

# PDCS30T

## 18 GHz InGaAs PHOTODIODE

PDCS30T is a fully qualified, high speed photodiode chip with a dual-pad layout and an optical aperture with a diameter of 30  $\mu\text{m}$ . The top illuminated photodiode is optimized for single-mode data- and telecom applications up to 25 Gb/s and offers excellent responsivity and a high speed response from 1260 to 1620 nm. The photodiode has a low capacitance and achieves full speed at a bias voltage of only 1.5 V. The small chip footprint saves valuable space in small packages such as TO-46.



### BENEFITS

- Volume production
- Dual-pad layout
- High speed
- Low capacitance

### FEATURES

- Top illuminated 18 GHz InGaAs photodiode
- High responsivity of 0.9 A/W
- Low capacitance: 100 fF
- Low dark current: 2 nA
- Low bias voltage: 1.5 V
- Operating temperature range: -40 to 85 °C

### APPLICATIONS

- 10G SONET / SDH
- 10G Ethernet / Fiber Channel
- 20 GHz analog links
- 25 Gb/s links

[DATA SHEET](#)

**CHARACTERISTICS (T = 25° C)**

Parameter	Sym	U <sub>R</sub>	Min	Typ	Max	Unit
Responsivity $\lambda = 1310 \text{ nm}$ $\lambda = 1550 \text{ nm}$	R	2.5 V	0.8 0.8	0.9 0.9		A/W
Dark current T = 25 °C T = 85 °C	I <sub>D</sub>	5 V		2	10 200	nA
Bandwidth	B	2.5V		18		GHz
Total capacitance	C	5 V		100	120	fF

**DIMENSIONS**

Parameter	Min	Typ	Max	Unit
Aperture		30		$\mu\text{m}$
Chip length	430	450	470	$\mu\text{m}$
Chip width	430	450	470	$\mu\text{m}$
Chip thickness	145	150	155	$\mu\text{m}$

For more information  
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