



## High Linearity Coaxial Photo-detectors

### *PDCS985 Series I*

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#### Features

- *High linearity InGaAs PIN photodiode ideally for analog O/E conversion application*
- *Low capacitance, low return loss, low dark current, low inter-modulation distortion*
- *Mini-Coaxial package (3 pin)*
- *Single model or multi-mode fiber is optional, and can be produced with a variety of industry standard connector or without a connector. They are also available with horizontal type flange package*

#### Application

- *Analog CATV/CDMA receivers*
- *Broadband analog receivers to 3GHz*
- *Multi-channel fiber optical transmission systems*

## Absolute Maximum Ratings

Parameter	Symbol	Unit	Min	Max
Storage Temperature Range	Ts	°C	-40	+85
Relative Humidity	RH	%	-	95
Reverse bias voltage	Vcc	V	-	-20
Diode Current	If	mA	-	10
Lead Soldering Temperature	-	°C	-	260
Lead Soldering Time	-	s	-	10
Input optical power	Pin	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	Tc	°C	-40	25	85
Operating voltage	Vcc	V	-	-15	-

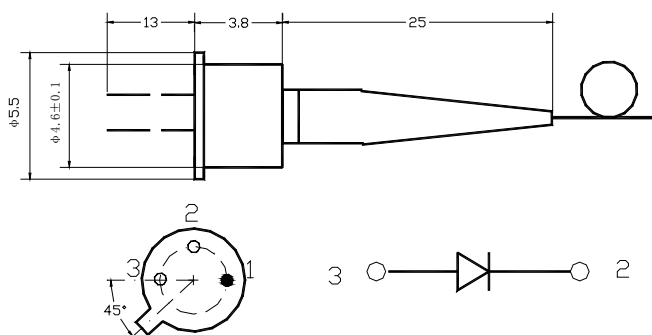
## Specifications (T=25°C, VR=15V, unless otherwise noted)

Parameter	Symbol	Unit	Min	Typ	Max	Test condition
<b>Electrical Characteristics</b>						
Distortion Product IM2	IM2	dBc	-	-	-70	VR=15V, Pavg=0dBm, MI=0.4, Rload=50Ω, f1=505MHz, f2=55 MHz
Distortion Product IM3	IM3	dBc	-	-	-80	
Dark current	ID	nA	-	-	1	
Capacitance	C	pF	-	-	0.5	
-3dB Bandwidth	BW	GHz	-	3	-	50Ω load
<b>Optical Characteristics</b>						
Wavelength range	λ	nm	1100	-	1650	
Responsivity	R1310	A/W	0.85	-	-	λ =1310
Responsivity	R1550	A/W	0.90	-	-	λ =1550
Return loss	RL	dB	45	-	-	λ =1310

## Pin Description

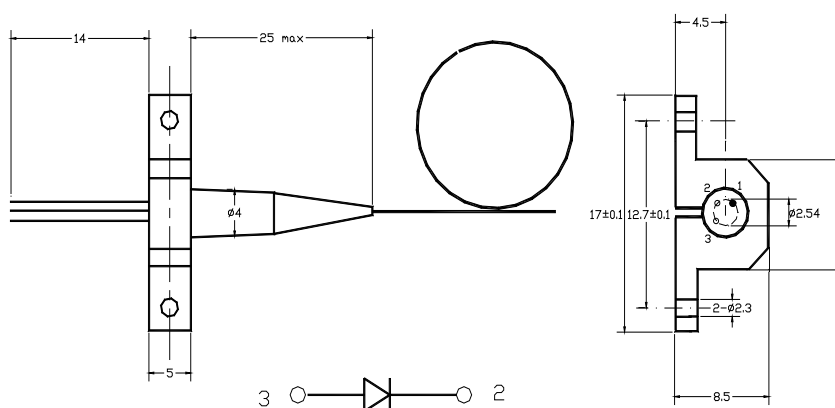
Pin	Description	Bottom view
1	GND	
2	Cathode	
3	Anode	

## Package Outline (unit: mm)



All dimension in mm

Flange type:



All dimension in mm

## Ordering Information

Part No.	Specification					
	Package	Bandwidth	Detector	Responsivity	Temp	Others (IM2)
PDCS985	3pin coaxial pigtail	3GHz	PIN	>0.85A/W (at 1310nm)	-40~+85°C	-70
PDCS985M	3pin coaxial pigtail	3GHz	PIN	>0.90A/W (at 1550nm)	-40~+85°C	Not required

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Edition 2009-12-01

Published by Wuhan Telecommunication Devices Co.,Ltd.

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