LT-1-SR-R Series

DEVICE

1550 nm Lightwave Transmitter, 1 GHz, Standard Range

OVERVIEW

The Optilab LT-1-SR-R series laser transmitters are designed for use in HFC, RFoG, and FTTH applications. They are cost effective and versatile transmission solutions for HFC/RFoG/FTTH networks regardless of architecture. The LT-1-SR-R transmitters incorporate a zero-chirp external modulator and a pre-distortion circuit which allows a 65 km transmission range, while maintaining a high OMI level and excellent CSO and CTB performance. The launch power level can be adjusted from +13.5 dBm to 16.5 dBm. The LT-1-SR-R transmitters support up to 77 NTSC analog channels. Designed to be digitally ready, the transmitters can also be loaded with additional QAM modulated data or HDTV channels. The LT-1-SR-R transmitters are available in four output power level versions including: +6 dBm, +7 dBm, +8 dBm, and +9 dBm. Contact Optilab for more information.

FEATURES

- High power CW DFB laser module
- Zero-chirp lithium niobite external modulator
- 65 km standard transmission range, can be extended to 90 km
- Adjustable SBS suppression level range of +13.5 dBm to +16.5 dBm
- Supports 77 channel NTSC plus QAM 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

- RFoG
- HFC
- FTTH

LT-1-SR-R Series

SPECIFICATIONS

TECHNICAL

Laser Wavelength Range	1550 nm ± 15 nm, specific wavelength on ITU Gird optional
Transmission Range	65 km in SMF-28 fiber, expandable to 90 km
Output Power Levels	+6, +7, +8, or +9 dBm
Noise Bandwidth	4 MHz
Carrier to Noise Ratio (CNR)	52 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	Adjustable +13.5 dBm to +16.5 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.

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	1 U Rack: 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