



# EMLT-1550-FH



## DEVICE

## EM Transmitter – FTTH

## OVERVIEW

The Optilab EMLT-1550-FH series of digital laser transmitters are designed for carrying analog and QAM modulated digital channels for the SCTE next generation Fiber To The Home (FTTH) requirements. The EMLT-1550-FH series transmitters are a cost-effective and versatile transmission solution for RFoG/ FTTH networks regardless of architecture. The EMLT-1550-FH transmitters incorporate a zero-chirp external modulator and pre-distortion circuit which allow a 65 km transmission range, while maintaining a high OMI level and excellent CSO and CTB performance. The SBS launch power level is set to +13 dBm. EMLT-1550-FH transmitters can support up to 77 NTSC analog channels and since it is designed to be digitally ready, the transmitters can also be loaded with additional QAM modulated QAM and HDTV channels.

## FEATURES

- High power CW-DFB laser module
- Zero-chirp lithium niobate external modulator
- 65 km standard transmission range
- SBS suppression level range of +13.5 dBm
- Supports 77 analog NTSC plus QAM digital channels
- Fully compatible with QAM256 modulated digital channels
- AGC (automatic Gain Control) and MGC (Manual Gain Control) RF Input Control
- -20 dB front panel RF test port
- 45 to 870 MHz modulation bandwidth

## USE IN

- HFC
- Deep Fiber Applications
- FTTH
- RFoG

## ORDERING OPTIONS

**EMLT-1550-NC-xx**  
**xx** Output Power Level +6 to +9 dBm





# EMLT-1550-FH

## SPECIFICATIONS

Laser Wavelength Range	1550 nm ± 15nm, specific wavelength on ITU Grid optional
Transmission Range	Standard 65 km in SMF-28 Fiber
Output Power Level	+6 dBm min., (6.3 dBm typ.); +7 dBm min., (7.3 dBm typ.); +8 dBm min., (8.3 dBm typ.), +9 dBm min. (9.3 dBm typ.)
Noise Bandwidth	4 MHz
Carrier to Noise Ratio (CNR)	53 dB typ. @ 0 dBm
Composite Second Order (CSO) Distortion	-63 dBc max.
Composite Triple Beat (CTB) Distortion	-63 dBc max.
Front Panel RF Gain/OMI Adjustment Range	+6 dB/-6 dB
SBS Suppression Level	Up to +13.0 dBm
Input RF Power Level	8 to 20 dBmV per channel
Frequency Plan	77 NTSC analog channels + Digital QAM Channels
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.

## GENERAL

## 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	75 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
Alarms	Over Temperature, Over Current
Optical Connectors	SC/APC or Customer Specified

