DMLT-1550-SR | DM Transmitter – Short Reach

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The QAMnet DMLT-1550-SR series laser transmitters are reliable and cost-effective for use in HFC, RFoG, FTTH and deep fiber applications. DMLT-1550-SR uses a highly linear DFB laser module and an advanced pre-distortion RF drive circuit to deliver 50 dB of CNR, while maintaining optimal CSO and CTB distortion specifications.

The DMLT-1550-SR has a standard transmission range of 10 km. Since the transmitter operates at 1550 nm wavelength, the output signal can be easily amplified by an EDFA to extend the transmission range.

DMLT-1550-SR transmitters support up to 75 NTSC analog channels. Designed to be digitally ready, they can be loaded with 60 additional QAM modulated signal channels.

The DMLT-1550-SR is available at three output power levels: +6 dBm, +8 dBm and +10 dBm.

Features

- Highly linear, analog-modulated 1550 nm DFB laser source
- Advanced pre-distortion circuit minimizes CSO and CTB distortion
- Optional Automatic Gain Control (AGC) for optimal RF drive level
- 75 channel NTSC plus 60 digital channels loading plan
- -20 dB front panel RF test port
- LED front panel digital display and status indicators
- 45-870 MHz modulation bandwidth

Ordering Information

- DMLT-1550-SR-xx-y
- x: 06, 08, 10 (Output Power in dBm)
- yy: a (No AGC), b (with AGC)

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Technical Specifications

Laser Wavelength Range	1550 nm ± 15 nm, Specific Wavelength on ITU Grid optional
Transmission Range	Up to 10 km in SMF-28 fiber
Output Power Level	
DMLT-1550-SR-06	5.7 dBm Minimum, 6.0 dBm Typical
DMLT-1550-SR-08	7.7 dBm Minimum, 8.0 dBm Typical
DMLT-1550-SR-10	9.7 dBm Minimum, 10.0 dBm Typical
Number of Outputs	1
Optical Return Loss	50 dB Minimum
Carrier to Noise Ration (CNR)	52 dB Typical @ 0dBm
Composite Second Order (CSO) Distortion	-60 dBc Maximum
Composite Triple Beat (CTB) Distortion	-62 dBc Maximum
RF Test Port Ratio	-20 dB
AGC Adjustment Range	6 dB (optional)
Input RF Power Level	13-18 dBmV per channel
Frequency Range	45 MHz to 870 MHz
Flatness in Frequency Range	±0.75 dB
Input Impedance	75 Ω
Input RF Return Loss	16 dB Minimum

Environment / Mechanical Specifications

Temperature Range	0°C to +50°C (operation) -40°C to +70° C (storage)
Power Supply	80 – 240 V, 43 – 63 Hz AC 40 - 58 VDC (optional)
Power Consumption	30 W 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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