

PDCS85F-XS

PON Photodiode Chip with Integrated Optical Filter

Product Description

The PDCS85F-XS is a bottom illuminated photodiode with a dual-pad layout and a large optical aperture with a diameter of 85 μm . The chip is optimized for single-mode data-, telecom and analog applications up to 5 Gb/s and offers excellent responsivity and a high speed response from 1260 to 1620 nm. Integrated on the chip are unique shortpass / longpass / bandpass optical filters, designed for Passive Optical Network (PON) applications meeting ITU-T G.983.1 (APON), ITU-T G.983.3 (BPON and GPON) as well as IEEE 802.3ah (EPON) specifications. The photodiode achieves full speed at a bias voltage of only 1.5V and has a pad metallization optimized for wire-bonding or flip-chip soldering with the pads ideally positioned to enable easy and direct bonding to any TIA layout.

Highlights

- Integrated shortpass / longpass / bandpass optical filters meeting PON specifications
- Large optical aperture: 85 μm
- High responsivity: 0.9 A/W
- Low dark current: 5 nA
- Low bias voltage: 1.5 V
- Bottom illuminated device

Applications

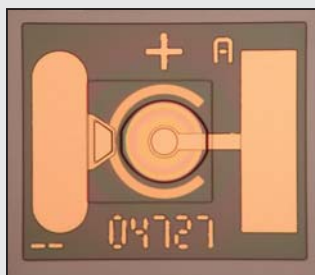
- APON, BPON, GPON, EPON

Options

- Integrated longpass, shortpass or bandpass filter
- Wire bondable or flip-chip solderable

Availability

- Samples available



Dimensions: 300 x 350 μm

Characteristics (T = 25 °C)

Parameter		Sym	U _R	Min	Typ	Max	Unit
Diameter of optical aperture		\emptyset			85		μm
Responsivity shortpass filter	$\lambda = 1310 \text{ nm}$	R	2.5 V	0.70	0.80		A/W
Responsivity longpass filter	$\lambda = 1550 \text{ nm}$			0.80	0.90		
Responsivity bandpass filter #1	$\lambda = 1490 \text{ nm}$			0.80	0.90		
Responsivity bandpass filter #2	$\lambda = 1555 \text{ nm}$			0.80	0.90		
Optical isolation shortpass filter	$\lambda = 1550 \text{ nm}$	A		20	25		dB
Optical isolation longpass filter	$\lambda = 1310 \text{ nm}$			20	25		
Optical isolation bandpass filter #1	$\lambda = 1555 \text{ nm}$			20	25		
Optical isolation bandpass filter #2	$\lambda = 1490 \text{ nm}$			20	25		
Dark current	T = 25 °C	I _D	5 V		5	12	nA
	T = 90 °C					250	
Bandwidth		B	2.5 V	4.0			GHz
Total capacitance		C	2.5 V		380	500	fF

For detailed product information visit www.albisopto.com



Rev 0.1a / 2007-02-14

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.

Albis Optoelectronics AG
Moosstrasse 2a
8803 Rüslikon/Switzerland

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

www.albisopto.com