

LaserLite Model OTEA-CM Series 1550nm EDFA's 8 to 20 Outputs for Use With Direct Modulation 1550nm Transmitters

Features / Benefits

Single channel booster EDFA with up to 20 optical outputs at +18 to +21dBm each.

Optimized for use with Olson's SuperMod (Direct Mod) 1550nm transmitters.

Specifically for **distribution of 1550nm video/data** in HFC, PON or FTTH systems.

Takes direct input from a 1550nm Direct Mod transmitter without an intermediate driver.

Coolerless pump lasers reduce overall power consumption and increase reliability.

Low optical input level requirements with excellent low noise performance at high output.

Front panel and RS232 serial interface for monitoring and control of the EDFA.

Powering options for 110/220 Volts AC and -48 Volts DC.



The Olson Technology, Inc. **Model OTEA-CM Series** 1550nm Erbium Doped Fiber Amplifier (EDFA) is a rackmount EDFA package providing up to 20 optical outputs at +18 to +22dBm, each optimized to work with Direct Modulation 1550nm transmitters. It is engineered to meet the requirements for a high-density solution for the very large-scale distribution of broadband CATV video and/or wideband multi-channel L-Band video.

The **Model OTEA-CM Series** eliminates the traditional requirement of converting the optical signal to 1310nm for "last mile" distribution, facilitating the design of robust end-to-end optical transport networks directly from the head-end to large numbers of remote node or premise locations without O-E-O conversions. The combination of this EDFA and a Super Mod (Direct Mod) 1550nm transmitter, such as Olson's **Model OT-1000-HH/HJ**, can cost effectively replace large quantities of standard 1310nm DFB transmitters without compromising system performance.

This rugged, low-profile, high-efficiency EDFA design provides eight (8) to 20 optical outputs in the 2RU package over a wide operating temperature range, with low power consumption. The **Model OTEA-CM Series** also incorporates μ P-controlled electrical control circuitry, and is stabilized with APC. This includes photodiodes for monitoring the optical input and output power through tap couplers. The pump laser diode input current is determined by a feedback circuit in order to minimize the difference between the detected output power level and preset output power level. The 2RU package can deliver a total optical output of 2,500mW/+34dBm.

The **LaserLite Model OTEA-CM Series** Erbium Doped Fiber Amplifier is the perfect companion to Olson's *LaserPlus*, *LaserLite* and *SATELLitePlus* families of 1550nm DM transmitters and the *MetroNode*, *PremiseNode* and *SATELLitePlus* families of receiver/nodes. It is also designed to operate seamlessly with optical transmitters, receivers and nodes from most leading manufacturers.

System Specifications

Optical Characteristics (with SM 9/125µm Fiber)

	Min	Typ	Max	Units
Wavelength	1550		1560	nm
Gain Flatness Over λ Range			±3	dB
Noise Figure (@+6dBm In)		3.7	4.5	dB
Analog CNR Degradation		1		dB
CSO		-63	-58	dBc
CTB		-70	-65	dBc
Optical Input Range	0	+6	+10	dBm
Optical Output Power (per port)*	+18		+21	dBm

*(per appropriate OTEA-CM Series Module)

Physical Characteristics

Dimensions (W x H x D)	Min	Typ	Max	Units
2RU (Unit)	19 x 3.5 x 12.25			in.
	483x 88 x 311			mm

Electrical and Environmental Characteristics

	Min	Typ	Max	Units
Power Supply Voltage (Std)	+85		+265	V _{AC}
Power Supply Voltage (Option)	-36		-60	V _{DC}
Power Supply Frequency	47		63	Hz
Power Consumption (2RU Unit)		70		W
Operating Temp. Range	-10		+50	°C
	+14		+122	°F
Humidity (RH Non Con.)	15		85	%

EDFA Interfaces

Optical Output Connector
RS232 Control Interface

Shuttered SC/APC
DB-9, Commands, report alarms, set alarm limits, and monitor functions.
SUPPLY, PWR IN, PUMP, MODE, EQUIP, PWR OUT, FANS (see manual for description)
Key switch (key cannot be removed when in the ON position)

LED Indicators
(Yellow/Red/Green)

Laser Enable/Disable

Part Numbers

Ordering Information

Model OTEA-CM-B-nyy-SA-pp EDFA, 2RU Booster, 8-20 outputs, for use with Direct Mod 1550nm transmitters, shuttered SC/APC optical connector.

n = Number of outputs: 8, 16, 18, or 20

yy = Optical output per port (dBm) Consult factory.

pp = Power: AC specifies universal AC input; DC specifies 48 Volts DC input

