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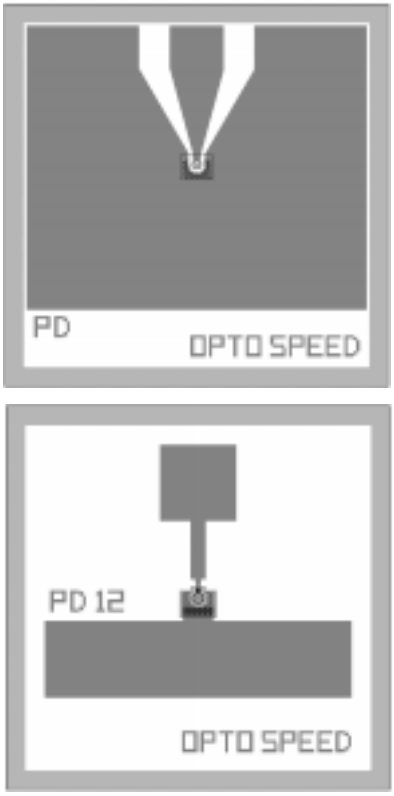
Opto Speed

High Speed InGaAs/InP Photodiode Chip

PDCS12



FEATURES

High speed response: t_{FWHM}10 ps
On chip coplanar waveguide (Z=50 Ω) or standard pad layout chip option
Diameter of light sensitive area 12 μm
High responsivity from 800 to 1600 nm

PRODUCT DESCRIPTION

The PDCS12 is an InGaAs/InP very high speed photodiode chip integrated with either a tapered coplanar transmission line or a standard pad outline. The top-illuminated p-i-n photodiode structure offers excellent responsivity and high speed of response for the wavelength region 800 to 1600 nm. The photodiode, which achieves full speed already at 2.5 volt bias, is intended for use in high-speed receiver front-ends and for the measurement of optical signals with pico-second time resolution.

SPECIFICATIONS @ T = 25°C

PARAMETER		SYMBOL	MIN	TYP	MAX	UNIT
Responsivity	λ = 1550 nm λ = 1300 nm	$\mathcal{R}$	0.4 0.5	0.5 0.6		A/W
Optical pulse energy		$\mathcal{E}_p$			50	fJ
CW optical power		$\mathcal{P}_{cw}$			3	dBm
Bias voltage		V^+		2.5	3	V
Dark current	V_r = 2.5 V	I_D		20	100	nA
Bandwidth		B	35	40		GHz
Optical pulse response	V_r = 2.5 V	t_{FWHM}		12	13	ps