

PDCS38B

Long Wavelength 10 Gb/s Photodiode Chip

Product Description

The PDCS38B is a fully qualified high speed photodiode chip with a coplanar pad layout and an optical aperture with a diameter of 38 μm . The bottom illuminated photodiode is optimized for single-mode data- and telecom applications up to 12.7 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 pad metallization is optimized for wire-bonding or flip-chip soldering with the ground-signal-ground pad structure allowing direct bonding to any TIA layout. In addition, a backside metallization can be added to solder the die to a submount.

Highlights

- High responsivity: 0.9 A/W
- Low dark current: 3 nA
- Low capacitance: 150 fF
- Low bias voltage: 1.5 V
- Pad layout allows easy bonding to any TIA pad design
- Support pads for flip-chip assembly
- Bottom illuminated device

Applications

- WDM / CWDM / DWDM
- 10 Gb/s SONET / SDH
- 10 G Ethernet / Fiber Channel
- 12 GHz analog links

Options

- Wire bondable or flip-chip solderable
- Wavelength specific, extremely low reflectivity AR coatings
- Backside metallization

Availability

- Volume production



Dimensions: 600 x 600 μm

Characteristics (T = 25 °C)

Parameter	Sym	U _R	Min	Typ	Max	Unit	
Diameter of optical aperture	\varnothing			38		μm	
Responsivity	$\lambda = 1310 \text{ nm}$	R	2.5 V	0.80	0.90	A/W	
	$\lambda = 1550 \text{ nm}$			0.80	0.90		
Dark current	T = 25 °C	I _D	5 V		3	12	nA
	T = 85 °C					240	
Bandwidth	B	2.5 V	14	15		GHz	
Total capacitance	C	2.5 V		150	180	fF	

For detailed product information visit www.albisopto.com



Albis Optoelectronics AG
Moosstrasse 2
8803 Rüslikon/Switzerland

Phone +41 43 388 06 10
Fax +41 43 388 06 11

www.albisopto.com

REV 2.2 / 2005-01-03

Albis Optoelectronics reserves the right to make changes in design, specifications and other information at any time without prior notice. Information in this data sheet is believed to be reliable. However, no responsibility is assumed for possible inaccuracy or omission.