



## 1319MR

### APD 2.5 Gb/s Receiver Module, -34 dBm Sensitivity

The high-speed APD receiver consists of a wideband linear preamp followed by a limiting amplifier buffer stage. It is designed for use in singlemode, high-speed applications at the SONET<sup>®</sup>C-48 and STM-16 data rate of 2488.32 Mbits/s. The receiver is built with an APD photodetector. At 2.5 Gbits/s, the typical room temperature receiver sensitivity measured at 3 x 10<sup>-11</sup> bit-error rate is -34 dBm. The receiver is manufactured in a 14-pin butterfly lead package with a single-mode optical fiber pigtail. The fiber in the 1319MR is internally beveled for low optical return loss.

Photodiode/  
APD

Photodiode/  
APD

#### FEATURES

- High Data Rate Capability: 2.5 Gbits/s
- APD or PIN Photodetector
- Fully Operational through the 1.3 μm to 1.55 μm Wavelength Range
- Typ. Sensitivity:
  - 34 dBm with APD
  - 25 dBm with Pin
- 25 dB typ. min. Dynamic Range
- Single-mode Fiber Pigtail with FC/PC or SC Optical Connector
- High-performance GaAs Preamplifier
- Operating Case Temperature Range:
  - 0°C to 65°C with APD
  - 40°C to +85°C with PIN
- Compact, Butterfly Package
- Single-ended or Differential Outputs

#### USE IN

- Line Terminal Equipment
- High-speed Networks Up to 2.5 Gbits/s
- SONET<sup>®</sup>C-48 and SDH STM-16 Telecommunications Applications
- Extended Reach Datacomm and Telecomm Applications
- Digital Video



## 1103 APD (Avalanche Photo Diode)

Photodiode Type	InGaAs APD+Pre-Amp+Limiting Amp
Spectral Response Range	1250 nm to 1625 nm
Responsivity	Small Signal Transimpedance 10 k typ.
Frequency Response	2 GHz typ.
Overload	-1 dBm typ.
Sensitivity	-34 dBm typ.
APD Breakdown Voltage	60 V typ.
Optical Return Loss	27 dB min.
Package Type	Hermetically Sealed Butterfly Package
Fiber Type	Single Mode SMF28
Detector Diameter	NA
Connectors	FC/UPC
Operation Temperature Range	0°C to +60°C
Qualifications	Telcordia

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