EMLT-1550-SA | Satellite Link Laser Transmitter

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The QAMnet EMLT-1550-SA series of laser transmitters are designed to perform RF signal to optical conversion from 10MHz to above 3,000 MHz. EMLT-1550-SA series transmitters are low cost and high performance products that can be used for 36-Channel QAM satellite signal distribution in optical fiber networks. It can also be a ideal transmission solution for any RF, microwave signal over fiber applications.

EMLT-1550-SA transmitters incorporate a broadband external modulator that allows the transmission frequency range to be extended beyond 3,000 MHz. With a narrow linewidth DFB laser source, it is capable of transmitting 65km kilometers in single mode fiber, while maintaining a high CNR and excellent IM2 and IM3 performance. EMLT-1550-SA transmitters can be utilized in IF link, mobile signal link applications

QAMnet EMLT-1550-SA transmitters are available in three output power level versions: +6 dBm and +8 dBm.

Features

- High Power DFB Laser
- Broadband External Modulator
- SBS suppression level to +13dBm
- 65km standard transmission range
- Supports 36-Channel QPSK Satellite signal
- MGC (Manual Gain Controls) RF Input Control
- 10 - 3,000 MHz Modulation Bandwidth

Ordering Information

- EMLT-1550-SA-xx
- xx: 06, 08 (Output Power in dBm)

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Technical Specifications

Laser Wavelength Range	1550 nm ± 10 nm, or customer specified
Transmission Range	Up to 65 km in SMF-28 Fiber
Optical Output Power Level	
EMLT-1550-SA-06	5.7 dBm Minimum, 5.0 dBm Typical
EMLT-1550-SA-08	7.7 dBm Minimum, 8.0 dBm Typical
Input RF Signal Level	10 - 20 dBmV
Operating Frequency Range	5 MHz to 3,000 MHz
Number of Output Port	1 standard
Carrier to Noise Ratio (CNR)	> 40 dBc (for 36 channels SAT/IF)
Intermodulation Products	< -40 dBc (for 36 channels SAT/IF)
Noise Bandwidth	16 MHz
Third Order Distortion (IM3)	-65 dB maximum
SBS Suppression Level	+10 dBm to +13 dBm
RF Connector	F Connector (SMA optional)
Flatness in Frequency Range	±1.0 dB
Input Impedance	50 Ω
Input RF Return Loss	13 dBm Minimum

Environment / Mechanical Specifications

Temperature Range	0° to +50° C (operation), -40° to +70° C (storage)
Power Supply	80 – 240 V, 43 – 63 Hz AC or 40 - 58V DC (Optional)
Power Consumption	50W Maximum
Housing Dimensions	1U Rack: 19”(W) x 14”(D) x 1.75”(H)
Control / Monitoring	DFB Laser Temperature and Current
Display	Output Power Level, Tec Temperature
Alarm	Over Temperature , Over Current
Optical Connectors	SC/APC or Customer Specified

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