# 1mm InGaAs PIN photodiode

#### Model: LSIPD-L1

#### Features:

- High reliability, low dark current
- Top illumination Planar PIN PD
- Active diameter 1mm
- TO46 Can or with receptacle or fiber coupling

### **Applications:**

- Optical sensor
- Optical power meter
- Industrial automatic control
- Science analysis and experiment
- Space light detect equipment
- Response spectrum testing



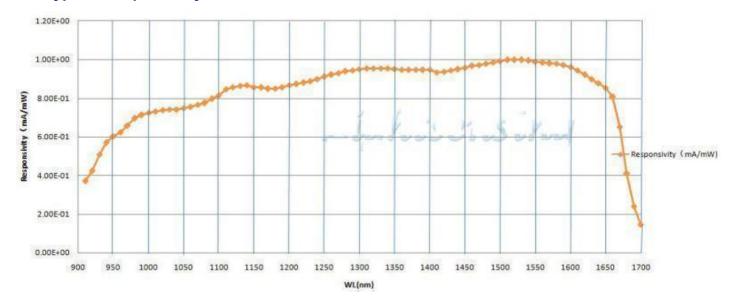
## **Absolute maximum ratings:**

| parameter                   | symbol         | value    | unit                 |
|-----------------------------|----------------|----------|----------------------|
| Operating temperature       | Тор            | -40~+85  | $^{\circ}\mathbb{C}$ |
| Storage temperature         | Tstg           | -40~+100 | $^{\circ}$ C         |
| Forward current             | I <sub>f</sub> | 12       | mA                   |
| Reverse voltage             | V <sub>r</sub> | 20       | V                    |
| Soldering temperature(time) | Ts (10s)       | 260      | $^{\circ}$ C         |

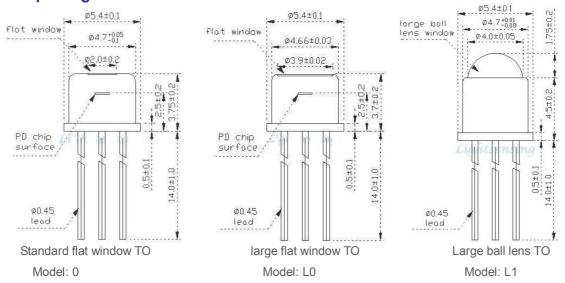
# **Electrical and optical characteristics:(T=25°C)**

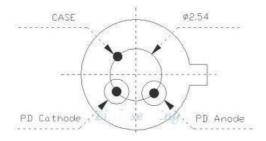
| parameter                 | symbol  | unit  | Value (typ.) |
|---------------------------|---|-------|--------------|
| Active diameter           | Ф   | mm    | 1            |
| Spectral range            | λ   | nm    | 800-1700     |
| Responsivity              | Re(V <sub>R</sub> =0V,λ=1310nm)               | mA/mW | 0.85         |
|                           | Re(V <sub>R</sub> =0V,λ=1550nm)               | mA/mW | 0.90         |
| Response time             | Tr ( $R_L$ =50 $\Omega$ , $V_R$ =5 $V$ )      | ns    | 10           |
| Dark current              | Id(V <sub>R</sub> =0V)                        | nA    | 0.1          |
|                           | Id(V <sub>R</sub> =5V)                        | nA    | 1            |
| Reverse Breakdown voltage | VBR (IR=10uA)                                 | V     | 30           |
| Junction capacitance      | Cj (f=1MHz, V <sub>R</sub> =0V)               | pF    | 1200         |
|                           | Cj (f=1MHz, V <sub>R</sub> =5V)               | pF    | 75           |
| Saturated Optical Power   | Ps(V <sub>R</sub> =5V)                        | mW    | 10           |
| Operating voltage         | V <sub>R</sub>                                | V     | 0-5          |
| Shunt resistance          | Rsh (VR=10mV)                                 | ΜΩ    | 100          |
| package                   | TO46 Can or with receptacle or fiber coupling |       |              |

### The typical Responsivity curve



### **TO package and Lead**





**Bottom View** 

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

#### **Order information**

LSIPD-L1-X

X=0 TO-46 Can with 2mm flat window cap

X=0A TO-46 Can with 2mm flat window cap and Antireflection Coatings

X=L0 TO-46 Can with 3.9mm flat window cap X=L1 TO-46 Can with large ball lens cap

X=SMFA/P SM Fiber coupling with FC-APC/FC-PC connector

X=SMSA SM Fiber coupling with SC-APC connector

X=5MMFA/P
X=6MMFA/P
62.5um MM Fiber coupling with FC-APC/FC-PC connector
X=CWFC
X=CWSC
X=CWLC
X=CWST
TO-46 Can with replaceable receptacle with SC connector
X=CWST
TO-46 Can with replaceable receptacle with LC connector
X=CWST
TO-46 Can with replaceable receptacle with ST connector

X=2JKFC TO-46 Can with fixed receptacle with FC connector and 2 pieces of fix holes X=4JKFC TO-46 Can with fixed receptacle with FC connector and 4 pieces of fix holes

X=Other By customer's request

#### The cautions

- 1: The suitable ESD protection is required in storage, transportation and using
- 2: 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.