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LaserPlus Model LP-OA EDFA Module

Features / Benefits

Compact, full-featured optical Amplifier.

1540nm-1560nm optical range.

Optical output power from +13dBm to +22dBm.

Optical input range of -6dBm to +4dBm.

Optical gain up to 30dB.

Low power dissipation for maximum reliability.

Low Noise Figure - 5dB typical and 5.5dB maximum at -6dBm Optical Input . 6dB typical and 6.5dB maximum at +4dBm Optical Input.

Low Polarization Sensitivity, 0.5dB & 0.5ps Maximum.

Extensive front panel indicators and SNMP monitoring features.

SC/APC optical connectors.

The Olson Technology, Inc. *LaserPlus* Model LP-OA Erbium Doped Fiber Amplifier (EDFA) is a cost-effective, full featured Optical Amplifier compatible with the LaserPlus product line. Designed for optical amplification of CATV or L-Band signals, the OT-OA EDFA is ideal for CATV Hybrid Fiber Coax (HFC) applications and Fiber-to-the-Premise (FTTP) deployments using Active/Passive Optical Network (AON/PON) architectures. The LP-OA offers simple plug and play operation,

The Model LP-OA EDFA utilizes a high-quality, EDFA gain module that provides optical output powers ranging from +13dBm to +22dBm at the rated optical input power of +3dBm over a wavelength range from 1540nm to 1560nm. The EDFA has low power dissipation to maximize reliability.

The LP-OA includes five front panel indicators for *Optical Input Power*, *Optical Output Power*, *Laser Temperature*, *Pump Enable* and *Pump Status* that allow the health of the unit to be assessed at a glance. The unit also provides extensive SNMP capability that includes the ability to read the following parameters; *Optical Input Power*, *Optical Output Power*, *Module Temperature*, *Pump Laser Current*, *Pump Laser Power*, *Pump Laser Temperature* and alarms for *High Current*, *High Temperature*, *Temperature Stable* and *Laser Enable*.

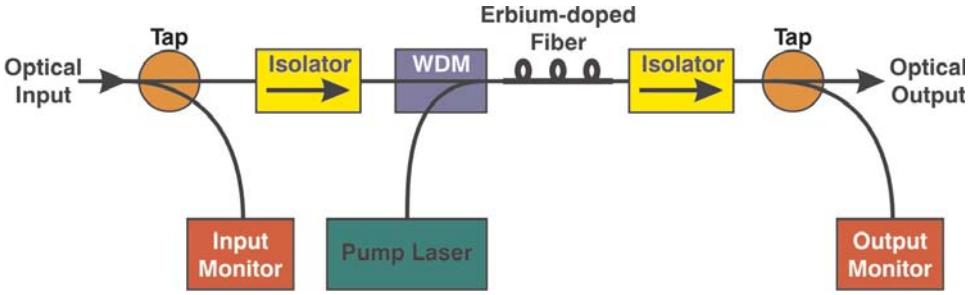

Figure 1 - EDFA Block Diagram

System Specifications

Optical Characteristics (with SM 9/125µm Fiber)

	Min	Typ	Max	Units
Optical Output Pwr.[1]	+13		+22	dBm
Optical Input Range[2]	-6		+4	dBm
Gain with -30dBm Opt. In		31		dB
Gain with +3dBm Opt. In		13		dB
Noise Figure	5		6.5	dB
Pump Power Leakage		-30		dB
Optical Return Loss	45			dB
Optical Connector		SC/APC		
Wavelength Range	1540		1550	nm

Electrical and Environmental Characteristics

	Min	Typ	Max	Units
Power Supply - Voltage		+5		V_{DC}
Power Supply - Current		600		mA
Power Consumption		3		W
Operating Temperature	0		50	°C
Storage Temperature	-10		60	°C
Humidity[3]	5		95	%

Physical Characteristics

	Min	Typ	Max	Units
Weight		1		lbs.
		2.2		kg
Dimensions (W x H x D)		4.5H x 0.96W x 8.75D		in.
		114H x 24.4W x 222D		

NOTES:
1) See "Ordering Information" for complete specifications.
2) Recommended range. Lower optical powers will give a red light.
3) Non-condensing

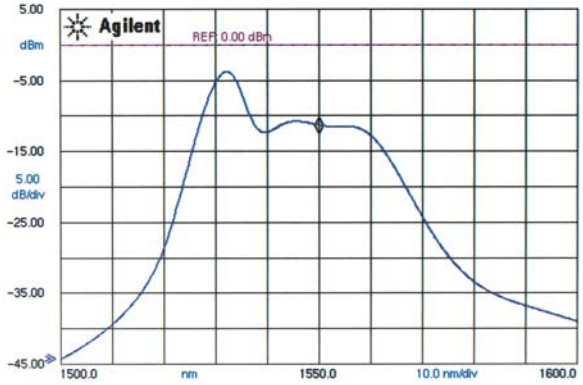

Figure 3 - Typical EDFA ASE Spectrum

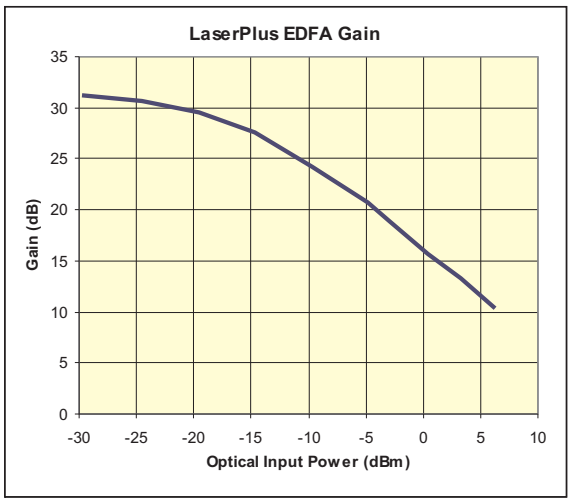

Figure 2 - Typical EDFA Gain

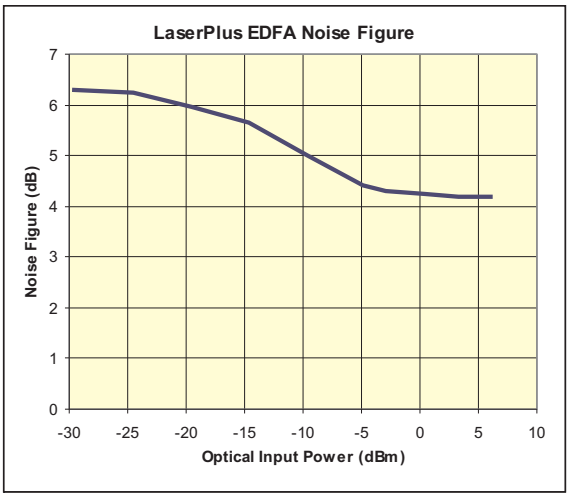

Figure 4 - Typical EDFA Noise Figure

Ordering Information

Model LP-OA-13-SA	*LaserPlus EDFA, +13dBm, SC/APC Connectors*
Model LP-OA-14-SA	*LaserPlus EDFA, +14dBm, SC/APC Connectors*
Model LP-OA-15-SA	*LaserPlus EDFA, +15dBm, SC/APC Connectors*
Model LP-OA-16-SA	*LaserPlus EDFA, +16dBm, SC/APC Connectors*
Model LP-OA-17-SA	*LaserPlus EDFA, +17dBm, SC/APC Connectors*
Model LP-OA-18-SA	*LaserPlus EDFA, +18dBm, SC/APC Connectors*
Model LP-OA-19-SA	*LaserPlus EDFA, +19dBm, SC/APC Connectors*
Model LP-OA-20-SA	*LaserPlus EDFA, +20dBm, SC/APC Connectors*
Model LP-OA-21-SA	*LaserPlus EDFA, +21dBm, SC/APC Connectors*
Model LP-OA-22-SA	*LaserPlus EDFA, +22dBm, SC/APC Connectors*