

## General Description

The OSP-7FR4 is a high output , high speed photodiode mounted in black plastic package.

## Features

- High output power
- High speed response
- Wide angular response
- Meet RoHS



## Applications

- Remote control sensor
- Optical switches
- Photocouplers

## MAXIMUM RATINGS

(Ta=25°C)

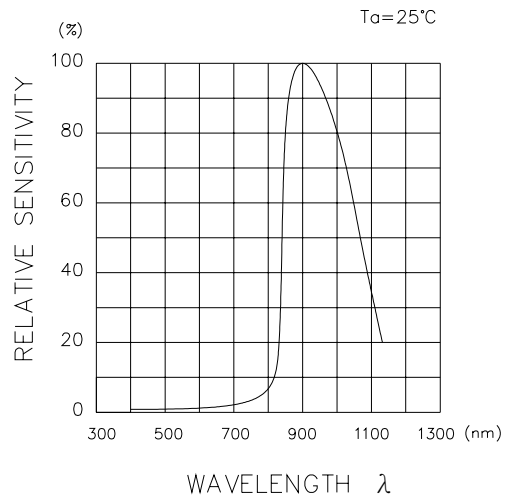
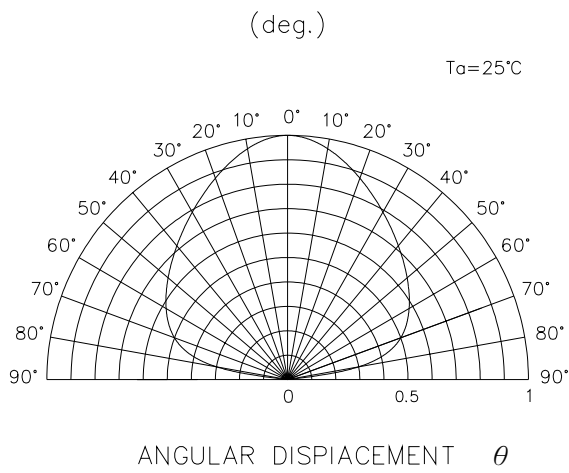
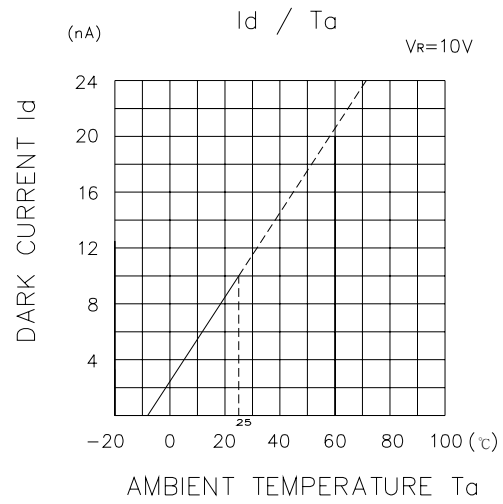
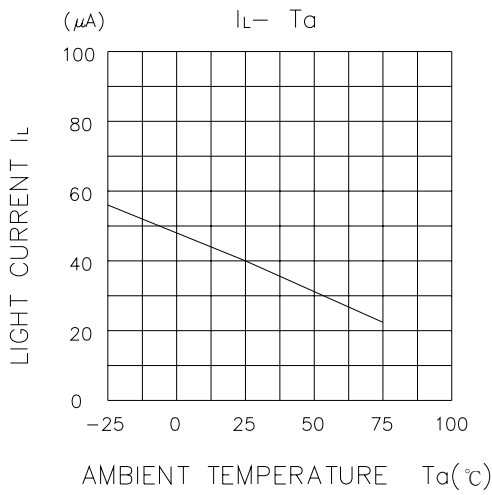
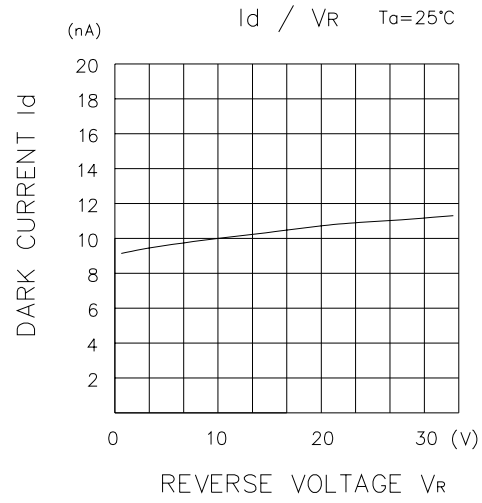
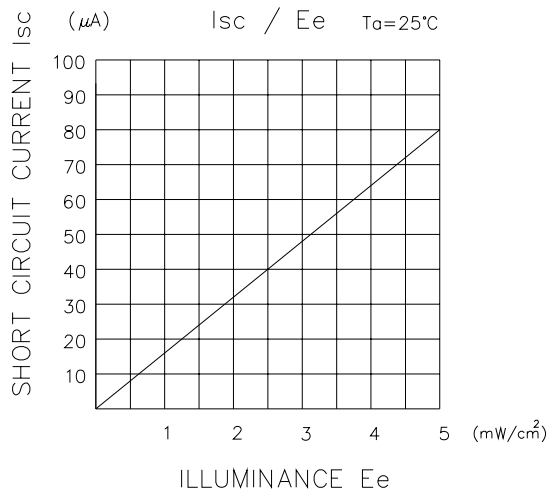
Item	Symbol	Rating	Unit
Maximum reverse voltage	V <sub>RM</sub>	50	V
Operating temperature.	T <sub>opr</sub>	-25 ~ +75	°C
Storage temperature.	T <sub>stg</sub>	-25 ~ +100	°C
Soldering temperature. *1	T <sub>sol</sub>	260	°C

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

## ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25°C)

Item	Symbol	Condition	Min	Typ	Max	Unit
Reverse breakdown voltage	V <sub>BR</sub>	I <sub>R</sub> = 100uA	33	170		V
Reverse dark current	I <sub>D</sub>	V <sub>cc</sub> = 10V			30	nA
Open circuit voltage	V <sub>oc</sub>	E <sub>e</sub> = 5mW/cm <sup>2</sup>		350		mV
Short circuit current	I <sub>sc</sub>	E <sub>e</sub> = 5mW/cm <sup>2</sup>		80		uA
Light current	I <sub>L</sub>	λ <sub>p</sub> = 940nm E <sub>e</sub> = 0.5mW/cm <sup>2</sup>	24	40		uA
Total capacitance	C <sub>t</sub>	V <sub>cc</sub> = 5V , f = 1MHz		21		pF
Radiant sensitivity area	A			8.0		mm <sup>2</sup>
Peak sensitive wavelength	λ <sub>p</sub>			900		nm
Switching speeds	Turn-on time	t <sub>on</sub>	V <sub>cc</sub> = 5V , R <sub>L</sub> = 50Ω	50		nsec
	Turn-off time	t <sub>off</sub>		50		nsec
Half angle	Δθ			±70		deg.



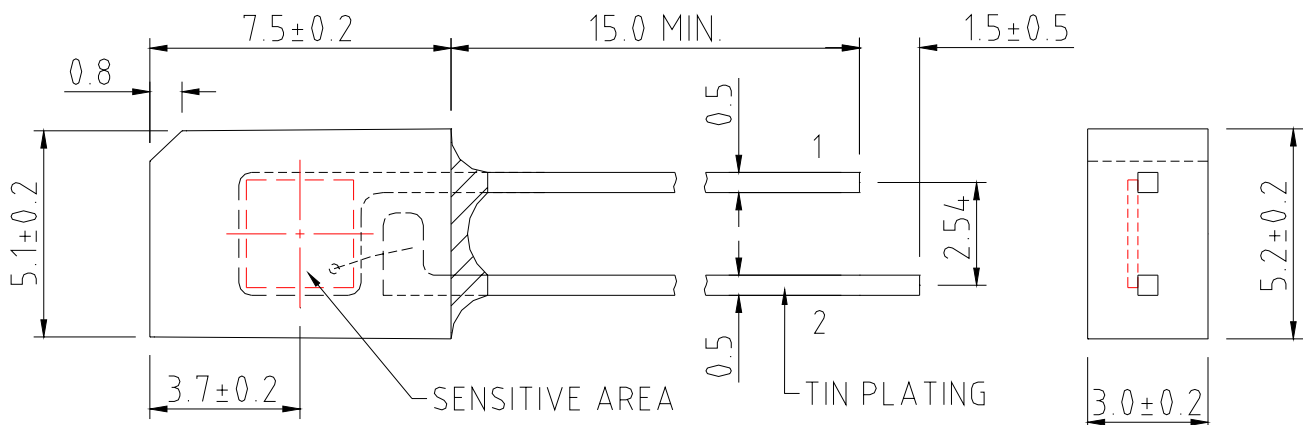
## Reliability Test Items

### 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°C	5 sec	0/60
2	Thermal Shock	0°C (15 sec) ~ 100°C (15 sec)	20 cycle	0/60
3	High Temp. Storage	100°C	1000 Hrs	0/60
4	Low Temp. Storage	-25°C	1000 Hrs	0/60
5	Operation Temperature Cycle TEST	-25°C ~ 75°C	100 Cycles , 200Hrs	0/60
6	High Temp. High Humidity Test	60°C , 90% RH	1000 Hrs	0/60
7	Operation Life Test	Room Temp. @TR940nm	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 .

