

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.

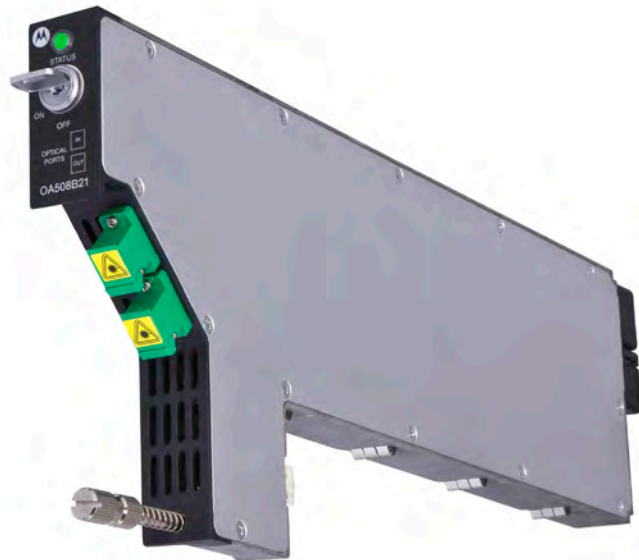
Product Overview

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.

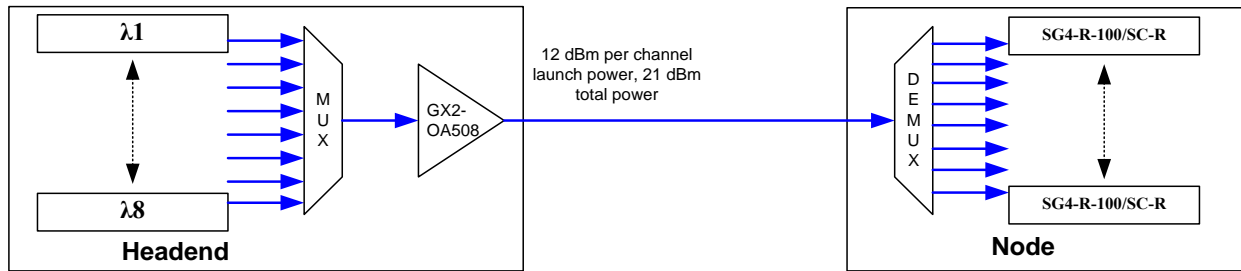


Figure 1 - Multi-Wavelength Gain Flattened optical amplification.

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)

DATA SHEET OMNISTAR GX2-OA508B21

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.

MOTOROLA and the Stylized M Logo are trademarks or registered trademarks of Motorola Trademark Holdings, LLC. All other product or service names are the property of their respective owners. ©2011 Motorola Mobility, Inc. All rights reserved.

365-095-18972 x.1 9/11