

OmniStar Enhanced DFB 1310 nm Laser Transmitter



Features

- 870 MHz passband: up to 110 channels + digital
- Advanced linear predistortion circuitry
- Low RF input level
- AGC/manual gain modes
- CW/video switch for accurate link optimization
- Microprocessor control

Description

The OmniStar® ALM-* is a line of high performance DFB laser modules. The AM-OMNI-ALM-* family consists of twelve models with optical powers ranging from 2 to 25+ mW serving link budgets from 2 to 16+ dB. All OmniStar lasers have an integrated Gallium Arsenide (GaAs) preamp allowing for a low RF input level and exceptional distortion performance. The laser modules have separate broadcast and narrowcast RF inputs with high port to port isolation.

Each laser module features a state-of-the-art linear predistortion circuit to provide superior CSO and CTB distortion performance. During manufacturing the performance of each laser is characterized and its optimal operating point is stored in non-volatile memory within the unit. No user adjustments of RF or laser drive levels are required by the operator to insure that the guaranteed link performance is automatically achieved upon power-up.

The three user controlled modes of operation are: Preset- factory set AGC for optimal laser performance, Set- user adjustable AGC, and Manual- user adjustable fixed gain. The Set and Manual modes allow the user to adjust the RF drive level for customized C/N and distortion performance based on channel loading and system requirements. The CW/Video switch allows the user to set up and proof a link using a CW video source. When modulated signals are then applied, the microprocessor adjusts the RF drive level into the laser to match the CW drive levels. This feature insures the laser is not operating in clipping when modulated signals are applied and provides operators with a reliable and accurate way to proof links.

This wide variety of modules combined with the scalability of the OmniStar platform allows the user to design the best solution for an application based on different variables such as loss budget, performance criteria, splitting ratio considerations, and cost effectiveness.