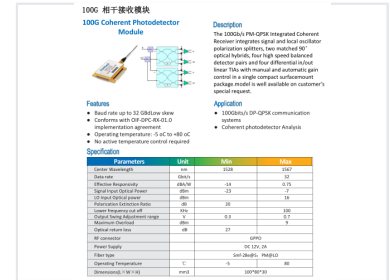


# 100G Coherent Photodetector Module

This 100Gb/s PM-QPSK integrated coherent receiver integrates signal and local oscillator polarization splitters with two matched 90° optical hybrids. It also features four high speed balanced detector pairs and four differential in/out linear TIAs with manual and automatic gain control in a single compact surface-mount package.



## Overview

### High-Performance Coherent Detection

The 100Gb/s PM-QPSK Integrated Coherent Receiver is designed for advanced optical communication systems, featuring integrated signal and local oscillator polarization splitters. It incorporates two matched 90° optical hybrids, four high-speed balanced detector pairs, and four differential in/out linear TIAs with manual and automatic gain control. This compact surface-mount module supports 100Gbits/s DP-QPSK communication systems, offering reliable performance without the need for active temperature control.

## Key Features

### Compliance & Capabilities

OIF-DPC-RX-01.0 Compliant, Low Skew, Manual/Auto Gain Control, Surface Mount Package

## Optical Performance

### Optical Performance Metrics

**1547 nm**

Center Wavelength

**32 Gbit/s**

Data Rate

**27 dB**

Optical Return Loss

**20 dB**

Polarization Extinction Ratio

### Power Specifications

Parameter	Min	Max	Unit
Signal Input Optical Power	-23	-7	dBm
LO Input Optical Power	16	16	dBm
Maximum Overload	9	9	dBm

## Technical Specifications

### Physical & Environmental

- Dimensions: 100 x 80 x 30 mm<sup>3</sup>
- Operating Temperature: -5 to 80 °C
- Power Supply: DC 12V, 2A
- Fiber Type: Smf-28e@S: PM@LO
- RF Connector: GPPO

### Electrical Characteristics

- Lower Frequency Cut Off: 100 KHz
- Output Swing Adjustment Range: 0.3 to 0.7 V
- Effective Responsivity: -14 to 0.75 dBA/W