LT-2.5-SR-R

DEVICE

1550 nm Lightwave Transmitter, 2.5 GHz, Dual Bond

OVERVIEW

The Optilab LT-2.5-SR-R series of laser transmitters is designed for use with dual-band transmission applications. Based on our proprietary design, the LT-2.5-SR-R operates as two sets of laser transmitters. There are two transmission bands: a CATV band and a Satellite band. The CATV band transmitter operates as a standard HFC laser transmitter with a frequency range from 45 MHz to 860 MHz. It is designed for electrical to optical conversion of CATV signals such as AM-VSB, FM and QAM signals. It can transmit up to 65 km in distance, while providing excellent CNR, CSO and CTB performance. The Satellite band transmitter can perform electrical to optical conversion from 950 MHz to 3,000 MHz. The LT-2.5-SR-R can also be used for transmitting DTH, Satellite, IF and other RF modulated signals over optical fiber. The Optilab LT-2.5-SR-R series is highly versatile, and is a cost-effective transmission solution for RF signals over optical fiber applications.

FEATURES

- High power, narrow linewidth DFB laser module
- Satellite: 950 MHz to 3,000 MHz for DTH and Sat/IF
- 65 km standard transmission range
- AGC (Automatic Gain Controls) Input Control for CATV band
- CATV: 45 MHz to 860 MHz for analog and QAM channels
- SBS suppression level: +13 dBm to +16 dBm (optional)
- Separate input port for CATV Band and Satellite Band
- Broadband external modulator

USE IN

- CATV
- Satellite
- HFC
- FTTH
- RFoG

LT-2.5-SR-R

SPECIFICATIONS

OPTICAL

Laser Wavelength Range	1550 nm ± 15 nm, Specific Wavelength on ITU Grid optional
Transmission Range	Up to 65 km in SMF-28 Fiber
Output Power Levels	6 dBm, 8 dBm
Optical Output Power	± 0.1 dBm over 24 hours
SBS Suppression Level	Up to +13 dBm
Relative Intensity Noise (RIN)	< -158 dB/Hz
CATV Band Applications	AM-VSB, QAM
Frequency Range	45 MHz to 870 MHz (77 Analog + Digital)
Input RF Power Level	15 to 25 dBmV per channel
Flatness in Frequency Range	± 1.0 dB
Carrier to Noise Ration (CNR)	> 53 dB (Direct out of Transmitter); > 52 dB (w/ EDFA and 30 km fiber)
Composite Second Order (CSO) Distortion	-63 dBc max.
Composite Triple Beat (CTO) Distortion	-63 dBc max.
RF Connector	F Type
Input Impedance	75Ω
Satellite Band Applications	DTH, SAT/IF, RFoG
Frequency Range	950 MHz to 3,000 MHz

MECHANICAL

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	110 W max.
Housing Dimensions	IRU 19" (W) x 14" (D) x 1.75" (H)
Controls/Monitoring	DFB Laser Temperature and Current
Display	Output Power Level, TEC temperature
Alarm	Over Temperature, Over Current
Optical Connectors	SC/APC, or Customer Specified