

# Toner

## TIN40-1000

### Indoor Optical Node

**Toner**  
cable equipment, inc.  
www.tonercable.com

#### Features

- Full forward bandwidth up to 1 GHz
- High RF output range; 40 dBmV stable within wide optical input range (-6 to 2 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
- Three colored LED indicator for optical input level
- 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 TIN40-1000 is a new, one way fiber optic node for CATV, SMATV, FTTx, MDU or private business applications. The TIN40-1000 has a wide optical input 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 a RF output over a -6 to +2 dB optical input level. The high RF output level of 40 dBmV eliminates the need for a separate RF amplifier for distribution. A 0-18 dB gain control makes system balancing easy without external pads. The GaAs E-pHEMT push pull hybrid provides superior performance with low distortions. 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.

**Specifications**

<b>FORWARD</b>	
<b>Optical Performance</b>	
Wavelength	1200-1600 nm
Operational AGC	Standard
Input Optical Power Range	AGC is operational within -6 to +2 dBm
Optical Input Test Point	1 V/mW, external, with calibrated power meter
Optical Input LED	3 color
<b>RF Performance</b>	
Bandwidth	40-1000 MHz
Gain Flatness	± 1 dB
Gain Control	0 to 18 dB
Output Return Loss	≤ -14 dB
Test Point	-20 dB
<b>Link Performance (0 dBm optical input power, NTSC77 channel, OMI = % 3,8)</b>	
Output Level	40 dBmV min (stable from -6 to +2 dBm optical level due to AGC)
CNR	52 dBc
CSO	62 dBc
CTB	62 dBc
<b>ELECTRICAL &amp; PHYSICAL PERFORMANCE</b>	
Surge Withstand	IEEE62.41 Cat.A3 (6kV, 200A)
Powering - External Adaptor	12 VDC external power supply, connection with F type connector (DC powering)
Powering Over Coax	Yes
Power Consumption	4, 0 Watt
Temperature	0 to 55°C
Enclosure	Aluminum diecast housing (IP54)
Weight	1.7 lbs (700 gr)
Dimensions	5.5 x 5.5 x 1.7 inches (140 x 140 x 44 mm)