

# High-Speed Low-Noise Balanced Photodetector

## 1. Product Description

Beogold's high-speed low-noise balanced photodetector integrates two matched ultra-low noise analog PIN detectors, low-noise broadband transimpedance amplifiers, and ultra-low noise power supplies. It features with high gain, high sensitivity, high bandwidth, low noise, and high CMMR. It can effectively reduce the common mode noise of the signal and improve the signal to noise ratio of the system.

## 2. Feature

Low noise  
 High gain  
 High bandwidth  
 Compact package  
 Custom design available



## 3. Application

Distributed fiber optic sensing  
 Wind LiDAR  
 Optical coherence tomography  
 Spectral measurement  
 ns level optical pulse detection

## 4. Optical Specification

Parameter	WBD-100M-A	WBD-200M-A	WBD-350M-A	Unit
Detector	InGaAs			-
Wavelength	1100-1700	1100-1700	1100-1700	nm
Bandwidth	DC-100	DC-200	DC-350	MHz
Detector Responsivity	0.95@1550nm	0.95@1550nm	0.95@1550nm	A/W
Transimpedance Gain	60k (30K optional)	30k (60K optional)	30k (60K optional)	V/A
Saturated Input Power	100	150	150	uW
NEP	5	5	5	pW/Sqrt (Hz)
Output Impedance	50	50	50	$\Omega$
CMRR	>25	>25	>25	dB
Output Voltage Noise	10 (Typical)	10 (Typical)	25 (Typical)	mVpp
Output Coupling Method	DC/AC	DC/AC	DC/AC	-
Voltage Supply	5	5	5	V
Current Supply	0.5 (max)	0.5 (max)	0.5 (max)	A
Optical Interface	FC/APC			-
RF Interface	SMA			-
Dimensions	75 x 55 x 25			mm