

TIN40R-1000 Optical Node

Features

- Full forward bandwidth up to 1000 MHz
- 5-42 MHz reverse, 2 Mw DFB laser
- 1550 nm reverse optical wavelength
- High RF output range; 40 dBmV stable within wide optical input range (-8 to +4 dBm) with AGC feature
- GaAs E-pHEMT push-pull technology for high and stable output level with very low power consumption
- Optical input test point
- LED display of optical levels
- External powering (11-35 Vdc) or remote powering over coax line via power inserter
- Surge protection (6kV) at RF output
- SCTE compliant F type connectors
- Diecast aluminum housing for excellent heat dissipation and RFI shielding



The TIN40R-1000 is a new, 1310 nm two-way fiber optic node for CATV, SMATV, FTTx, MDU, or private business applications. The TIN40R-1000 has a wide optical input bandwidth range from 1200 to 1600 nm making it ideal for either 1310 nm or 1550 nm systems. The fiber optic receiver has an AGC circuit to maintain an RF output over a -8 to +4 dB optical input level. The high RF output level of 40 dBmV eliminates the need for a separate RF amplifier for distribution. A 0-18dB gain control makes system balancing easy without external pads. The GaAs E-pHEMT push-pull hybrid provides superior performance with low distortions. With a 2 Mw DFB reverse band optical laser, the node is ideal for 2-way systems where reverse channels or modem data is present. The node uses an external 12VDC power supply (included) which can be connected directly or diplexed on the RF output cable for remote powering. The optical input is a SC/APC connector and features a multicolor LED for input level reference. Also featured is an internal LED display showing optical levels.

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Specifications

FORWARD	
Optical Performance	
Wavelength	1200-1600 nm
Operational AGC	Standard
Input Optical Power Range	AGC is operational within -8 to +4 dBm
Optical Input Test Point	1 V/mW, external, with calibrated power meter
Optical Input LED	3 color
RF Performance	
Bandwidth	54-1000 MHz / 85-1000
Gain Flatness	± 1 dB
Gain Control	0 to 18 dB
RF Output Level	40 dBmV
Output Return Loss	≤-14 dB
Test Point	-20 dB
Link Performance (0 dBm optical input power, NTSC77 channel, OMI = % 3,8)	
Output Level	40 dBmV min (stable from -8 to +4 dBm optical)
CNR	51 dBc
CSO	63 dBc
CTB	60 dBc
REVERSE	
Optical Performance	
Wavelength	1310 nm
Laser Type	DFB
Optical Output	2 mW
Connector	SC/APC
RF Input	
Bandwidth	5-42 MHz
Frequency Response Accuracy A61	±1 dB
Return Loss	-16 dB
Input Range	8-27 dBmV
Level Control	Standard plug in pads (TBLE-9518**)
Test Port	-30 dB
ELECTRICAL & PHYSICAL PERFORMANCE	
Surge Withstand	IEEEEC62.41 Cat.A3 (6kV, 200A)
Powering - External Adaptor	12 VDC external power supply, connection with
Powering Over Coax	Yes
Power Consumption	8, 0 Watt
Temperature	0 to 55°C
Enclosure	Aluminum diecast housing (IP54)
Weight	3.7 lbs (1.7 kg)
Dimensions	7 5/8 x 5 3/8 x 3 inches (195 x 136 x 75 mm)