



EVERLIGHT ELECTRONICS CO., LTD.

DEVICE NUMBER : DPD-020-032 REV : 1.1
ECN : _____ PAGE : 1/7

3mm Silicon PIN Photodiode

MODEL NO : PD202B

■ Features :

- Fast response time
- High photo sensitivity
- Small junction capacitance

■ Description :

PD202B is a high speed and high sensitive PIN photodiode in a standard 3Φ plastic package. The device is spectrally matched to infrared emitting diode.

■ Applications :

- High speed photo detector
- Camera
- Optoelectronic switch
- VCRs ,Video camera
- Floppy disk drive

PART NO.	CHIP	LENS COLOR
	MATERIAL	
PD	Silicon	Black



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■ Absolute Maximum Ratings at T_A = 25°C

Parameter	Symbol	Rating	Unit	Notice
Reverse Voltage	V _R	32	V	
Power Dissipation	P _d	150	mW	
Lead Soldering Temperature	T _{sol}	260	°C	4mm from mold body less than 5 seconds
Operating Temperature	T _{opr}	-25 ~ +85	°C	
Storage Temperature	T _{stg}	-40 ~ +85	°C	

■ Electronic Optical Characteristics :

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Rang of Spectral Bandwidth	$\lambda_{0.5}$	----	840-1200	----	nm	-----
Wavelength of Peak Sensitivity	λ_p	----	980	----	nm	-----
Open-Circuit Voltage	V _{oc}	----	0.42	----	V	E _e =5m W/c m ² λ _p =940nm
Short-Circuit Current	I _{sc}	----	15	----	μA	
Reverse Light Current	I _L	----	15	----	μA	E _e =5m W/c m ² λ _p =940nm V _R =5V
Dark Current	I _d	----	----	10	nA	E _e =0m W/c m ² V _R =10V
Reverse Breakdown Voltage	BV _R	32	170	----	V	E _e =0m W/c m ² I _R =100μA
Total Capacitance	C _t	----	5	----	pF	E _e =0m W/c m ² V _R =5V, f=1MHz
Rise/Fall Time	t _r /t _f	----	6/6	----	nS	V _R =10V R _L =1KΩ



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■ Typical Electrical/Optical/Characteristics Curves

Fig. 1 Power Dissipation vs. Ambient Temperature

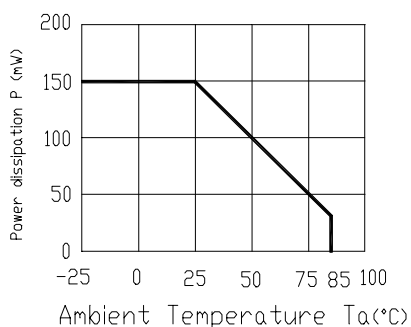


Fig. 2 Spectral Sensitivity

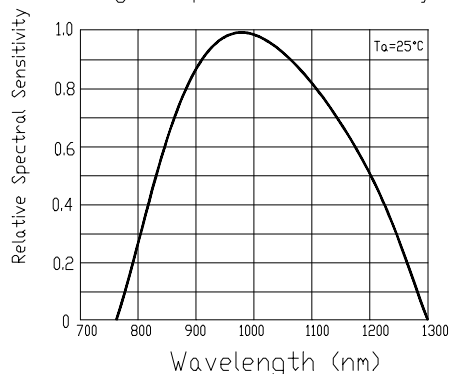


Fig.3 Dark Current vs. Ambient Temperature

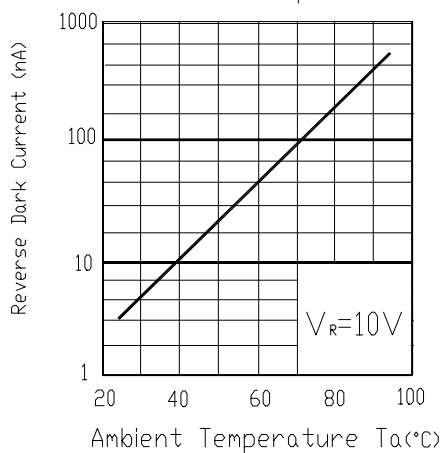


Fig.4 Reverse Light Current vs. E_e

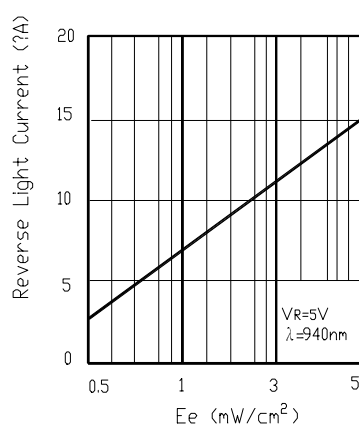


Fig.5 Terminal Capacitance vs. Reverse Voltage

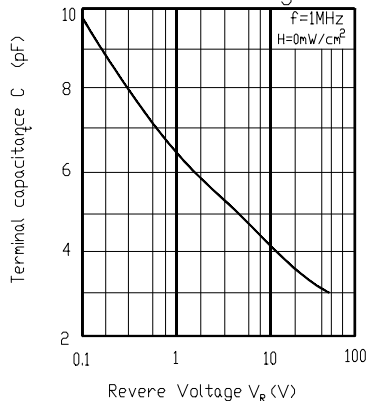
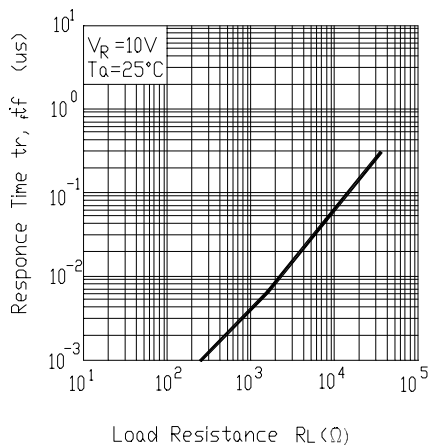


Fig.6 Responce Time vs. Load Resistance





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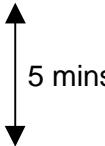
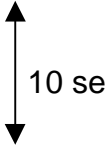
MODEL NO : PD202B

■ Reliability Test Item And Condition

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

Confidence level:90%

LTPD:10%

NO.	Item	Test Conditions	Test Hours/ Cycle	Sample Size	Failure Judgement Criteria	Ac/Re
1	Solder Heat	TEMP : 260°C ± 5 °C	5 secs	22 pcs	$I_L \leq L_x \times 0.8$ L :Lower specification limit	0/1
2	Temperature Cycle	H : +85°C 30 mins  L : -55°C 30 mins	50 cycles	22 pcs		0/1
3	Thermal Shock	H : +100°C 5 mins  L : -10°C 5 mins	50 cycles	22 pcs		0/1
4	High Temperature Storage	TEMP. : +100°C	1000 hrs	22 pcs		0/1
5	Low Temperature Storage	TEMP. : -55°C	1000 hrs	22 pcs		0/1
6	DC Operating Life	$V_R=5V$	1000 hrs	22 pcs		0/1
7	High Temperature / High Humidity	85°C / 85% R.H.	1000 hrs	22 pcs		0/1

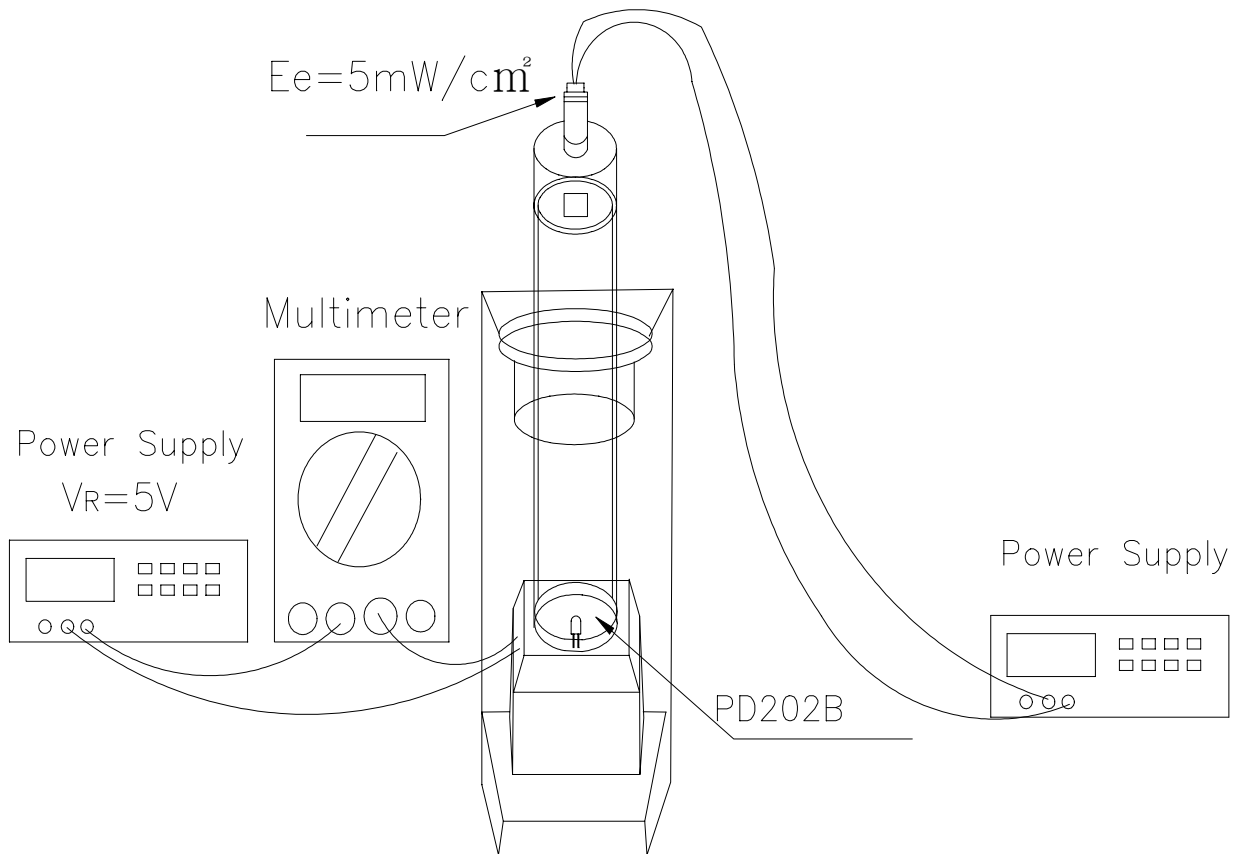
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■ Test Method For Reverse Light Current

Condition: $E_e=5\text{mW}/\text{cm}^2, V_R=5\text{V}$

Test Item: Reverse Light Current

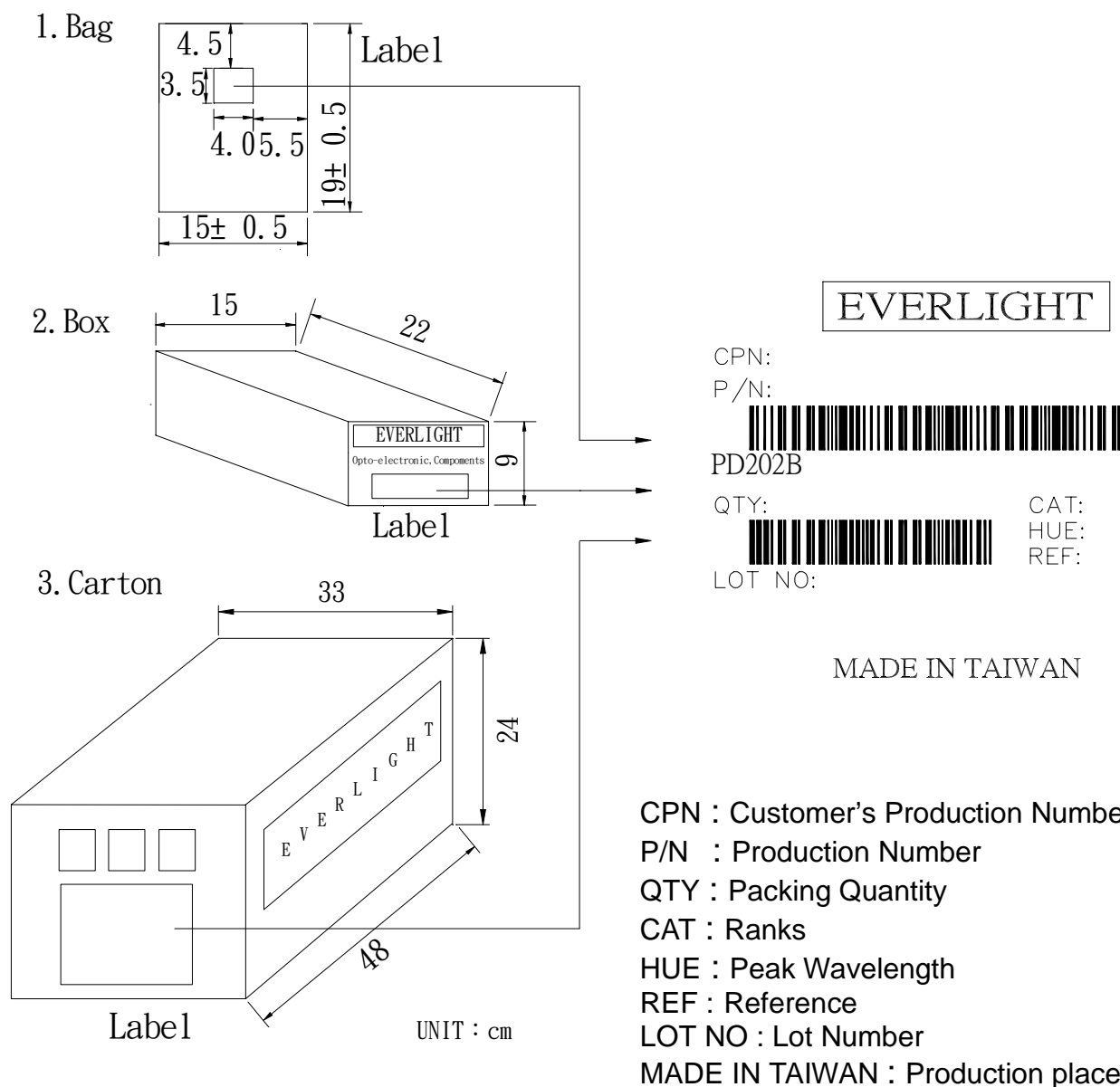
Unit : μA 



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■ Packing Specifications



■ Packing Quantity Specification

1. 1000 Pcs/1Bag , 4 Bags/1Box
2. 10 Boxes/1Carton