

PDCS12T

High Speed InGaAs/InP Photodiode Chip

REV 09/01

Features

High speed response: t_{FWHM} 12 ps

**On chip coplanar waveguide ($Z = 50 \Omega$) or
standard pad layout chip option**

Diameter of light sensitive area 12 μm

High responsivity from 800 to 1600 nm

Product Description

The PDCS12T is an InGaAs/InP very high speed photodiode chip 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 volt bias, is intended for use in high- speed receiver front-ends and for the measurement of optical signals with picosecond time resolution.

Specifications @ $T=25^{\circ}C$

Parameter	Sym	Min	Typ	Max	Unit
Responsivity	$\lambda = 1550 \text{ nm}$	R	0.5		A/W
	$\lambda = 1300 \text{ nm}$		0.6		
Optical pulse energy	E_p			50	fJ
CW optical power	P_{cw}			3	dBm
Bias voltage	V^+		2		V
Dark current	$V_f = 2.5$	I_0	5		nA
Bandwidth	B		40		GHz
Optical pulse response	$V_f = 2.5$	t_{FWHM}	12		ps

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