

## *LaserLite: 1550nm Optical Amplifier (OTEA-CO-B Series)*

### 1550nm EDFA for LARGE DISTRIBUTION APPLICATIONS

#### Features / Benefits

- Booster EDFA with one optical output from +13dBm/20mW to +26dBm/400mW
- Booster EDFA with two optical outputs from +16dBm/40mW to +23dBm/200mW
- Booster EDFA with three optical outputs from +16dBm/40mW to +20dBm/100mW
- Booster EDFA with four optical outputs from +16dBm/40mW to +19dBm/80mW
- Booster EDFA with eight optical outputs of +16dBm/40mW
- Optimized for **distribution of 1550nm** CATV/video/data in HFC, PON/AON or FTTH systems
- Takes direct input from a 1550nm transmitter (EM or DM) without an intermediate driver
- Low optical input level requirements with excellent low noise performance at high output
- 110/220 V<sub>AC</sub> and -48 V<sub>DC</sub> powering options
- RS-232 craft serial interface (optional)
- SNMP Option Available

The **Olson Technology, Inc. Model OTEA-CO-B Series** 1550nm Erbium Doped Fiber Amplifier is a 1RU high, rack-mount EDFA package providing one, two, three or four or eight identical optical outputs. It is engineered to meet the requirements for a high-density solution for the large-scale distribution of broadband CATV video (and/or wideband L-Band satellite signals) & data signals to traditional CATV HFC nodes in the field or to video overlay receivers in a FTTH/FTTP or PON system.



The **Model OTEA-CO-B 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 headend to large numbers of remote node or premise locations without O-E-O conversions. Hence, the combination of this EDFA and an externally modulated (EM) 1550nm transmitter (such as the Olson **Model OTOT-EM55X or XL**) can cost-effectively replace large quantities of standard 1310nm DFB transmitters without compromising system performance.

This rugged, low-profile, high-efficiency EDFA design utilizes reliable pump lasers for maximum reliability. The unit’s wide optical input range accepts a single optical input (0dBm to +6dBm) and provides a total composite/saturated output power of up to 400mW/+26dBm, depending upon the desired configuration. As a matter of convenience and safety, this high output is further limited by dividing the unit’s power into individual optical output ports via an internal low loss coupler/splitter, which ultimately provides one, two, three, four or eight optical output ports.

The **LaserLite Model OTEA-CO-B Series** erbium doped fiber amplifier is the perfect companion to the Olson **LaserPlus** and **LaserLite** families of 1550nm EM and DM transmitters and **MetroNode** and **PremiseNode** families of receiver/nodes. It is also designed to operate seamlessly with optical transmitters, receivers and nodes from most leading manufacturers. Optional SNMP is available.

# LaserLite: 1550nm Optical Amplifier (OTEACO-B Series)

Quality / Engineering / Innovation

## Specifications

### OPTICAL CHARACTERISTICS:

Wavelength	1540nm to 1560nm
Gain flatness for DWDM	< ±0.5dB
Noise Figure	5.0dB (typical); 5.5dB (typical) @ 6dBm Input
Isolation	> 30dB
Optical Input Range	0dBm to +6dBm
Optical Input Power (typical)	+1dBm to +3dBm
Output Power	* +13dBm/20mW to +26 dBm/400mW Total Power (@ 0dBm input)
<i>(for C-Band single channel application)</i>	

\* (In CATV applications, typically no more than +16-19 dBm launch level per wavelength should be launched into the fiber to avoid excessive Stimulated Brillouin Scattering (SBS). SBS can negatively impact link CNR and CSO performance. The exact limit is set by the optical transmitter being used.

### ELECTRICAL, ENVIRONMENTAL & MECHANICAL PARAMETERS:

Dimensions	1.75" H x 19.0" W x 9.0" D 44mm H x 483mm W x 229mm D
Weight	12.1 lb. (5.5 kg)
Air Inlet Operating Temperature Range	0°C to +50°C (+32 to +122°F)
Humidity Range	to 95% non-condensing (For use only in non-condensing environments)
AC Input Range (Standard)	100-240 V <sub>AC</sub> (@ 47-63 Hz)
DC Input Range (Optional)	-48 V <sub>DC</sub>

### EDFA INTERFACES:

Optical Connectors	SC/APC standard; FC/APC optional
LED Indicators (Green/Red)	Alarms: Pump Temperature; Pump Bias Current; Input Power; Output Power
Unit Operating Parameters	RS-232 interface (Optional)
Pump Enable/Disable	Key Switch (key not removable in the "On" position)

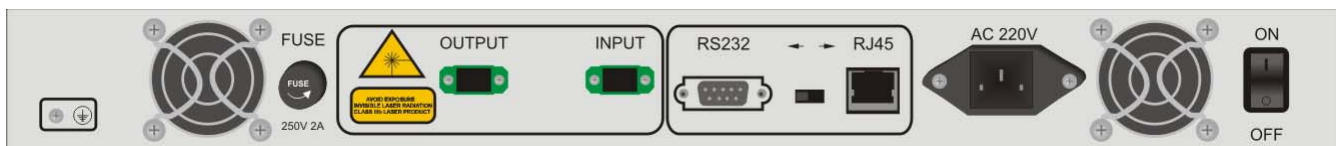
### ORDERING INFORMATION:

<u>Model Number</u>	<u>Description</u>
<b>OTEACO-B-nxx-yy-pp/S</b>	EDFA; 1RU Booster, 1-8 outputs, up to +26dBm total power

Where

n	Number of outputs (1, 2, 3, 4 or 8) (See top of first page for specific options)
xx	Optical power per output (Consult factory)
yy	Optical connector type; SA = SC/APC (Standard), FA = FC/APC (Optional)
pp	Power; AC = AC power (universal AC), DC = DC power (48V <sub>DC</sub> )
/S	Designates unit with SNMP

\* Contact factory to verify valid part numbers.



Typical EDFA Rear Panel

All specifications are subject to change without notice

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