



# LT-1-DM-1550-SR



## DEVICE

## DM Transmitter – Short Reach

## OVERVIEW

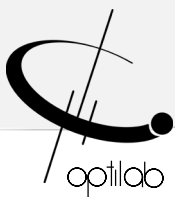
The Optilab LT-1-DM-1550-SR series laser transmitters are reliable and cost effective for HFC, RFoG, FTTH and deep fiber applications. These transmitters use a highly linear DFB laser module and an advanced pre-distortion RF drive circuit to deliver 50 dB of CNR, while maintaining optimal CSO and CTB distortion specifications. The LT-1-DM-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. The transmitters can support up to 75 NTSC analog channels and since they are designed to be digitally ready, they can be loaded with 60 additional QAM modulated signal channels. The LT-1-DM-1550-SR is available with three output power levels: +6 dBm, +8 dBm, and +10 dBm. Contact Optilab for more information.

## 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
- -20 dB front panel RF test port
- 75 channel NTSC plus 60 digital channels loading plan
- 45 MHz to 870 MHz modulation bandwidth

## USE IN

- RFoG
- Deep Fiber Applications
- HFC
- FTTH





# LT-1-DM-1550-SR

## 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	6 dBm typ. (5.7 dBm min.), 8 dBm typ. (7.7 dBm min.), 10 dBm typ. (9.7 dBm min.)
Number of Outputs	1
Optical Return Loss	50 dB min.
Carrier to Noise Ratio (CNR)	52 dB typ. @ 0 dBm
Composite Second Order (CSO) Distortion	-60 dBc max.
Composite Triple Beat (CTB) Distortion	-62 dBc max.
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 min.

## TECHNICAL

## MECHANICAL

Operating Temperature Range	0 °C to +50 °C
Storage Temperature Range	-40 °C to +70 °C
Power Supply	80 - 240 V, 43 – 63 Hz AC 40 – 58 VDC (optional)
Power Consumption	30 W max.
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 Current
Alarm	Over Temperature, Over Current
Optical Connectors	SC/APC or Customer Specified

