

## Ultra low dark current Analog InGaAs PIN photodiode

Version: 3.1 17-03-01

**Model: LSIPD-LD50**
**Features:**

- High reliability, Ultra low dark current
- 800-1700nm spectral range
- -3dB Bandwidth up to 3GHZ
- Hermetic TO46 Can package or with fiber coupling



Fiber coupling

**Applications:**

- Ultra Weak optical signal detecting
- Analog CATV, Fiber communication
- Fast optical pulse testing
- OTDR, Optical fiber sensor
- Industrial automatic control

**Absolute maximum ratings:**

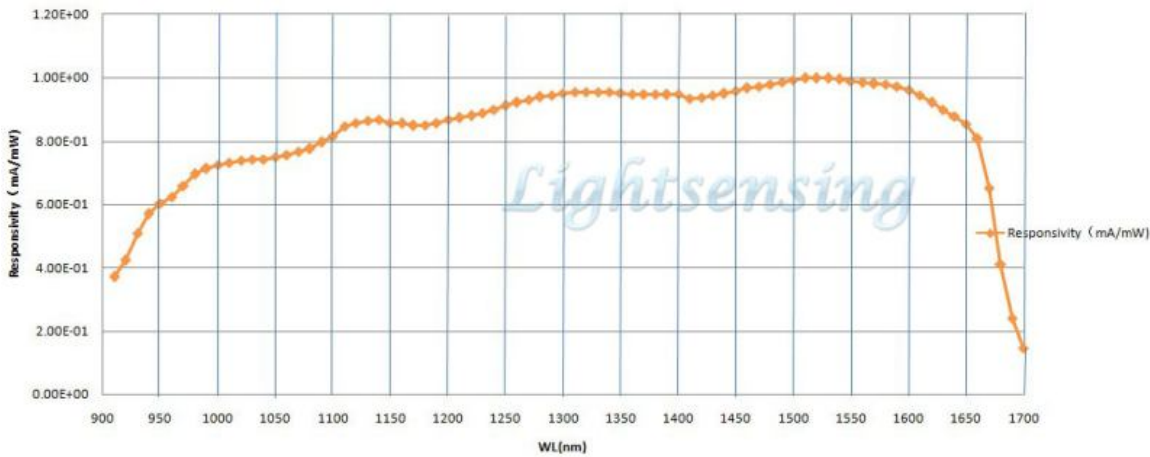
parameter	symbol	value	unit
Operating temperature	Top	-40~+85	°C
Storage temperature	Tstg	-40~+100	°C
Forward current	I <sub>f</sub>	3	mA
Reverse voltage	V <sub>r</sub>	20	V
Soldering temperature(time)	T <sub>s</sub> (10s)	260	°C

**Electrical and optical characteristics:(T=25°C)**

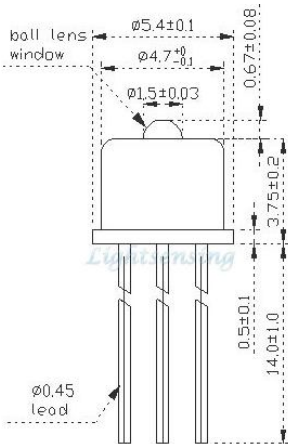
parameter	symbol	unit	Value (typ.)
Spectral range	$\lambda$	nm	800-1700
Responsivity	Re(V <sub>R</sub> =0V, $\lambda$ =1310nm)	mA/mW	0.85
	Re(V <sub>R</sub> =0V, $\lambda$ =1550nm)	mA/mW	0.90
Response time	T <sub>r</sub> (R <sub>L</sub> =50 $\Omega$ ,V <sub>R</sub> =5V)	ps	120
Band width(-3dB)	T <sub>r</sub> (R <sub>L</sub> =50 $\Omega$ ,V <sub>R</sub> =5V)	GHZ	3
Dark current	I <sub>d</sub> (V <sub>R</sub> =0V)	pA	0.1
	I <sub>d</sub> (V <sub>R</sub> =5V)	pA	5
Reverse Breakdown voltage	V <sub>BR</sub> (I <sub>R</sub> =10 $\mu$ A)	V	40
Junction capacitance	C <sub>j</sub> (f=1MHz, V <sub>R</sub> =0V)	pF	320
	C <sub>j</sub> (f=1MHz, V <sub>R</sub> =5V)	pF	0.8
Saturated Optical Power	P <sub>s</sub> (V <sub>R</sub> =5V)	mW	3
2nd Order Inter-modulation distortion	CSO(Two tones, R <sub>L</sub> =50 $\Omega$ ,1mW, V <sub>R</sub> =10V )	dBc	-75
Operating voltage	V <sub>R</sub>	V	0-15
Shunt resistance	R <sub>sh</sub> (V <sub>R</sub> =10mV)	G $\Omega$	100
package	Hermetic TO46 Can package or with fiber coupling		

NOTICE: The above product specifications are subject to change without notice.

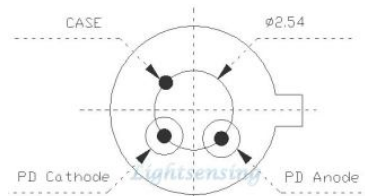
## The typical Responsivity curve



## TO package and Lead



Standard ball lens TO  
Model: 1



Type B PIN description  
Bottom View

## Order information

LSIPD-LD50-X-X



X=B Type B PIN description  
X=other By customer's request

X=1  
X=1A  
X=SMFA/P  
X=SMSA  
X=5MMFA/P  
X=6MMFA/P  
X=Other

TO-46 Can with ball lens cap  
TO-46 Can with ball lens cap and Antireflection Coatings  
TO-46 Can with SM Fiber coupling with FC-APC/FC-PC connector  
TO-46 Can with SM Fiber coupling with SC-APC connector  
TO-46 Can with 50um MM Fiber coupling with FC-APC/FC-PC connector  
TO-46 Can with 62.5um MM Fiber coupling with FC-APC/FC-PC connector  
By customer's request

## The cautions

- 1: The above product specifications are subject to change without notice.
- 2: The suitable ESD protecting measures are recommend in storage, transporting and using.
- 3: The fiber bending radius no less than 20mm for avoiding fiber damaged ,Be sure the fiber coupling facet is clean before connecting it to opto-circuit.