

## 60um 10Gbps Visible Light PIN photodiode

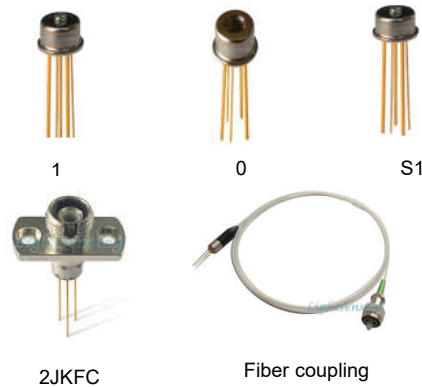
V4.1SWPD-012 20-10-01

**Model: LSGSPD-10G**
**Features:**

- High reliability, low dark current
- Wavelength 500-880nm,
- rate up to 10Gbps
- Hermetic TO46 Can or with receptacle or fiber coupling

**Applications:**

- Fiber communication
- Fast optical pulse testing
- OTDR, Optical fiber sensor
- Industrial automatic control
- Science analysis and experiment


**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   |

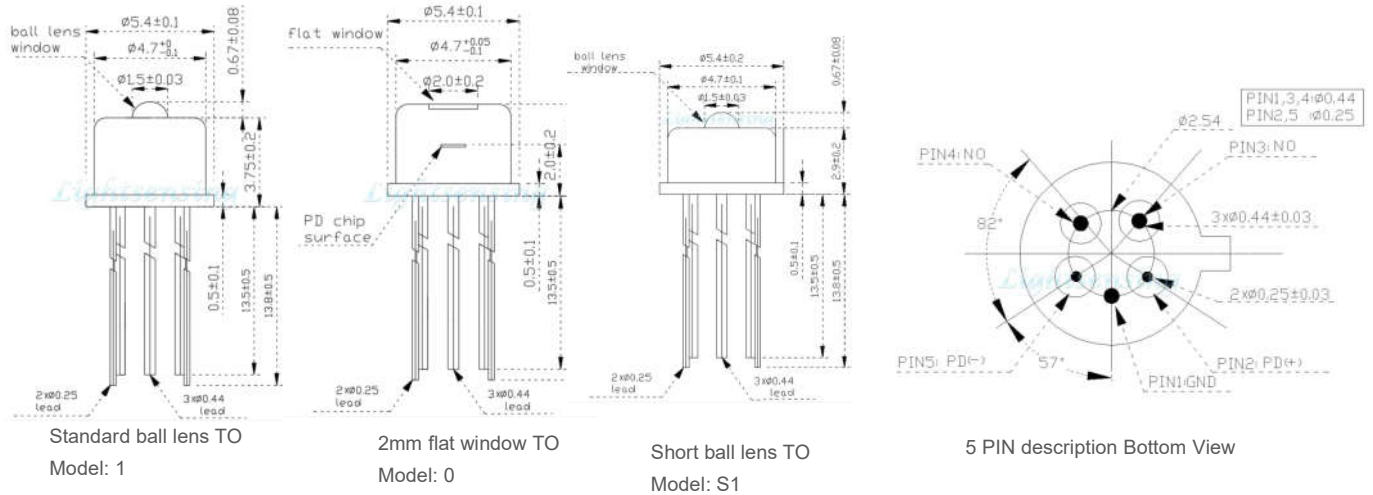
**Electrical and optical characteristics:(T=25°C)**

| parameter                                | symbol                                                 | unit       | Value (typ.) |
|------------------------------------------|--------------------------------------------------------|------------|--------------|
| Spectral range                           | $\lambda$                                              | nm         | 500-880      |
| Active diameter                          | $\phi$                                                 | um         | 60           |
| Responsivity for fiber coupling          | Re(Vr=0V, $\lambda$ =532nm)                            | mA/mW      | 0.10         |
|                                          | Re(Vr=0V, $\lambda$ =850nm)                            | mA/mW      | 0.55         |
| Responsivity for receptacle and SM fiber | Re(Vr=0V, $\lambda$ =532nm)                            | mA/mW      | 0.07         |
|                                          | Re(Vr=0V, $\lambda$ =850nm)                            | mA/mW      | 0.40         |
| Response time                            | Tr (RL=50 $\Omega$ , Vr=5V)                            | ps         | 40           |
| Rate                                     | Ra(RL=50 $\Omega$ , Vr=5V)                             | Gbps       | 10           |
| Band width(-3dB)                         | BW(RL=50 $\Omega$ , Vr=5V)                             | GHZ        | 8            |
| Dark current                             | Id(Vr=0V)                                              | pA         | 0.1          |
|                                          | Id(Vr=5V)                                              | pA         | 0.5          |
| Reverse Breakdown voltage                | VBR (Id=10uA)                                          | V          | 40           |
| Total capacitance                        | Cj (f=1MHz, Vr=0V)                                     | pF         | 40           |
|                                          | Cj (f=1MHz, Vr=5V)                                     | pF         | 0.3          |
| Saturated Optical Power                  | Ps(Vr=5V)                                              | mW         | 5            |
| Reverse operating voltage                | Vr                                                     | V          | 0-5          |
| Shunt resistance                         | Rsh (Vr=10mV)                                          | G $\Omega$ | 100          |
| package                                  | Hermetic TO46 Can or with receptacle or fiber coupling |            |              |

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

**The typical Responsivity curve**


## TO package and Lead



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

## Order information

LSGSPD-10G-X-X-X-X

X=5P 5P PIN description  
X=other By customer's request

X=1 TO46 Can with ball lens cap(**Standard products**)  
X=0 TO46 Can with 2mm flat window cap(**Standard products**)  
X=S1 TO46 Can with short ball lens cap  
X=SMFA/P TO46 Can with SM Fiber coupling with FC-APC/FC-PC connector(**Standard products**)  
X=SMSA/P TO46 Can with SM Fiber coupling with SC-APC/SC-PC connector  
X=5MMFA/P TO46 Can with 50um MM Fiber coupling with FC-APC/FC-PC connector  
X=6MMFA/P TO46 Can with 62.5um MM Fiber coupling with FC-APC/FC-PC connector  
X=2JKFC TO46 Can with fixed receptacle with FC connector and 2 mounting holes  
X=Other By customer's request

### Fiber length

X= Default 1m  
X=0.3m, 0.5m or other

### Tube

X= Default 0.9mm tight tube  
X=S 0.9mm Loose tube

## 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.

