

Balanced Optical Detector Module



Overview

Symmetrical InGaAs photodetectors, also referred to as balanced detectors, are used in fiber-optic applications in optical coherence tomography and fiber sensor technology. Mach Zehnder interferometers are also available with integrated symmetrical detectors. Available in AC and DC coupled versions, with mounted InGaAs photodiodes or without photodiodes, the PD100B is ideal for applications such as Optical Coherence. high-speed photodetector module for for > 1 T/bs coherent telecom applications High-speed balanced photodetector modules are of interest for the development of next-generation telecom coherent optical communication links. Since these R&D links are always a step ahead in terms of symbol rates. SIMTRUM's high speed balanced optical detection module integrates two matching photodiodes with high speed response, which effectively reduces laser noise and common mode noise, improves the system's signal-to-noise ratio, and has low noise, high gain, and easy to use.



Article Content

Feb 13, 2026

Optimization of Balanced Detector for Coherent Receiver on Generic

Abstract—Balanced photodetector (BPD) is an important component for high-speed coherent receiver. Optimization strategy of waveguide-based multi-quantum well (MQW) BPDs, operating at 1550 nm is

Apr 04, 2026

40G DPSK DQPSK Balanced Optical Receivers

The DSC-R410 module consists of a pair of balanced photodiodes and a high-gain limiting transimpedance amplifier, which also has a unique peak detector function. The DSC-R410 has a very

Jun 05, 2026

Auto-Balanced Detector with Avalanche Photodiodes

The balanced detector, which uses two well-matched avalanche photodiodes (APDs) and an ultra-low-noise, ultra-low-distortion, high-speed transimpedance amplifier, is optimized for applications with low

Feb 25, 2026

Balanced Photodetector | YB Photonics

BPD465 Balance Detector 10M-400MHz for OCT, Fiber Optic Sensing Systems, Wind Radar DAS-BPD DAS-BPD Balanced Photodetector Coherent Detection

Dec 27, 2025

Balanced Receiver

3.3.4 High-power balanced detectors Balanced receivers, which consist of anti-parallel photodiodes, are widely used in coherent receivers owing to their capacity to suppress laser relative

Apr 01, 2026

100 GHz BALANCED PHOTODETECTOR

The BPDV412xRv balanced photodetector is a compact, non-hermetic module consisting of two optimized 100 GHz waveguide-integrated photodiodes on a single chip. As a single device, this

Jul 12, 2025

Balanced Amplified Photodetectors with Fast Monitor

The detectors consist of two balanced photodiodes and an ultra-low-noise, high-speed transimpedance amplifier. The two photodiodes are matched to achieve an

Dec 12, 2025

Balanced detector C12668-03 | Hamamatsu Photonics

C12668-03 is a differential amplification type photoelectric conversion module containing two Hamamatsu photodiodes with balanced characteristics. The photodiodes are connected in a

Oct 19, 2025

High Speed Balanced Photodetector | SIMTRUM

SIMTRUM's high speed balanced optical detection module integrates two matching photodiodes with high speed response, with high bandwidth up to 40GHz.

May 18, 2026

Distributed balanced photodetectors for high-performance

Discrete balanced photodetectors with high saturation power have been reported, however, they have limited bandwidth.⁵ It is also more difficult to match the electrical and optical characteristics of the

Sep 27, 2025

Balanced Photodetectors in Optical Systems: Principle,

Balanced photodetectors are critical components in modern optical systems, offering high sensitivity and precision in detecting light signals. These

Nov 19, 2025

Balanced Photodetector | YB Photonics

Leading manufacturer of photodetectors and distributed fiber optic sensing systems (DVS,DAS,DTS) from China, Over 100 universities and research units have

Mar 31, 2026

40 GHz Fiber Coupled Balanced Photodetector /

SKU: GHBD The GHBD Balanced Photoreceiver is designed for high-speed analog and digital light detection, offering exceptional performance with a differential gain

Dec 24, 2025

43 GHz BALANCED PHOTODETECTOR

The BPDV21x0R consists of two optimized 43 GHz waveguide-integrated photodiodes on a single chip that show an extremely flat frequency response, both in power and in phase.

Feb 28, 2026

PD100B 100 MHz balanced photodetector

Available in AC and DC coupled versions, with mounted InGaAs photodiodes or

Nov 20, 2025

Balance Detector 10M-400MHz for OCT, Fiber Optic

Balance Detector 10M-400MHz for OCT, Fiber Optic Sensing Systems, Wind Radar
This series of balanced photodetectors with fiber coupled input and SMA output,

Jan 18, 2026

High-CMRR Balanced Detection Module Based on Complementary ...

A balanced photodetector module combined with two complementary photodetectors is proposed and demonstrated. Key factors influencing common-mode rejection ratio are analyzed, and excellent

Aug 27, 2025

Balanced Photodetectors

Symmetrical InGaAs photodetectors, also referred to as balanced detectors, are

Jan 13, 2026

HC Optical Balanced Photodetector Module

HC-BPRM series balanced photodetector module integrates two matched high-linearity analog PIN detectors and a low-noise broadband transimpedance amplifier, featuring high gain, high sensitivity,

Nov 27, 2025

Balanced detector | PICWave | Photon Design

Balanced photo-detector and photodiodes PICWave The Laser Diode, SOA, and Photonic Integrated Circuit (PIC) Simulator

May 28, 2026

High Performance Balanced Photodetector (BPD-1)

The BPD-1 is configured as a dual-balanced receiver by subtracting the two optical input signals from each other, resulting in the cancellation of common mode noise. Dual balanced detection allows

Dec 22, 2025

Balanced Detectors

Thorlabs' line of balanced photodetectors are presented here. Depending on the model, either a silicon or InGaAs detector is employed to enable detection in the

Jan 08, 2026

Technical note / Balanced detectors

The balanced detector can be used in various measurement and analytical instruments that use optical interference signals. It is also used for medical equipment such as an optical coherence tomography

Dec 30, 2025

Balanced Photo-Detector (BPD)

| Description The Balanced Photo-Detector (BPD) ce signal of two photodiodes. It can be used in optical experiments as a low noise homodyne receiver de ling wi 50 MHz. The monitor signals (I-PD+, I-PD-,

Feb 24, 2026

100 GHz Balanced Photodetector Module

In combination with a 90° optical hybrid, the balanced photodetectors provide the functionality of a coherent receiver for detecting dual-polarization higher order QAM signals.

Contact Us

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