Optical Transceiver Module

Features

- Enables optical communications between various headend products
- Up to 2.125 Gbps bi-directional data links
- Pluggable RJ-45 footprint
- Duplex LC connector
- Very low jitter
- Metal enclosure for lower EMI
- 3.3 V power supply with low power dissipation
- Extended operating temperature range

The TR3000-PI Optical Transceiver Module enables additional capabilities for high-speed bi-directional communications required for Aurora Networks' digital networking products. These modules are functionally identical to the transceivers already built into many of Aurora Networks' products, but provide a flexible, plug-in means of enabling additional optional secondary ports in several of those products. The TR3000-PI has been optimized for optical communications between various headend or hub equipment.

Conforming to the Small Form Factor Pluggable (SFP) Multisource Agreement, these state-of-the-art components are designed expressly for high-speed bi-directional communication applications that require rates of up to 2.125 Gbps, with the laser transmission portion of the device operating at a wavelength of 1310 nm.

The TR3000-PI features a very low jitter contribution, resulting in extremely clean, high-quality eye patterns. And the modules' metal enclosure not only makes them sturdier, but also improves their FCC test margins. This emission and ESD control is particularly important in applications with sensitive multiport hubs and switches. The module operates at extended voltage (3.15 to 3.6 V) and temperature (–20º to +70ºC) ranges, and dissipate less than 700 mW. The modules are supplied with a duplex LC connector.

Legacy Product

TR3000-PI Product Specifications

Physical:

- Dimensions:
  2.2” L x 0.4” H x 0.5” W (5.6 cm x 1.0 cm x 1.3 cm)
- Weight:
  0.1 lbs (0.05 kg)

Environmental:

- Operating temperature range: –20º to +70ºC (–4º to 158ºF)
- Storage temperature range: –40º to +85ºC (–40º to 185ºF)
- Humidity: 5% to 95% non–condensing

Optical Interface:

- Optical connectors:
  Duplex LC

Power Requirements:

- Input voltage:
  3.3 V_{DC} (240 mA max)
- Power consumption:
  700 mW max

General:

- Supported link length: 10 km (on SMF-28 or equivalent)
- Data rate: 2.125 Gb/s
- BER: 10^{-12} max
- Hot plug–in/out

Optical Interface:

Output:

- Transmitter type: 1310 nm DFB
- Average launch power: –9.5 dBm min, –3 dBm max
- Optical modulation amplitude: 174 µW min

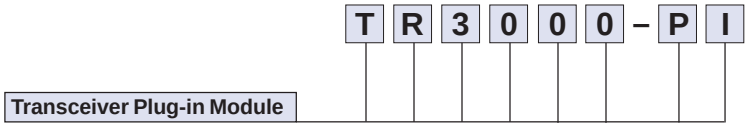
Input:

- Receiver sensitivity: –22 dBm typ, –20.5 dBm max
- Return loss: 12 dB min
- Receive LOS assert level: –24 dBm

Regulatory:

Class 1 devices per FDA/CDRH and IEC-825-1 laser safety regulations

Ordering Information



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