

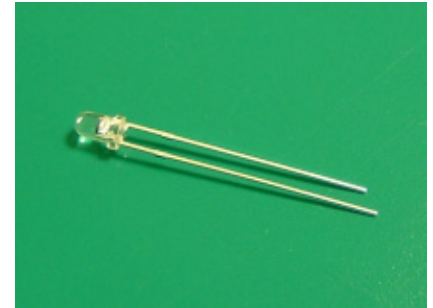
PHOTODIODE

General Description

The OSP-3L2 is a high output , high speed photodiode mounted in clear plastic package.

Features

- Lens Appearance : Water Clear
- Narrow angular response
- High output power
- Meet RoHS



Applications

- Optical switches
- Optical detectors

MAXIMUM RATINGS

(Ta=25°C)

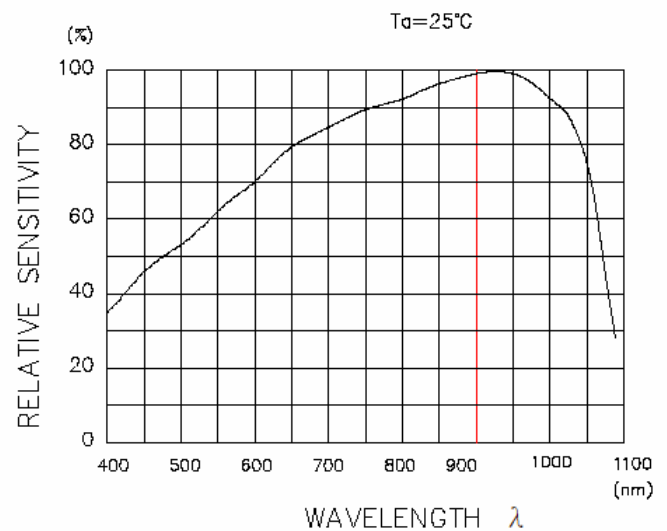
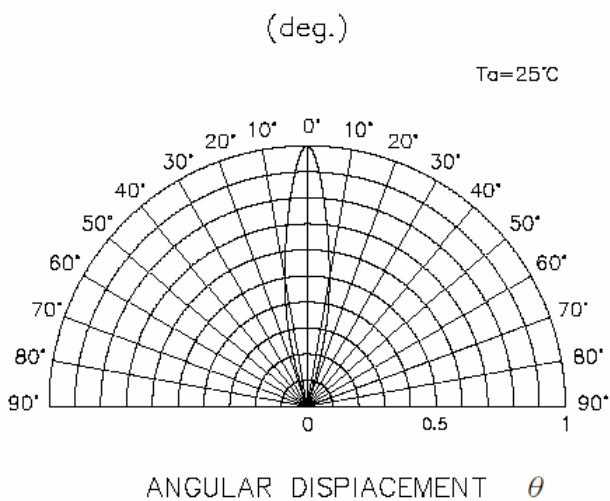
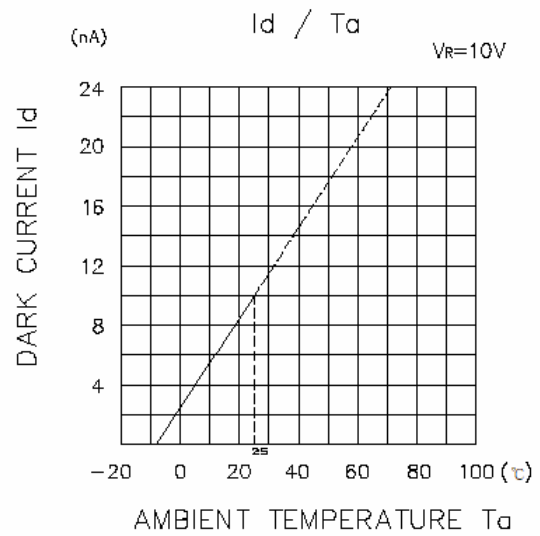
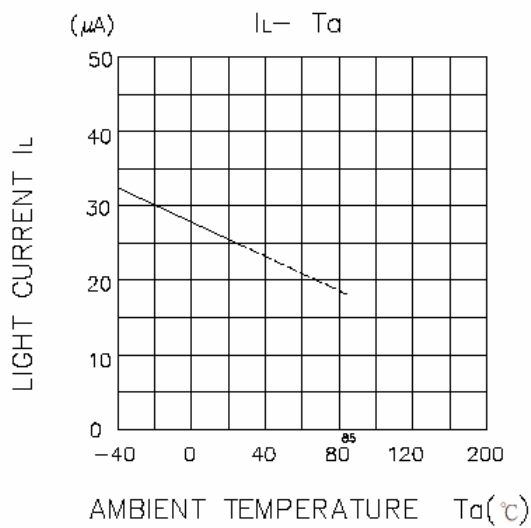
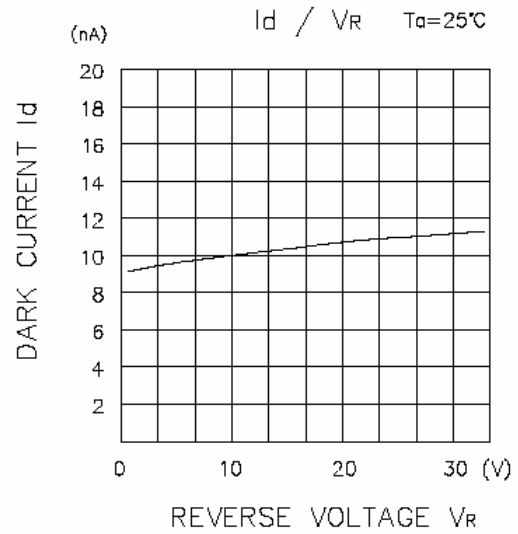
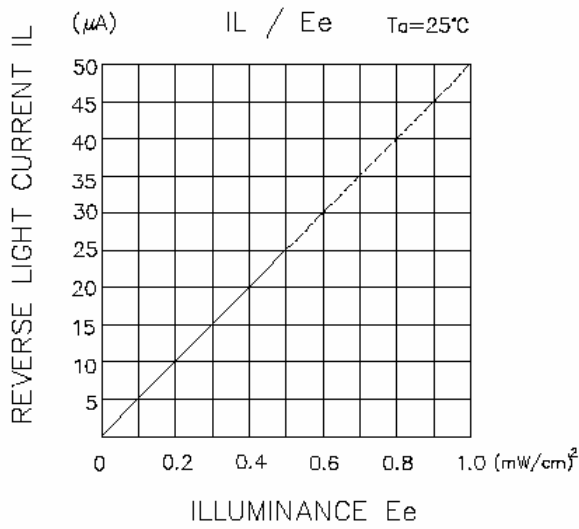
| Item | Symbol | Rating | Unit |
|--------------------|--------------------|------------|------|
| Operating temp. | To _{pr} . | -40 ~ +85 | °C |
| Storage temp. | T _{stg} . | -40 ~ +100 | °C |
| Soldering temp. *1 | T _{sol} . | 260 | °C |

*1. For MAX. 5 seconds at the position of 5mm from the package

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25°C)

| Item | Symbol | Conditions | Min. | Typ. | Max. | Unit | |
|---------------------------|-----------------|--|--|------|------|-----------------|----|
| Reverse breakdown voltage | V _{BR} | I _R =100uA | 33 | 170 | - | V | |
| Reverse dark current | I _D | V _R =10V | - | - | 10 | nA | |
| Light current | I _L | λ _p = 940nm E _e = 0.5mW/cm ² | 10 | - | 40 | uA | |
| Open circuit voltage | V _{OC} | C _T =2870K , H=mW/cm ² | - | 410 | - | mV | |
| Short circuit current | I _{SC} | C _T =2870K , H=mW/cm ² | - | 16 | - | uA | |
| Total capacitance | C _t | V _R =5V , f=1MHZ | - | 6 | - | pF | |
| Peak sensitive wavelength | λ _p | | - | 900 | - | nm | |
| Radiant sensitivity area | A | | - | 1.55 | - | mm ² | |
| Switching speeds | Turn-on time | T _{on} | V _R =5V , R _L =50Ω λ _p = 850nm | - | 10 | - | ns |
| | Turn-off time | T _{off} | | - | 10 | - | |
| Half angle | Δθ | | - | ± 10 | - | deg. | |



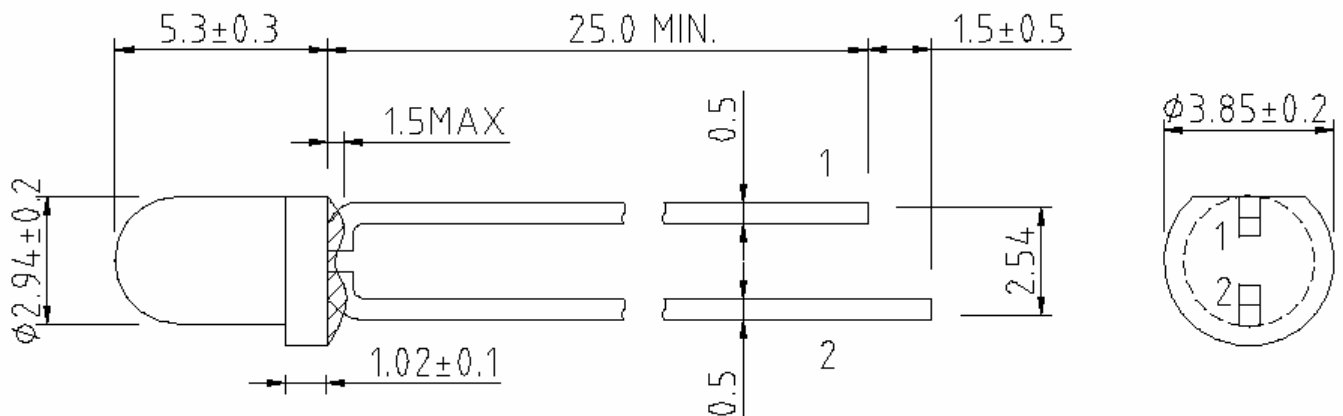
RELIABILITY TEST

CONDITIONS :

The reliability of products shall be satisfied with items listed below .

| NO. | Item | Condition | Time / Cycle | Number of Damaged |
|-----|----------------------------------|--------------------------------|----------------------|-------------------|
| 1 | Soldering Heat Test | 260℃ | 5 sec | 0 / 60 |
| 2 | Thermal Shock | 0℃ (15 sec) ~ 100℃ (15 sec) | 20 cycle | 0 / 60 |
| 3 | High Temp. Storage | 100℃ | 1000 Hrs | 0 / 60 |
| 4 | Low Temp. Storage | -40℃ | 1000 Hrs | 0 / 60 |
| 5 | Operation Temperature Cycle TEST | -40℃ ~ 85℃ | 100 Cycles 200Hrs | 0 / 60 |
| 6 | High Temp. High Humidity Test | 60℃ , 90% RH | 1000 Hrs | 0 / 60 |
| 7 | Operation Life Test | Room Temp : @IR940nm | 1000 Hrs | 0 / 60 |

DIMENSIONS



SIGN : 1. CATHODE

2. ANODE

UNIT : mm

Lamp Condition

In the automatic mounting of LAMP LED to the L/F , any bending , expanding and pulling forces against the LAMP LED should be minimized to prevent the electrical failures or mechanical damaged .

Reflow Soldering and Temperature Profile

The LAMP LED is designed for the reflow soldering process. Too high temperature or too large temperature gradient may cause the electrical and optical failures .

