

PDCS30T

High Speed InGaAs/InP Photodiode Chip



REV 09/01

Features

Top-illuminated InGaAs/InP pin photodiode

High speed response: t_{FWHM} 14 ps

On chip coplanar waveguide ($Z = 50 \Omega$)

Diameter of light sensitive area 30 μm

Wire bondable or flip-chip solderable

High responsivity from 800 to 1600 nm

Product Description

The PDCS30T 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 @ $T=25^{\circ}C$

Parameter	Sym	Min	Typ	Max	Unit
Responsivity	$\lambda = 1550 \text{ nm}$	R	0.8		A/W
	$\lambda = 1300 \text{ nm}$		0.9		
Optical pulse energy	E_p		50		fJ
CW optical power	P_{cw}		3		dBm
Bias voltage	V^+		2.0		V
Dark current	$V_r = 2.5 \text{ V}$	I_0	5		nA
Bandwidth	B		14		GHz
Optical pulse response	t_{FWHM}		28		ps

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