

# 70 GHz HIGH SPEED PHOTODETECTOR

## XPDV3x20R

The XPDV3x20R photodetector consists of a well-established, waveguide-integrated single photodiode chip, designed to exhibit an optimized frequency response in both power and phase. Due to experienced RF packaging, the pulse response shows almost no ringing. The integrated on-chip spot size converter leads to a high responsivity and ensures reliability and robustness of the detector. An advantage of the waveguide structure is the unsurpassed high-power behavior with linear response up to an optical input power of 10 dBm. XP DVs contain a unique on-chip integrated bias network and ensure undisturbed frequency response from DC to the 3 dB cut-off frequency. Besides the standard version optimized for C-band a dual window version supporting O- and C- band is offered.



Picture shows product example, actual product might differ

## FEATURES

- 70 GHz typical bandwidth with flat response
- High linearity
- C- band and dual window version
- Unique on-chip integrated bias network
- High Linearity (OIP3 > 30 dBm at 10 GHz)

## APPLICATIONS

- Microwave Photonics
- Analog Photonic links
- Radio-over-Fiber

*Ordering Information:*



800 Village Walk #316  
Guilford, CT 06437  
Ph: 203-401-8093

Email orders to: [sales@xsoptix.com](mailto:sales@xsoptix.com)  
Fax orders to: 800-878-7282

# COHERENT

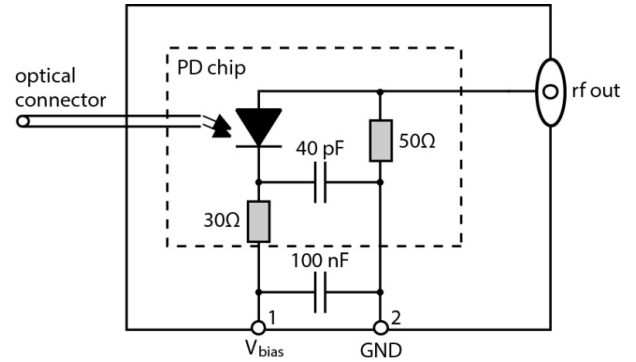
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## Product Selection

### XPDV3x20R -Vy-zz

<b>x</b>	1	= C-band version
	3	= Dual window version
<b>Vy</b>	VF	= Female V <sup>®</sup> connector
	VM	= Male V <sup>®</sup> connector
<b>zz</b>	FP	= FC/PC connector (standard)
	FA	= FC/APC connector

## Block Diagram



## Key Specifications

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Operating Case Temperature	$T_{CASE}$		0		75	°C
Storage Temperature	$T_{STORE}$		-40		85	°C
Wavelength Range	$\lambda$	O-band C-band		1310 1550		nm
Photodiode Supply Voltage	$V_{PD}$			2.8		V
Average Optical Input Power	$P_{OPT\_avg}$				10	dBm
Photodiode DC Responsivity	R	C-band		0.65		A/W
Polarization-Dependent Loss	PDL	C-band		0.3		nA
Photodiode Dark Current	$I_{DARK}$	$T_{CASE} = 25\text{ °C}$		5		GHz
3 dB Cut-off Frequency	$f_{3dB}$	C-band	65			dB
Output Reflection Coefficient	$S_{22}$				-4	

