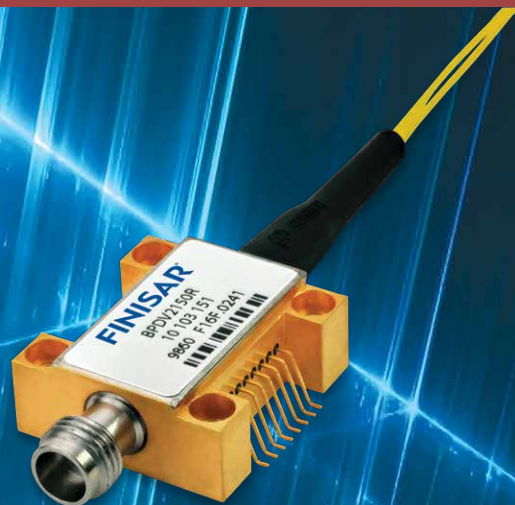


# Product Guide

Coherent and Advanced  
Photodetectors and  
Receivers

**FINISAR**<sup>®</sup>

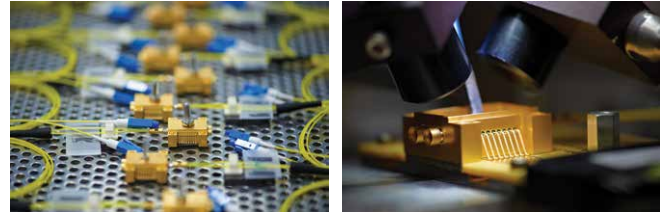


# Coherent and Advanced Photodetectors and Receivers

Finisar's Coherent and Advanced Photodetectors and Receivers offer exceptional performance for a wide variety of applications, including Communication, Test & Measurement, and Research & Development.

## Trust Finisar's Coherent and Advanced Receivers and Photodetectors for:

- ▶ Field Proven Reliability
- ▶ On Time Delivery
- ▶ Custom and Standard Products
- ▶ Vertically Integrated Design
- ▶ High-Volume Manufacturing Capabilities
- ▶ RoHS Compliance
- ▶ Extensive Patent Protection



## Coherent Receivers and Detectors

Intradyn coherent receivers (ICRs) manufactured by Finisar comply to the Optical Internetworking Forum (OIF) implementation agreement OIF DPC RX 01.2 and OIF-DPC-MRX-01.x form factors. Each of the Type 1.0, 2.0 and Micro-ICR form factors each contain two matched optical 90° hybrids with monolithically integrated balanced photodetectors, manufactured in InP. The polarization beam splitter (PBS) is realized in free space optics. A monitor photodiode and a variable optical attenuator are offered as an option. Finisar offers a High Bandwidth Micro-ICR to the market that addresses the latest advances in coherent communication. The CPRV412x series of receiver provide over 40GHz of BW to support baud rates up to 64Gbd. It also includes all the functionality as require by the OIF OIF-DPC-MRX-01.x being adopted in the forum.

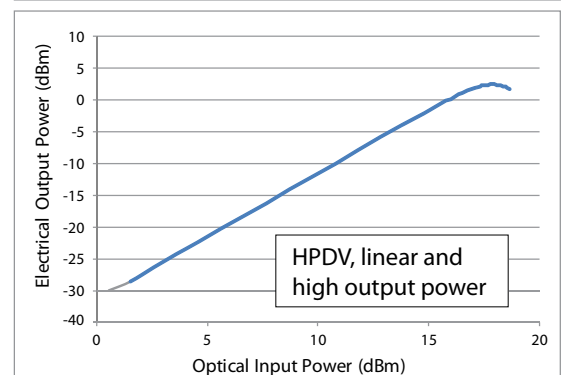
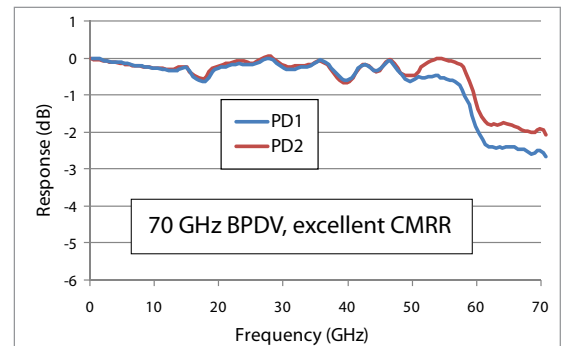
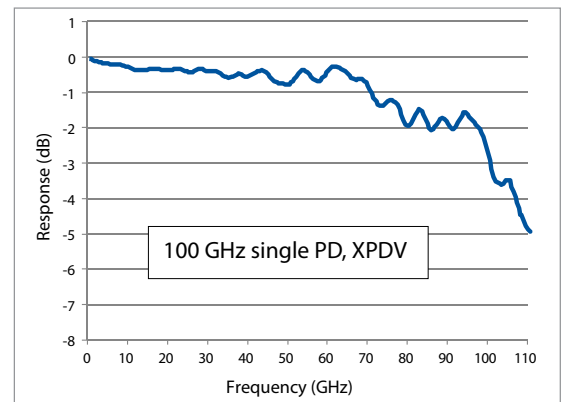
The coherent detector is a fully differential, optical front-end component suited for up to 64 GBaud with a 40 GHz bandwidth. The detector is the preferred product for coherent Test & Measurement systems and applications involving 400 Gb/s to 1 Tb/s detection and parallel optical sampling.

## Advanced Receivers and Detectors

Single and balanced photodetectors (PDs) are based on advanced waveguide integrated photodiodes. The detectors are designed for wavelengths including 1310 nm and 1550 nm, and ensure undisturbed linear frequency response from DC to the 3dB cut-off frequency of up to 100+ GHz bandwidth and high common mode rejection ratio (CMRR).

Additionally, our single and balanced receivers contain advanced waveguide-integrated photodiodes and transimpedance amplifiers. The receiver design allows DPSK and DQPSK applications at 40G and 100G with rates from 20 to 56 GBaud.

The entire receiver and detector portfolio meets requirements for high-speed, extreme linearity, high RF power performance. It is well suited for Communication, Test & Measurement, Research & Development and Analog Applications worldwide.



## Coherent Receivers and Detectors

### OIF compliant, CPRV-series

- ▶ OIF-DPC-MRX-01.0 Class 20 and Class 40 Micro-ICR
- ▶ OIF-DPC-RX-01.2 type 1 and type 2 ICR
- ▶ DP-QAM/QPSK/BPSK receiver
- ▶ Symbol rate up to 64Gbd per polarization
- ▶ Intradyne and homodyne
- ▶ Linear amplifier
- ▶ C-Band versions available



### Integrated Coherent Photodetector, CPDV-series

- ▶ Intradyne and homodyne detection
- ▶ Monolithically integrated 90° hybrid with PDs
- ▶ Integrated PBS
- ▶ 40 GHz bandwidth
- ▶ Up to 64 GBaud systems



## Single Photodetectors

### 100 GHz, 70 GHz and 50 GHz Detectors, XPDV-series

- ▶ Select the bandwidth for your application
- ▶ Waveguide integrated PD
- ▶ W1 connector for ultra high speed
- ▶ V-connector for 50 and 70 GHz



## Single Photoreceivers

### 40G Single-ended Receivers, XPRV-series

- ▶ 150 V/W conversion gain
- ▶ Surface mountable package with V connector
- ▶ OC-768/STM-256 systems



## Balanced and High Power Photodetectors

### 100, 70 and 50 GHz Balanced PDs, BPDV-series

- ▶ High bandwidth with excellent CMRR
- ▶ Low skew
- ▶ 1480 to 1620 nm wavelength range
- ▶ Detection of 64-130 GBaud xQAM signals
- ▶ Unique on-chip bias network



### High Power Photodetector, HPDV-series

- ▶ Up to 6 dBm RF output power @ 20 GHz
- ▶ High Linearity (>25 dBm OIP3 @ 40 GHz)
- ▶ No cooling required
- ▶ Analog Photonic links
- ▶ Radio-over-Fiber



## Balanced Photodetectors – Quad Set

### 100, 70, and 50 GHz Balanced Photodetectors, BPDV2150RQ

- ▶ Dual input: FC/PC connector
- ▶ Output: V-female (50 and 70GHz) or W1 female (100GHz) connector
- ▶ Single wavelength 1550nm
- ▶ Low PDL, 8-fiber matched set with low skew
- ▶ Matched Set of Quad detectors for T&M and Advanced Laboratory applications



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Broad Product Portfolio.  
Trusted Partner.

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