

## 400nm-1700nm 1mm InGaAs PIN Photodiode

**Model: LSIPD-1S**

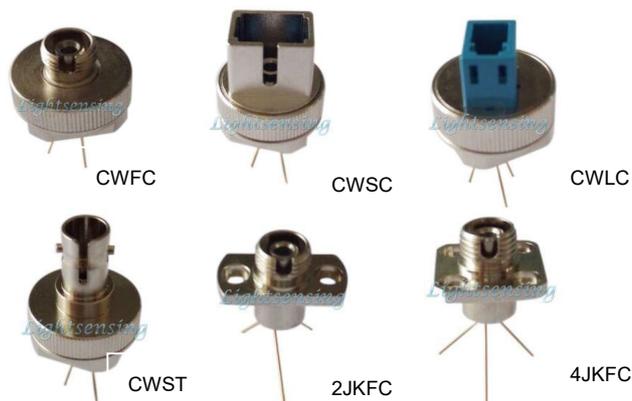
### Features:

- High reliability, low dark current
- Active diameter 1mm
- 400-1700nm wide wavelength range
- Hermetic package TO46 Can or with receptacle or with fiber coupling



### Applications:

- Optical sensor, Temperature sensing
- Covert IR sensing, Spectrography
- Medical and Chemical analysis
- Optical power meter, Space light detect equipment
- Light Detection , Industrial automatic control
- Science analysis and experiment
- Space light detect equipment



### 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>	10	mA
Reverse voltage	V <sub>r</sub>	10	V
Soldering temperature(time)	T <sub>s</sub> (10s)	260	°C

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

parameter	symbol	unit	Value (typ.)
Active diameter	Φ	mm	1
Spectral range	λ	nm	400-1700
Responsivity	Re(V <sub>R</sub> =0V,λ=405nm)	mA/mW	0.12
	Re(V <sub>R</sub> =0V,λ=650nm)	mA/mW	0.35
	Re(V <sub>R</sub> =0V,λ=850nm)	mA/mW	0.48
	Re(V <sub>R</sub> =0V,λ=1550nm)	mA/mW	0.90
Response time	Tr (R <sub>L</sub> =50Ω, V <sub>R</sub> =5V)	ns	5
Dark current	I <sub>d</sub> (V <sub>R</sub> =0V)	nA	0.05
	I <sub>d</sub> (V <sub>R</sub> =5V)	nA	1
Reverse Breakdown voltage	V <sub>BR</sub> (I <sub>R</sub> =10uA)	V	30
Junction capacitance	C <sub>j</sub> (f=1MHz, V <sub>R</sub> =0V)	pF	110
	C <sub>j</sub> (f=1MHz, V <sub>R</sub> =5V)	pF	35
Saturated Optical Power	P <sub>s</sub> (V <sub>R</sub> =5V)	mW	10
Operating voltage	V <sub>R</sub>	V	0-5

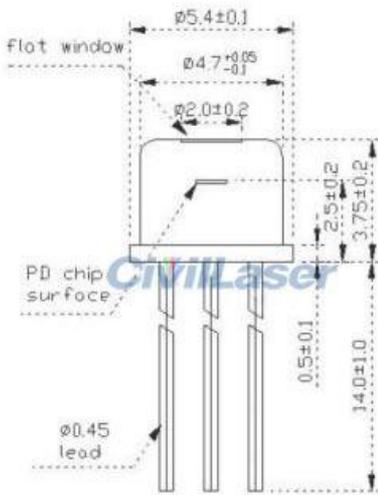
Shunt resistance	$R_{sh}$ ( $V_R=10mV$ )	$M\Omega$	200
package	Hermetic package TO46 Can or with receptacle or with fiber coupling		

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

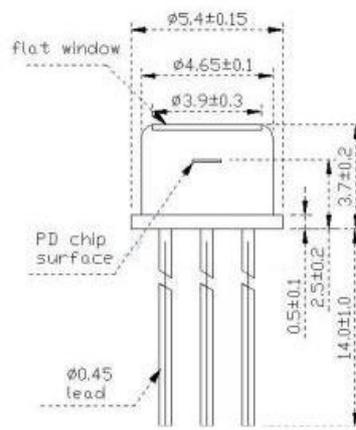
### The typical Responsivity curve



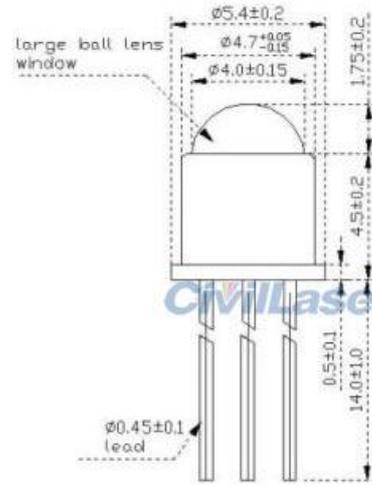
## TO package and Lead



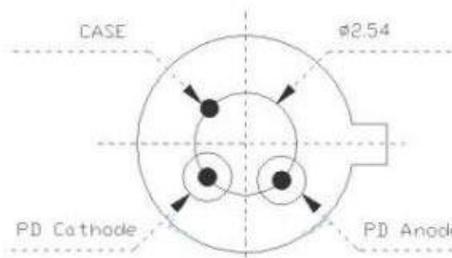
2mm flat window TO  
Model: 0



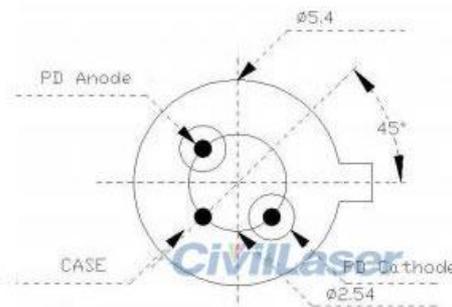
large flat window TO  
Model: L0



Large ball lens TO  
Model: L1



B Type PIN description  
Bottom View



C Type PIN description  
Bottom View

**Note:** In order to get other dimensions, please contact us.

## Order information

<p>LSIPD-1S-X-X</p> <p>B=B Type PIN description</p> <p>C=C Type PINdescription</p>	<p>X=0 TO-46 Can with 2mm flat window cap</p> <p>X=0A TO-46 Can with 2mm flat window cap and Antireflection Coatings</p> <p>X=L0 TO-46 Can with 3.9mm flat window cap</p> <p>X=L0A TO-46 Can with 3.9mm flat window cap and AntireflectionCoatings</p> <p>X=L1 TO-46 Can with large ball lens cap</p> <p>X=SMFA/P TO-46 Can with SM Fiber coupling with FC-APC/FC-PC connector</p> <p>X=SMSA TO-46 Can with SM Fiber coupling with SC-APC connector</p> <p>X=5MMFA/P TO-46 Can with 50um MM Fiber coupling with FC-APC/FC-PC connector</p> <p>X=6MMFA/P TO-46 Can with 62.5um MM Fiber coupling with FC-APC/FC-PC connector</p> <p>X=10MMA/P TO-46 Can with 105um MM Fiber coupling with FC-APC/FC-PC connector</p> <p>X=20MMA/P TO-46 Can with 200um MM Fiber coupling with FC-APC/FC-PC connector</p> <p>X=40MMA/P TO-46 Can with 400um MM Fiber coupling with FC-APC/FC-PC connector</p> <p>X=CWFC TO-46 Can with replaceable receptacle with FC connector</p> <p>X=CWSC TO-46 Can with replaceable receptacle with SC connector</p> <p>X=CWLC TO-46 Can with replaceable receptacle with LC connector</p> <p>X=CWST TO-46 Can with replaceable receptacle with ST connector</p> <p>X=CWFC-1 TO-46 Can with replaceable receptacle with FC connector and better repeatability but with lower saturated power</p> <p>X=CWSC-1 TO-46 Can with replaceable receptacle with SC connector and better repeatability but with lower saturated power</p> <p>X=CWLC-1 TO-46 Can with replaceable receptacle with LC connector and better repeatability but with lower saturated power</p> <p>X=CWST-1 TO-46 Can with replaceable receptacle with ST connector and better repeatability but with lower saturated power</p> <p>X=CWFC-20dB TO-46 Can with replaceable receptacle with FC connector and 20dB attenuation</p> <p>X=CWSC-20dB TO-46 Can with replaceable receptacle with SC connector and 20dB attenuation</p> <p>X=CWLC-20dB TO-46 Can with replaceable receptacle with LC connector and 20dB attenuation</p> <p>X=CWST-20dB TO-46 Can with replaceable receptacle with ST connector and 20dB attenuation</p> <p>X=2JKFC TO-46 Can with fixed receptacle with FC connector and 2 pieces of fix holes</p> <p>X=4JKFC TO-46 Can with fixed receptacle with FC connector and 4 pieces of fix holes</p> <p>X=Other By customer's request</p>
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## The cautions

- 1: The above product
- 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.