Metro-Access DWDM Erbium Doped Fiber Amplifer
LightAmp

Key Features

- **Protocol and data rate independent – including 10 G/OC-192 applications**
- **Simple to install, "plug-and-play"**
- **Optical output monitor for maintenance**
- **Easily configurable as a booster or pre/inline amplifier**
- **Constant gain and constant power modes**
- **Works with redundant -48 volt supplies**
- **Low power consumption and noise figure**
- **High-speed control circuitry provides transient suppression**

Applications

- Booster or pre/inline amplifier
- Access and metro optical networks
- DWDM point-to-point applications
- DWDM optical add-drop or X-C nodes

Compliance

- NEBS Level 3
- FDA Class 1M laser device
- FCC Class A device
- UL 60950 Third Edition

The WaveReady™ 3000 series LightAmp metro-access dense wavelength division multiplexing (DWDM) optical amplifier is a configurable, multi-channel device that provides simple and economical C-band optical amplification in a flexible, ready-to-use package. It is network-ready and includes an advanced, efficient pump laser and mid-stage variable attenuator.
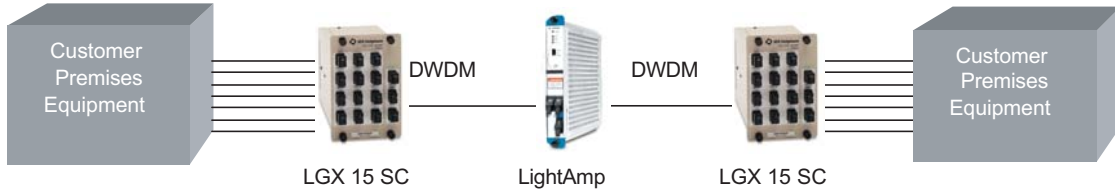
LightAmp features a switch on the front panel that enables field personnel to install and configure it in seconds as a power, inline, or pre-amplifier. The module works by default in constant gain mode, but can be configured to constant power mode. Its ease-of-use and performance make LightAmp the ideal solution for access and metro DWDM optical networks.

Front panel LEDs show the status of the module, while the integrated electronics provide simple alarm and control functionality. An RS-232 interface and Ethernet port, through a WaveReady shelf and communications module, allow for remote management.

The package is designed to be deployed in either the WaveReady 3500 or 3100 systems which mount in 19- or 23-inch telecommunications racks.

2

Reach Extension

Performance Specifications[1]

Parameter	Minimum	Typical	Maximum
Optical Characteristics (All Models)			
Operating wavelength range	1530 nm	-	1562 nm
Operating total input power range	-29 dBm	-	0 dBm
Output monitor tap ratio	-22 dB	-	-16 dB
Time constant of control circuitry	-	-	2.5 ms
Return loss	-40 dB	-45 dB	-
Booster Characteristics			
Output power (-9 dBm < P_{in} < 0 dBm)	13 dBm	16 dBm	17 dBm
Polarization sensitivity	-	-	0.5 dB
Noise figure (-9 dBm < P_{in} < 0 dBm)	-	6.75 dB	8 dB
Pre/Inline Amplifier Characteristics			
Gain (-29 dBm ≤ P_{in} ≤ -9 dBm)	23 dB	-	-
Gain flatness over operating wavelength range	-	±1 dB	±1.5 dB
Polarization sensitivity	-	-	0.5 dB
Noise figure (-29 dBm ≤ P_{in} ≤ -9 dBm)	-	5 dB	6.5 dB
Electrical Characteristics			
DC supply voltage	-	-48 V	-
Power dissipation	-	5 W	8.5 W
Alarm relay signals (major and minor)	-	Dry contact	-
Physical Dimensions			
Size (H x W x L)	-	6.8 x 1.0 x 8.6 inches	-
Weight	-	1.5 lbs	-
Environmental Characteristics			
Operating ambient temperature	-5 °C	-	55 °C
Storage temperature	-40 °C	-	85 °C
Relative humidity (non-condensing)	5 %	-	85 %

Note: This product should be deployed in accordance with your company's deployment directives.
1. Unless otherwise noted, all specifications are guaranteed over the life, operating temperatures, wavelength range, and input voltage range specified.

Interface Specifications

Parameter	Specification
Optical (physical)	SC/UPC bulkhead, single-mode fiber (SMF)
Electrical (physical)	96-pin Metral (power, alarms, craft/remote interface)
Craft	Menu and TL1 interfaces through RS-232. Access depends on the mounting solution
Alarms	Major, Minor. Relay closed when alarm is active
Front panel LEDs	Power (CARD); Major Alarm (MAJ); Minor Alarm (MIN); Loss of input signal (LOS A)
Front panel configuration switch	Two positions (booster and pre/inline amplifier)

Ordering Information

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide or via e-mail at customer.service@jdsu.com.

Sample: LAP-MCH00XR00A

Product Code	Description
LAP-MCH00XR00A	LightAmp Metro-Access DWDM Optical Amplifier

Associated Parts

Product Code	Description
10129126	DenseMount Shelf
10132805	Comm Module