
Data/Control	Serial Peripheral Interface (SPI) to Control Module
Status Monitoring	SNMP 10BaseT Ethernet interface through and RJ-45 data port on the GX2-CM100B control module

Specifications are subject to change.

For Services, contact your Motorola account executive for more information.

System Integration Services

Your Broadband System business and operational goals are complex. Using Motorola Mobility's System Integration Services can make achieving those goals a lot easier. Our expert team will plan, document, and deploy the services you need to accomplish what you want. And if flexibility is a concern, don't worry: we provide both horizontal (across multiple technologies) and vertical (engineering, labor, project management) system integration.

Outside Plant Project Management

Similar to our Outside Plant Build/ReBuild/Upgrade service, but here you'll provide construction labor. This service provides you with the comprehensive project management, including planning and documentation, you'll need to facilitate your headend/ hub build, RF grooming, Transmit/Receive cabling, and optical mux/demux. We'll plan and document to facilitate your field node build, including fiber plant, splicing, and coaxial distribution system. We'll also provide you with project management, construction management, inventory management, quality control, and Acceptance Testing services.