Optoelectronics

Scientific Atlanta

Laser Link®
Modular 1550 nm
Erbium Doped Fiber Amplifier (EDFA)

Description

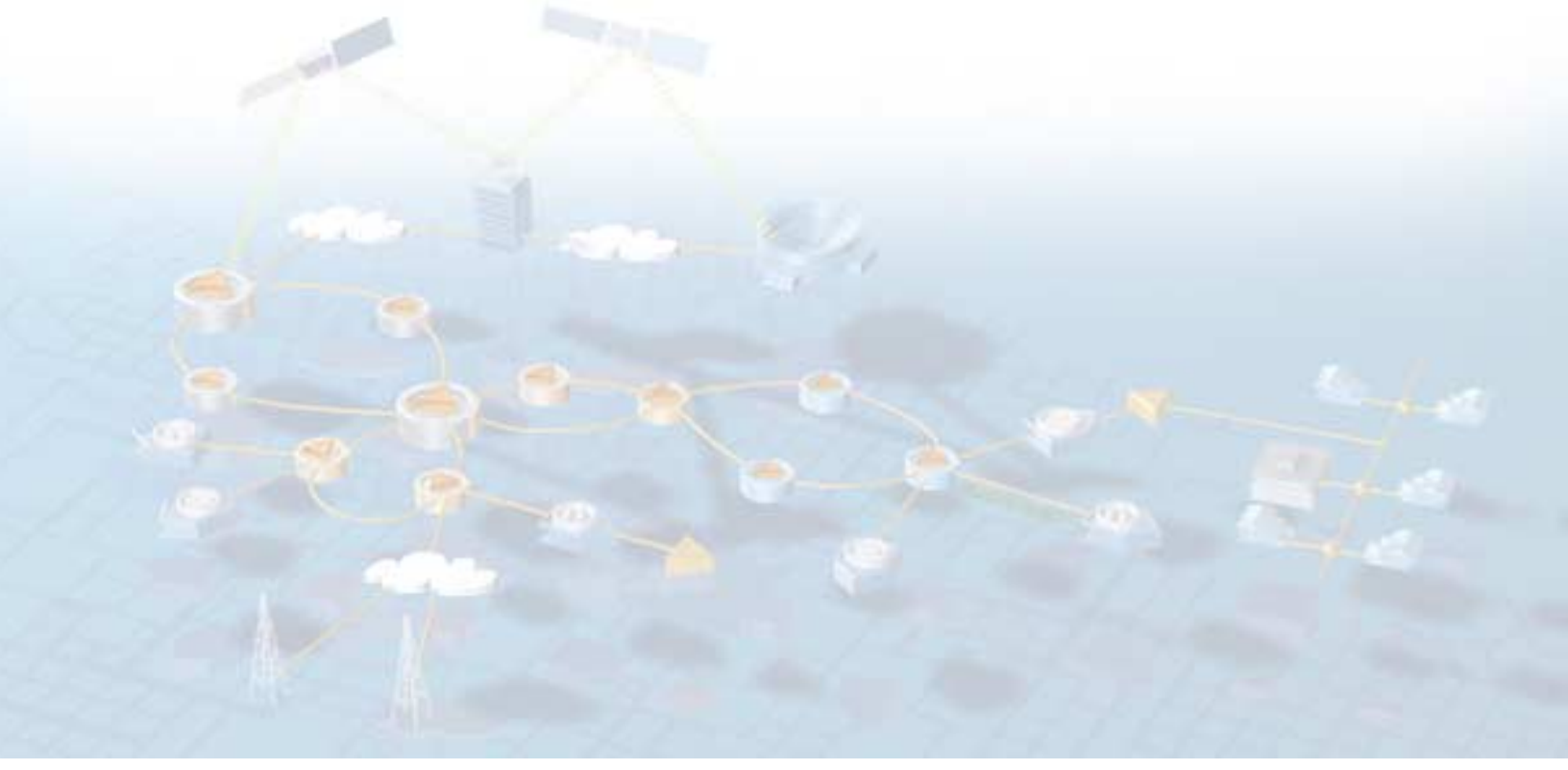
The Laser Link® 1550 nm EDFA amplifies 1550 nm optical signals to increase the optical transmission reach of the system. This product offering is flexible enough to perform in numerous upstream and downstream applications, including DWDM architectures, supertrunk transmission, hub interconnects and 1310/1550 nm overlays.

Benefits

- Provides high performance
- Allows for simple optimization and configuration
- Allows for high density deployment
- Provides interface for remote monitoring
- Reduces capital and operating expenses
- Adapts to numerous system architectures
- Drives optical signal further into the network

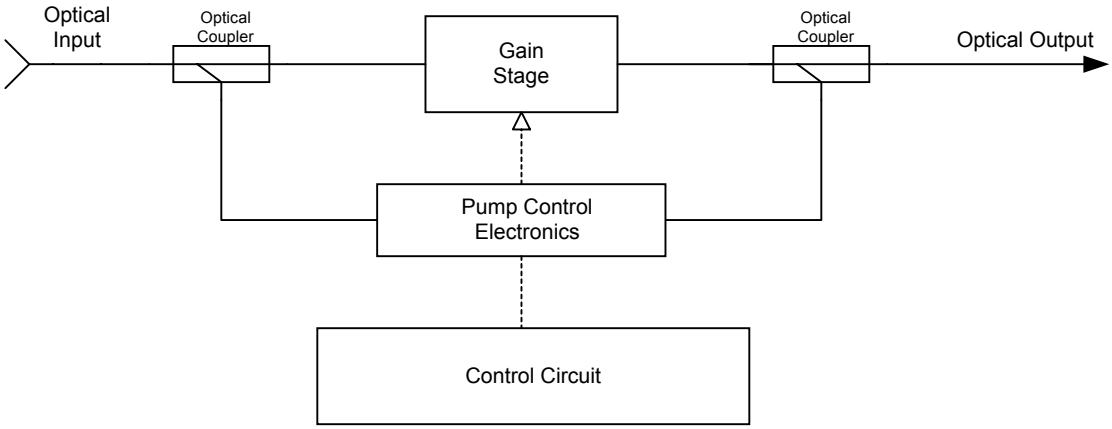
Features

- Low noise figure
- Front panel LCD and LED display
- User adjustable optical output power
- Network Management (status monitoring) ready
- Highly reliable, rugged design
- Saturated, gain-locked, power-locked modes of operation
- Numerous optical output power options
- Multiple primary and redundant powering configurations
- Housed in a full-width Laser Link module



Block Diagram

LLOA 1550 nm EDFA



Laser Link Modular 1550 nm EDFA

Specifications

Description	Units	LLOA-C-14BM	LLOA-C-17BM	LLOA-C-20BM	LLOA-C-22BM	LLOA-C-20BM-GF
Noise Figure (Max.)	dB	5.0	5.0	5.3	5.3	5.3
Wavelength	nm	1528-1562	1528-1562	1528-1562	1528-1562	1528-1562
Polarization Dependent Gain (Max.)	dB	±0.2	±0.2	±0.2	±0.2	±0.2
Optical Return Loss	dB	50	50	50	50	50
Optical Input Power[1]	dBm					
Saturation Mode		0-10	0-10	0-10	0-10	n/a
Power Lock		0-10	0-10	0-10	0-10	n/a
Gain Lock		-10 to 3	-10 to 3	-10 to 3	-10 to 3	-7 to 3
Minimum Output Power[2]	dBm					
Saturation Mode		14	17	20	22	n/a
Power Lock		14	17	20	22	n/a
Gain Lock		4	7	10	12	10
Gain[3]	dB					
Saturation Mode		n/a	n/a	n/a	n/a	n/a
Power Lock		n/a	n/a	n/a	n/a	n/a
Gain Lock		11-14	14-17	17-20	19-22	16.5-17.5
Static Gain Flatness[4] (Max.)	dB					
Saturation Mode		2.0	2.0	2.0	2.0	2.0
Power Lock		3.0	3.0	3.0	3.0	3.0
Gain Lock		n/a	n/a	n/a	n/a	n/a
Dynamic Gain Flatness[5]	dB					
1528-1562		5	6	8	n/a	1
1542-1562		2	4	6	n/a	1
1549-1562		1.5	3.5	5.5	n/a	1
Power						
Power Consumption (Max.)	W	17	17	35	45	45
DC Input	24 V dc					
Physical						
Operating Temperature	-4 to 149°F -20 to 65 °C					
Relative Humidity (Non condensing)	<95%					
Optical Connector	SC/APC					
Dimensions (H x W x D)	5.3 x 2.2 x 13.5 in. 13.3 x 5.6 x 34.3 cm					
Weight	1.75 lbs (0.79 kg)					

Notes:

1. Operating input range in Gain Lock mode is selectable in ranges, 3 to -7 dBm, 2 to -8 dBm, 1 to -9 dBm or 0 to -10 dBm; refer to Gain Lock mode discussion in Equipment Description
2. Minimum output power in Gain Lock mode varies according to the selected gain
3. Gain in Saturation and Power Lock modes varies according to operating input power
4. Static Gain Flatness in Saturation and Power Lock modes is for 0<P in <10 dBm
5. Dynamic Gain Flatness in Gain Lock mode only

Ordering Information

Description	Part Number
Optical Amplifier, Modular, LLOA-C-14BM, Input Isolator, SC/APC	253704
Optical Amplifier, Modular, LLOA-C-17BM, Input Isolator, SC/APC	253706
Optical Amplifier, Modular, LLOA-C-20BM, Input Isolator, SC/APC	253708
Optical Amplifier, Modular, LLOA-C-20BM-GF, Input Isolator, Gain Flattened, SC/APC	253720
Optical Amplifier, Modular, LLOA-C-22BM, Input Isolator, SC/APC	253710

Laser Link products include some of the industry's most complete range of high performance optical components:

	For more information please refer to:
1310 nm Transmitters	Laser Link Data Sheet Part Number 7001673
1550 nm Transmitters	Laser Link Data Sheet Part Number 7001674
1550 nm Optical Amplifiers	Laser Link Data Sheet Part Number 7001675
Receivers	Laser Link Data Sheet Part Number 7001676
Ancillary Modules	Laser Link Data Sheet Part Number 7001677
Main Frame	Laser Link Data Sheet Part Number 7001678

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