



# LT-1-DM-1550-SA



## DEVICE

## Satellite Link Laser Transmitter

## OVERVIEW

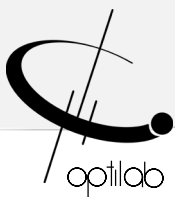
The Optilab LT-1-DM-1550-SA series of laser transmitters are designed to perform RF signals to optical conversion from 10 MHz to above 2,400 MHz. This low cost and high performing transmitter series can be used for L-Band Analog and 36-Channel satellite IF signal distribution in optical fiber networks. They are also an ideal transmission solution for an RF, microwave signal over fiber applications. The LT-1-DM-1550-SA transmitters incorporate direct modulation that allows the transmission frequency range to be extended up to 2,500 MHz. With a narrow linewidth DFB laser source, they are capable of transmitting 20 km kilometers in single mode fiber, while maintaining a high CNR and excellent IM2 and IM3 performance. The LT-1-DM-1550-SA transmitters can also be utilized in IF link, mobile signal link applications. Contact Optilab for more information.

## 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

## USE IN

- RFoG
- Deep Fiber Applications
- HFC
- FTTH





# LT-1-DM-1550-SA

## SPECIFICATIONS

Laser Wavelength Range	1550 nm ± 10 nm, or customer specified
Transmission Range	Up to 20 km in SMF-28 fiber
Output Power Level (06 and 08 Models)	5.7 dBm min., 6 dBm typ., 7.7 dBm min., 8 dBm typ.
Input RF Signal Level	-25 to -14 dBm
Operating Frequency Range	10 MHz to 2,400 MHz
Link Gain	10 dB
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 max.
RF Connector	F Connector (SMA optional)
Flatness in Frequency Range	± 0.75 dB
Input Impedance	75 Ω
Input RF Return Loss	16 dB min.

## TECHNICAL

Operating Temperature Range	0 °C to +50 °C
Storage Temperature Range	-40 °C to +70 °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
Alarm	Temperature and Current Threshold
Optical Connectors	SC/APC or Customer Specified
Housing Dimensions	1U Rack: 19" (W) x 14" (D) x 1.75" (H)

## MECHANICAL

