

## Coaxial InGaAs PIN Photodiodes

### PDCS983 Series



PDCS983-3&PDCS983-4

#### Features

- High reliability and high responsivity planar structure InGaAs photo-detector
- Low capacitance, low return loss, low dark current
- Mini-Coaxial package (3 pin)
- 250 $\mu$ m or 900 $\mu$ m diameter fiber pigtail is optional
- Single mode (PDCS983) or multi-mode (PDCM983) fiber
- It can be produced with a variety of industry standard connector or without a connector, and also available with horizontal type flange package

#### Applications

- Optical fiber communication systems up to 3.0GHz
- Optical network monitoring
- EDFA and DWDM monitoring

#### Absolute Maximum Ratings

Parameter	Symbol	Unit	Min	Max
Storage Temperature Range	T <sub>s</sub>	°C	-40	+85
Relative Humidity	RH	%	-	95
Reverse bias Voltage	V <sub>cc</sub>	V	-	20
Diode Current	I <sub>f</sub>	mA	-	10
Lead Soldering Temperature	-	°C	-	260
Lead Soldering Time	-	s	-	10
Input optical power	P <sub>in</sub>	mW	-	3
Fiber yield strength	-	N	-	10
Fiber bend radius	-	mm	30	-

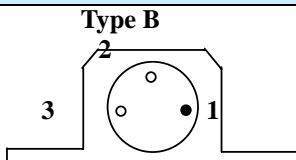
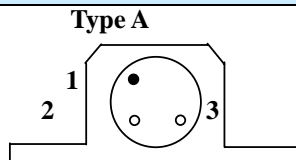
**Recommended Operating Conditions**

Parameter	Symbol	Unit	Min	Typ	Max
Case Operating Temperature Range	T <sub>c</sub>	°C	-40	25	+85
Power Supply Voltage	V <sub>cc</sub>	V	-	-5	-

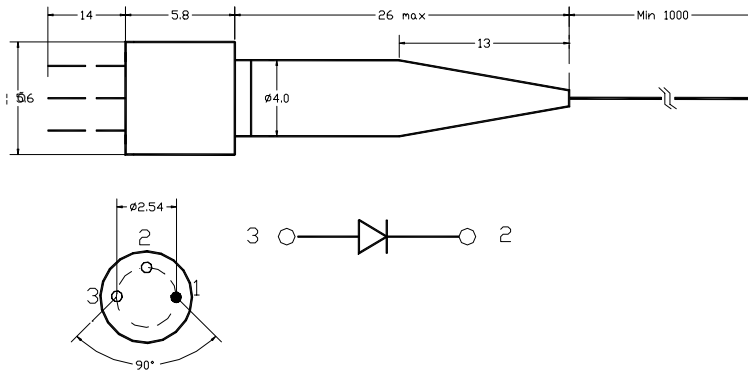
**Specifications(T=25°C, BOL ,V<sub>R</sub>=5V ,unless otherwise noted)**

Parameter	Symbol	Unit	Min	Typ	Max	Test condition
Electrical Characteristics						
Dark current	I <sub>D</sub>	nA	-	-	1	
Capacitance	C	pF	-	-	0.8	
-3dB Bandwidth	BW	GHz	-	3	-	50Ω load
Optical Characteristics						
Wavelength range	λ	nm	1100	-	1650	
Responsivity	R <sub>1310</sub>	A/W	0.80	-	-	λ=1310
Responsivity	R <sub>1550</sub>	A/W	0.85	-	-	λ=1550
Optical Return Loss	RL	dB	40	-	-	λ=1310

**Pin Description**

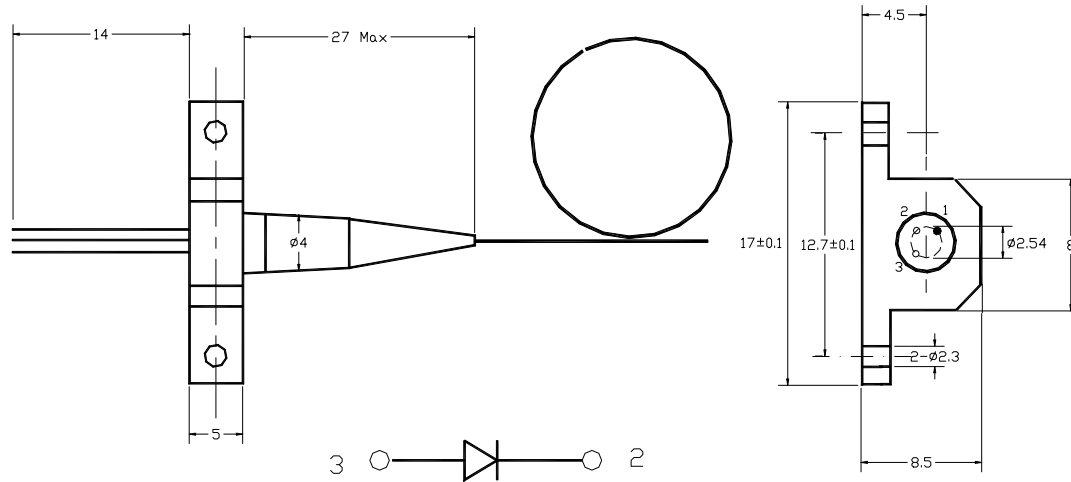
Pin	Description	Bottom view	
1	GND		
2	Cathode		
3	Anode		

**Package Outline (PDCS983)**



All dimension in mm

**Flange type package (PDCS983-4)**



All dimension in mm

**Ordering Information**

Part No	Specification					
	Package	Bandwidth	Detector	Responsivity	Temp	Others
PDCS983	3pin coaxial pigtail	3GHz	PIN	0.80 A/W (at 1310nm)	-40~85°C	Single mode, without flange
PDCM983	3pin coaxial pigtail	3GHz	PIN		-40~85°C	Multi mode, without flange
PDCS983-3	3pin coaxial pigtail	3GHz	PIN	0.85A/W (at 1550nm)	-40~85°C	With flange, Type A
PDCS983-4	3pin coaxial pigtail	3GHz	PIN		-40~85°C	With flange Type B

Note: See "Pin Description" for Type A, Type B

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Edition 2006-8-16

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