

# DMLT-1550



## 1550 nm Directly Modulated Laser Transmitter

The Optilab DMLT-1550 series laser transmitters are a reliable and cost-effective solution for HFC, RFoG, PON, and deep fiber applications. Using a dispersion compensated analog 1550 nm DFB laser module and an advanced pre-distortion RF drive circuit, DMLT-1550 transmitters deliver 50+ dB of CNR while maintaining high CSO, CTB performance. Available in a Standard Reach (SR) option with a standard transmission range of 20 km, or an Extended Reach (ER) option with a transmission range of 40 km, the DMLT-1550 is the best cost/performance ratio in the industry. The DMLT-1550 series is available with output power levels from +6 dBm to +10 dBm, and the 1550 nm wavelength can be easily amplified by any EDFA. Designed to be digitally ready, it can be loaded with 77 NTSC analog channels with an additional 60 QAM channels. Contact Optilab for more information.

### Features

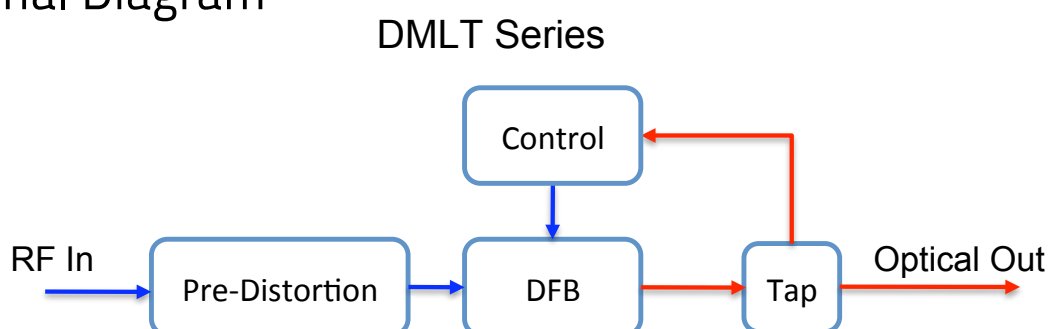
- Analog modulated 1550 nm DFB laser
- Transmission range up to 40 km
- Pre-distortion circuit minimizes CSO & CTB
- Output power level: +6 dBm to +10 dBm
- Automatic Gain and Manual Gain Control
- 77 channel NTSC plus 60 QAM channels
- Front panel RF test port of -20 dB
- 45 MHz to 870 MHz bandwidth
- 1 GHz available
- **3 year warranty standard**

### Applications

- HFC
- PON
- RFoG
- Deep fiber applications
- For RUS/USDA projects



### Functional Diagram



# 1550 nm Directly Modulated Laser Transmitter | DMLT-1550

## OPTIONS

### DMLT-1550-xx-yy

- xx ER: Extended Reach  
SR: Standard Reach
- yy Output power

## TECHNICAL INFO

For technical info and support:

[sales@optilab.com](mailto:sales@optilab.com)

[www.optilab.com](http://www.optilab.com)

## WEB ORDER

To order, please visit [OEQuest.com](http://OEQuest.com).



## Optilab Advantage

- Innovation
- Performance
- Quality
- Customization
- Warranty

Optical Specifications	
Laser Wavelength Range	1550 nm ± 15 nm, Custom wavelengths available
Transmission Range (in SMF-28 fiber)	-ER model up to 40 km -SR model up to 20 km
Output Power Level	+6 dBm to +10 dBm
Number of Outputs	1 output standard, multiple output optional
Optical Return Loss	50 dB min.
Carrier to Noise Ration (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 to 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.
Mechanical Specifications	
Operation 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	30 W max.
Housing Dimensions	1RU 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