

# LT-1-DM-1550-HP



## DEVICE

## DM Transmitter – High Power 1550 nm

## OVERVIEW

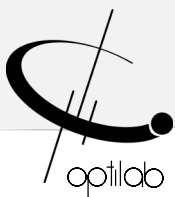
The Optilab LT-1-DM-1550-HP series high power laser transmitters are reliable, cost effective, space saving solutions designed for HFC, RFoG, FTTH and deep fiber applications. These transmitters use a highly linear, low chirp DFB laser module and an advanced pre-distortion RF circuit to deliver 50 dB of CNR, while maintaining optimal CSO and CTB distortion specifications. The output power level is amplified by an internal EDFA of up to +23 dBm. The LT-1-DM-1550-HP has a transmission range of up to 20 km. 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-HP is available in four output power levels: +15 dBm, +18 dBm, +20 dBm, and +23 dBm. Contact Optilab for more information.

## FEATURES

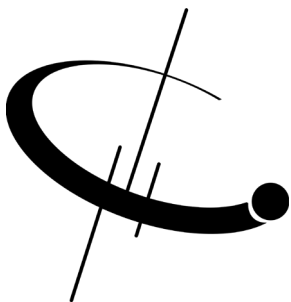
- Highly linear, low chirp 1550 nm DFB laser source
- Pre-distortion circuit minimizes CSO and CTB distortion
- Automatic Gain Control (AGC) for optimal RF drive level (optional)
- -20 dB front panel RF test port
- 75 channel NTSC plus 60 digital channels loading plan
- 45 - 870 MHz modulation bandwidth
- Built-in EDFA to boost output level
- Transmission range up to 20 km

## USE IN

- RFoG
- Deep Fiber Applications
- HFC
- FTTH



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# LT-1-DM-1550-HP

## SPECIFICATIONS

Laser Wavelength Range	1550 nm ± 15 nm, Specific Wavelength on ITU Grid Optional
Transmission Range	Up to 20 km in SMF-28 fiber
Output Power Level	+15 dBm, +18 dBm, +20 dBm, +23 dBm
Number of Outputs	1 output standard, can be customized up to 4
Optical Return Loss	50 dB min.
Carrier to Noise Ratio (CNR)	51 dB typ. @ 0 dBm
Composite Second Order (CSO) Distortion	-60 dBc max.
Composite Triple Beat (CTB) Distortion	-63 dBc max.
SBS Suppression Level	-18 dBm min.
RF Test Port Ratio	-20 dB
AGC Adjustment Range	6 dB (optional)
Input RF Power Level	17 - 23 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
Power Consumption	80 W max.
Housing Dimensions	1U Rack: 19" (W) x 14" (D) x 1.75" (H)
Control/Monitoring	Laser Temperature and Current
Display	Output Power Level, TEC Temperature
Alarm	Over Temperature, Over Current
Optical Connectors	SC/APC or Customer Specified

