

PHOTODIODE

General Description

The OHPI-5PR2 is a high output , high speed photodiode mounted in black plastic package.

Features

- Lens Appearance : Black
- High output power
- Low cost
- Meet RoHS



Applications

- Optical switches
- Optical detectors

MAXIMUM RATINGS

(Ta=25°C)

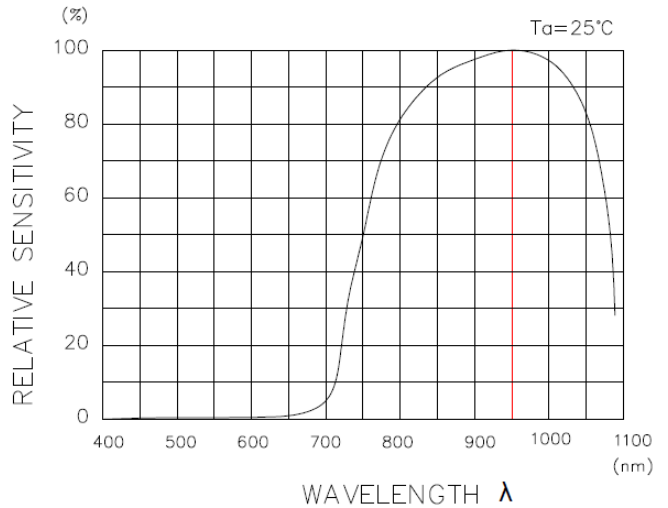
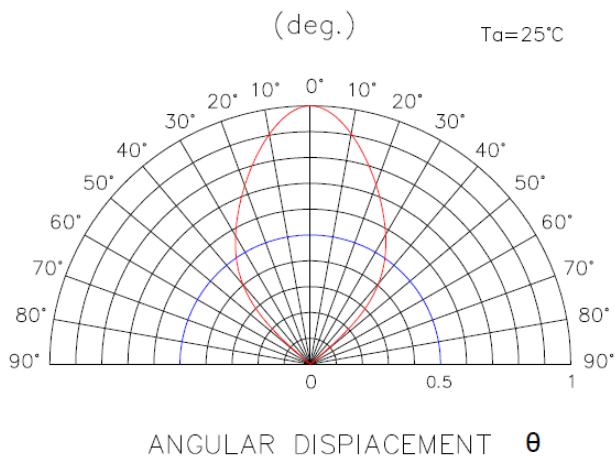
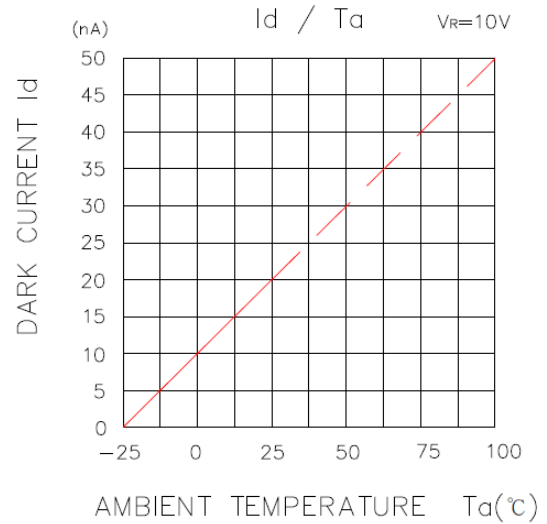
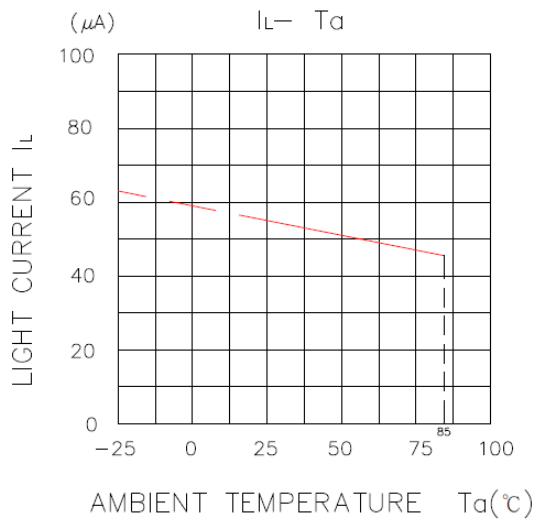
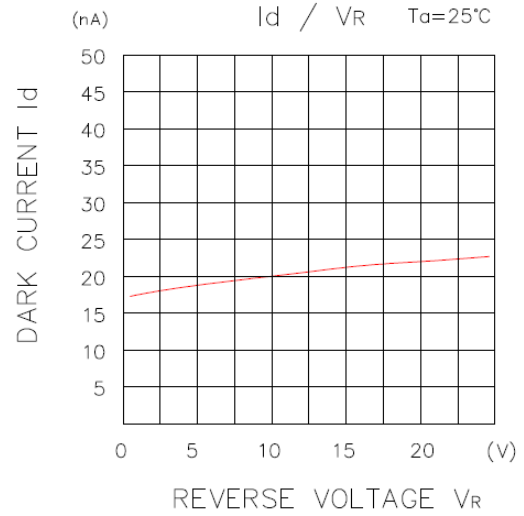
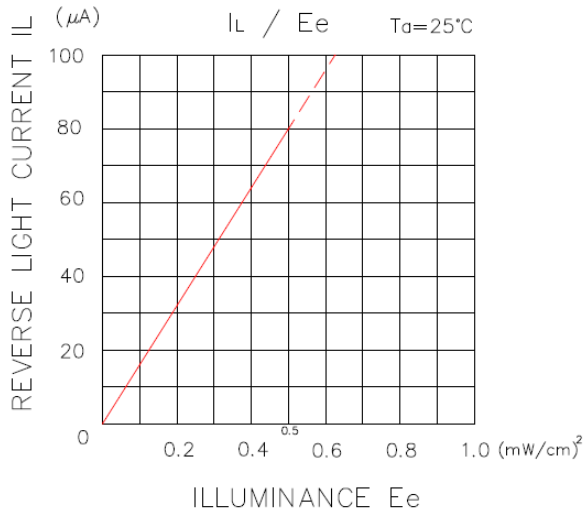
Item	Symbol	Rating	Unit
Operating temp.	To _{pr} .	-40 ~ +85	°C
Storage temp.	T _{stg} .	-40 ~ +100	°C
Soldering temp. *1	T _{sol} .	260	°C

*1. For MAX. 5 seconds at the position of 3mm 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	-	-	V	
Reverse dark current	I _D	V _R =10V	-	-	20	nA	
Light current	I _L	λ _p = 940nm E _e = 0.5 mW/cm ²	18	-	135	uA	
Open circuit voltage	V _{OC}	E _e = 5 mW/cm ²	-	390	-	mV	
Short circuit current	I _{SC}	E _e = 5 mW/cm ²	30	40	-	uA	
Total capacitance	C _t	V _R =5V , f=1MHz	-	11	-	pF	
Peak sensitive wavelength	λ _p		-	940	-	nm	
Radiant sensitivity area	A		-	4	-	mm ²	
Switching speeds	Turn-on time	T _{on}	V _R =5V , R _L =50Ω λ _p = 850nm	-	50	-	ns
	Turn-off time	T _{off}		-	50	-	
Half angle	Δθ		-	± 35	-	deg.	



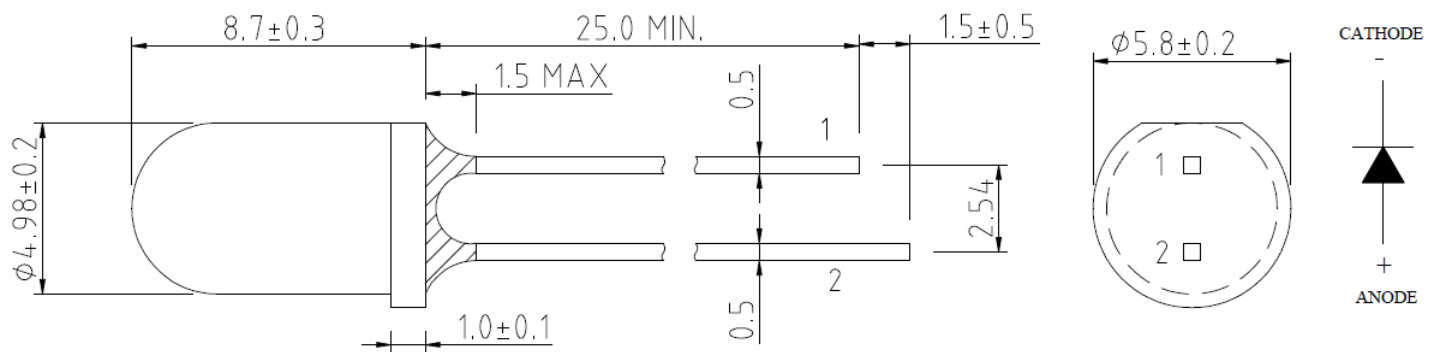
RELIABILITY TEST

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°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	-40°C	1000 Hrs	0 / 60
5	Operation Temperature Cycle TEST	-40°C ~ 85°C	100 Cycles 200Hrs	0 / 60
6	High Temp. High Humidity Test	60°C , 90% RH	1000 Hrs	0 / 60

DIMENSIONS



SIGN : 1. CATHODE
2. ANODE

UNIT : mm

Soldering Profile

Compliant with the following condition :

- (1) Leaded quantity of product below 100 ppm
- (2) Lead-free process

Shape	Lead Frame Type / Holder Type
Hand soldering	1. Temp. at tip of iron : 300 °C MAX (30W MAX). 2. Soldering time : 3 sec MAX. 3. Distance : 3 mm MIN (from solder joint to case)
DIP soldering	1. Preheat temp : 100 °C MAX , 60 sec MAX. 2. Bath temp : 260 °C MAX. 3. Bath time : 5 sec MAX. 4. Distance : 3 mm MIN (From solder joint to case).
Reflow soldering	No
Shape	SMD Type
Hand soldering	1. Temp. at tip of iron : 300 °C MAX (30W MAX). 2. Soldering time : 3 sec MAX.
DIP soldering	1. Preheat temp. : 120-150 °C , 60-120 sec. 2. Bath temp. : 260 °C MAX. 3. Bath time : 5 sec
Reflow soldering	1. Preheat temp. : 150-180 °C , 120 sec MAX. 2. Peak temp. : 260 °C MAX. 3. Peak time : 10 sec MAX

