Opto Speed SA
Via Cantonale, CH-6805 Mezzovico ☎ +4191 946 33 43 / Fax +4191 946 33 51 / Internet: www.optospeed.ch

Rev. 09/99

Opto Speed

High Speed InGaAs/InP

Preliminary

PDCS32

■ FEATURES

Top-illuminated InGaAs/InP pin photodiode
High speed response: t_{FWHM} 30 ps
On chip coplanar waveguide (Z = 50 Ω)
Diameter of light sensitive area 32 μm
Wire bondable or flip-chip solderable
High responsivity from 800 to 1600 nm

■ PRODUCT DESCRIPTION

The PDCS32 is an InGaAs/InP very high speed photodiode chip with a tapered coplanar transmission line. 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 1.5 volt bias, is intended for use in high-speed receiver front-ends and for optical measurement equipment with picosecond time resolution.

■ SPECIFICATIONS @ T = 25°C

PARAMETER		SYMBOL	MIN	TYP	MAX	UNIT
Responsivity	λ = 1550 nm λ = 1300 nm λ = 850 nm	$\mathcal{R}$	0.7 0.8 0.4	0.8 0.9 0.5		A/W
Optical pulse energy		$\mathcal{E}_p$			50	fJ
CW optical power		$\mathcal{P}_{cw}$			3	dBm
Bias voltage		V^+	1.5	2.5		V
Dark current	V_r = 2.5 V	I_D		10	100	nA
Bandwidth		B	14	16		GHz
Optical pulse response		t_{FWHM}		30	32	ps