Satellite Link Laser Transmitter

The QAMnet DMLT-1550-SA series of laser transmitters are designed to perform RF signal to optical conversion at a low cost and high performance that can be used for L-Band Analog and 36-Channel satellite IF signal distribution in optical fiber networks.

Product Description

The QAMnet DMLT-1550-SA series of laser transmitters are designed to perform RF signal to optical conversion from 10 MHz to above 2,400 MHz. The DMLT-1550-SA series transmitters are low cost and high performance products that can be used for L-Band Analog and 36-Channel satellite IF signal distribution in optical fiber networks. It can also be a ideal transmission solution for any RF, microwave signal over fiber applications.

The DMLT-1550-SA transmitters incorporates direct modulation that allows the transmission frequency range to be extended up to 2,500 MHz. With a narrow linewidth DFB laser source, it is capable of transmitting 20 km kilometers in single mode fiber, while maintaining a high CNR and excellent IM2 and IM3 performance. The DMLT-1550-SA transmitters can be utilized in IF link, mobile signal link applications. QAMnet EMLT-1550-SA transmitters are available in two output power level versions: +6 dBm and +8 dBm.

Features

- High Power DFB Laser
- 1550 nm laser Wavelength Range
- Can be Amplified by an EDFA
- 20 km Standard Transmission Range
- Supports Analog L-Band and 36-Channel QPSK Satellite IF Signal
- 10 – 2,400 MHz Modulation Bandwidth

Applications

✓ HFC ✓ FTTH ✓ RFoG ✓ Deep Fiber Applications

PRODUCT SPECIFICATIONS

Optical Specifications

Laser Wavelength Range	1550 nm ± 10 nm, or customer specified
Transmission Range	Up to 20 km in SMF-28 Fiber
Output Power Levels (06 and 08 Models)	5.7 dBm min., 6.0 dBm typ. 7.7 dBm min., 8.0 dBm typ.
Input RF Signal Level	-25 to -14 dBm
Operating Frequency Range	10 MHz to 2400 MHz
Link Gain	10 dB
Carrier to Noise Ration (CNR)	> 40 dBc (for 36 Channels SAT/IF)
Intermodulation Products	< -40 dBc (for 36 Channels SAT/IF)
Noise Bndwidth	16 MHz
Third Order Distortion (IM3)	-65 dB max.
RF Connector	F Connector (SMA optional)
Flatness in Frequency Range	±1.0 dB
Input Impedance	75 Ω
Input RF Return Loss	13 dB min.

Mechanical Specifications

Operating Temperature	0º C to +50º C
Storage Temperature	-40º C to +70º C
Power Supply Requirements	80 - 240 V, 43 - 63 Hz AC or 40 - 58 V DC (optional)
Power Consumption	40 W max.
Control/Monitoring	DFB Laser Temperature and Current
Display	Output Power Level, TEC Temperature
Alarms	Temperature and Current Threshold
Optical Connectors	SC/APC, or customer specified
Housing Dimensions	1U Rack, 19" x 14" x 1.75"

Ordering Information

	DMLT-1550-SA-xx
xx	Output power level +6 to +8 dBm

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