

RAYCORE

FIBER OPTIC SOLUTIONS



True Triple Play by **RAYCORE**®

1550nm EXTERNAL TX CATV TRANSMITTER

Product Description

The 1550nm Externally Modulated CATV Optical Transmitter, uses a DFB laser as light source. The incoming electrical RF AM-VSB signals are first converted to an optical signal and then transmitted into the fiber optic network. On the customer side the optical signal is then converted back to an electrical RF signal using an O/E CATV Module, integrated in equipment such as the Raycore RCMG.

Applications

- Converts electrical RF AM-VSB signals into an optical signal.
- Transmission of video and audio signals through the optical network.
- Suitable for long haul applications and short haul access networks.

Features

- 45 - 870 MHz bandwidth
- Selectable AGC (Automatic Gain Control) or MGC (Manual Gain Control)
- Available with fixed SBS threshold 13dBm, 16dBm, 18dBm or Adjustable SBS threshold
- Two optical output ports (SC/APC), with shutters
- 64 PAL or 77 NTSC Channels
- Accepts low signal input levels (75dB μ V/Channel @ 64 ch PAL)
- Unique simultaneous SBS/SPM suppression for point to point and point to multipoint application
- Front panel LCD display
- Microprocessor control and monitoring
- RS-485 interface for remote monitoring and control
- RF pre-distortion circuit for excellent CNR and low distortion performance

Technical Specification

General Specification

Optical Parameters

General	Conditions	Units	Manufacturing Specs.
Laser Type			Cooled DFB LD with Isolator
Optical Wavelength		nm	1555 ± 5
Connector Type			SC/APC with Shutter
Laser RIN Noise Density		dB/Hz	≤ -160
Optical Power		dBm	≥ 9
Optical Output Port			2
SBS Suppression Threshold		dBm	18

RF Parameters

General	Conditions	Units	Manufacturing Spec.
Operating Bandwidth		MHz	45 – 870
Channel Loading		Ch	64 ch PAL and 77 ch NTSC
RF Input Impedance	Unbalanced	Ω	75
RF Input Return Loss		dB	≤ -16
RF Input Level		dBmV/ch	15 – 25
OMI			3% ± 0.25
Flatness		dB	± 0.75
Connector Type			F-Type Female
Test Point	Ref to RF input power @77 channel loading	dB	-10 ± 1

Link Performance

C/N Table	Typical Value LINK LOSS (dB)
CNR	50 dB (typical)
CSO	≤ -65dBc @ Port A ≤ -63 dBc @ Port B
CTB	≤ -65 dBc
XM	≤ -65 dB

Note: Link budget is defined by output power to 0 dBm optical input at receiver under 20km fiber link + EDFA. SBS setting=18dBm test conditions.

General Information

Power	90 -260 Vac, 50/60 Hz, 100W (max)
Operating Temperature	0 to +50°C
Max. Storage Temperature	-20 to +60°C
Dimensions (L x W x H)	411 x 480 x 45 mm
Operating Humidity	85% (max)
Weight	3.0 kg



Raycore Fiber Optic Solutions offers the technically demanding customers complete FTTH solutions and high quality Fiber Optic components, in order to provide a scalable network design as well as securing a future proof FTTH installation.

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