

# 1mm InGaAs PIN photodiode

Model: LSIPD-L1

V4.2LIPD-005 2022-01-01

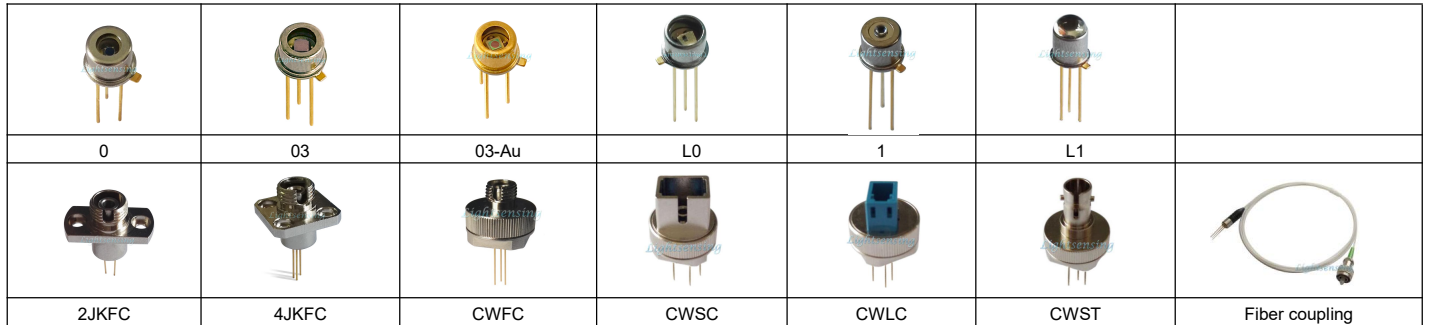
## 1.Features

- High reliability, low dark current
- Top illumination Planar PIN PD
- 800-1700nm spectral range
- Active diameter 1mm
- Hermetic TO46 Can or with receptacle or fiber coupling

## 2.Applications

- Gas sensor
- Optical sensor
- Optical power meter
- Industrial automatic control
- Space light detect equipment
- Response spectrum testing

## 3.Picture



## 4.Absolute maximum ratings:

parameter	symbol	value	unit
Operating temperature	Top	-40~+85	°C
Storage temperature	Tstg	-40~+100	°C
Reverse voltage	Vr	10	V
Soldering temperature(time)	Ts (10s)	260	°C

## 5.Electrical and optical characteristics:(T=25°C)

parameter	symbol	unit	Value typ.
Active diameter	$\Phi$	mm	1
Spectral range	$\lambda$	nm	800-1700
Responsivity	Re(Vr=0V, $\lambda$ =1310nm)	mA/mW	0.85
	Re(Vr=0V, $\lambda$ =1550nm)	mA/mW	0.90
Response time	Tr (RL=50 $\Omega$ , Vr=5V)	ns	10
Dark current	Id(Vr=0V)	nA	0.1
	Id(Vr=5V)	nA	1
Reverse Breakdown voltage	VBR (Id=10uA)	V	30
Total capacitance	Cj (f=1MHz, Vr=0V)	pF	1200
	Cj (f=1MHz, Vr=5V)	pF	75
Saturated Optical Power	Ps(Vr=0V)	mW	8(Min.5)
	Ps(Vr=5V)	mW	15
Reverse operating voltage	Vr	V	0-5
Shunt resistance	Rsh (Vr=10mV)	M $\Omega$	100
Package	Hermetic TO46 Can or with receptacle or with fiber coupling		

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

## The typical Responsivity curve



### 6. The package Dimensions and Lead

<p>Flat window: <math>\phi 5.4 \pm 0.1</math>  <math>\phi 4.7 \pm 0.05</math>  <math>\phi 2.0 \pm 0.2</math>          PD chip surface  <math>2.5 \pm 0.2</math>  <math>3.75 \pm 0.2</math>  <math>0.5 \pm 0.1</math>  <math>14.0 \pm 1.0</math>  <math>\phi 0.45</math> lead</p>	<p>Flat window: <math>\phi 5.4 \pm 0.2</math>  <math>\phi 4.7 \pm 0.1</math>  <math>\phi 3.0 \pm 0.3</math>          PD chip surface  <math>2.5 \pm 0.2</math>  <math>3.75 \pm 0.2</math>  <math>0.5 \pm 0.1</math>  <math>14.0 \pm 1.0</math>  <math>\phi 0.45</math> lead</p>	<p>Flat window: <math>\phi 5.4 \pm 0.15</math>  <math>\phi 4.65 \pm 0.1</math>  <math>\phi 3.9 \pm 0.3</math>          PD chip surface  <math>2.5 \pm 0.2</math>  <math>3.75 \pm 0.2</math>  <math>0.5 \pm 0.1</math>  <math>14.0 \pm 1.0</math>  <math>\phi 0.45</math> lead</p>	<p>CASE <math>\phi 2.54</math>          PD Cathode PD Anode</p>
0	03	L0	Type B PIN description Bottom View
<p>ball lens window: <math>\phi 5.4 \pm 0.1</math>  <math>\phi 4.7</math>  <math>\phi 1.5 \pm 0.03</math>  <math>0.67 \pm 0.08</math>  <math>3.75 \pm 0.2</math>  <math>0.5 \pm 0.1</math>  <math>14.0 \pm 1.0</math>  <math>\phi 0.45</math> lead</p>	<p>large ball lens window: <math>\phi 5.4 \pm 0.2</math>  <math>\phi 4.7 \pm 0.05</math>  <math>\phi 4.0 \pm 0.15</math>  <math>1.75 \pm 0.2</math>  <math>4.5 \pm 0.2</math>  <math>0.5 \pm 0.1</math>  <math>14.0 \pm 1.0</math>  <math>\phi 0.45 \pm 0.1</math> lead</p>		<p><math>\phi 5.4</math>          PD Anode          CASE          PD Cathode <math>\phi 2.54</math>  <math>45^\circ</math></p>
1	L1		Type C PIN description Bottom View

**Note:** For more information on dimension, please contact us

### 7. Order information

TO46 Can product order information: LS=Lightensing								
LS	IPD	-L1	-B	-03				
	PD type	Active Area	PIN	Cap type				
	IPD= InGaAs PD	1=1mm	B=Type B PIN C=Type C PIN	0=2mm flat window nickel-plated cap 0A=2mm flat window nickel-plated cap and Antireflection Coatings 03=3mm Flat window nickel-plated cap 03A=3mm flat window nickel-plated cap and Antireflection Coatings 03-Au=3mm Flat window Au-plated cap L0=3.9mm flat window nickel-plated cap 1=ball lens nickel-plated cap 1A=ball lens nickel-plated cap and Antireflection Coatings L1=large ball lens nickel-plated cap Other				
Receptacle product order information: LS=Lightensing								
LS	IPD	-L1	-B	-CWFC				
	PD type	Active Area	PIN	Receptacle type				
	IPD= InGaAs PD	1=1mm	B=Type B PIN C=Type C PIN	2JKFC=receptacle with FC connector and 2 mounting holes 4JKFC=receptacle with FC connector and 4 mounting holes CWFC=replaceable receptacle with FC connector CWSC=replaceable receptacle with SC connector CWLC=replaceable receptacle with LC connector CWST=replaceable receptacle with ST connector CWFC-5/12/16/20dB=replaceable receptacle with FC connector and 5/12/16/20dB attenuation CWSC-5/12/16/20dB=replaceable receptacle with SC connector and 5/12/16/20dB attenuation CWLC-5/12/16/20dB=replaceable receptacle with LC connector and 5/12/16/20dB attenuation CWST-5/12/16/20dB=replaceable receptacle with ST connector and 5/12/16/20dB attenuation Other				
Fiber coupling product order information: LS=Lightensing; Def=Default;								
LS	IPD	-L1	-B	-SM	FA	-	-	-
	PD type	Active Area	PIN	Fiber type	Fiber connector	Fiber tube	Fiber length	
	IPD= InGaAs PD	1=1mm	B=Type B PIN C=Type C PIN	SM=9um SM 5MM=50um MM 6MM=62.5um MM 10MM=105um MM 20MM=200um MM Other	FA=FC/APC FP=FC/PC SA=SC/APC SP=SC/PC Other	Def=0.9mm tight S=0.9mm Loose Other	Def=1 meter 0.3m=0.3 meter 0.5m=0.5 meter Other	

### 8. 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.

