

DEVICE NUMBER : DPD-033-056

ECN : _____

REV : 1.1PAGE : 1/7

5mm Silicon PIN Photodiode

MODEL NO : PD333-3B/L4

■ Features :

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

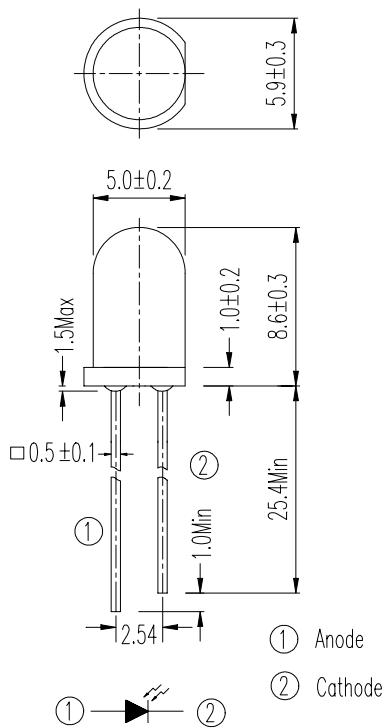
■ Description :

PD333-3B/L4 is a high speed and high sensitive PIN photodiode in a standard 5φ 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

5mm Silicon PIN PhotodiodeMODEL NO : PD333-3B/L4**■ Package Dimensions :****■ Notes :**

1. All dimensions are in millimeter.
2. General tolerance : ± 0.1 mm.
3. Protruded resin under flange 1.5 mm Max.
4. Lead spacing is measured where the lead emerge from the package.
5. Lens color : Black.
6. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
7. These specification sheets include materials protected under copyright of EVERLIGHT corporation. Please don't reproduce or cause anyone to reproduce them without EVERLIGHT's consent.
8. When using this product, please observe the absolute maximum ratings and the instructions for use outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.

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REV : 1.1PAGE : 3/7**5mm Silicon PIN Photodiode**MODEL NO : PD333-3B/L4**■ Absolute Maximum Ratings at $T_A = 25^\circ\text{C}$**

Parameter	Symbol	Rating	Unit	Notice
Reverse Voltage	V_R	32	V	
Power Dissipation	P_d	150	mW	
Lead Soldering Temperature	T_{sol}	260	$^\circ\text{C}$	4mm from mold body less than 5 seconds
Operating Temperature	T_{opr}	-40 ~ +85	$^\circ\text{C}$	
Storage Temperature	T_{stg}	-40 ~ +85	$^\circ\text{C}$	

■ 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	----	940	----	nm	-----
Open-Circuit Voltage	V_{oc}	----	0.42	----	V	$E_e=5\text{m W/c m}^2$ $\lambda_p=940\text{nm}$
Short-Circuit Current	I_{sc}	----	25	----	μA	
Reverse Light Current	I_L	----	30	----	μA	$E_e=5\text{m W/c m}^2$ $\lambda_p=940\text{nm}$ $V_R=5\text{V}$
Dark Current	I_d	----	---	10	nA	$E_e=0\text{m W/c m}^2$ $V_R=10\text{V}$
Reverse Breakdown Voltage	BV_R	32	170	----	V	$E_e=0\text{m W/c m}^2$ $I_R=100\mu\text{A}$
Total Capacitance	C_t	----	5	----	pF	$E_e=0\text{m W/c m}^2$ $V_R=5\text{V}, f=1\text{MHz}$
Rise/Fall Time	t_r/t_f	----	6/6	----	nS	$V_R=10\text{V}$ $R_L=1\text{K}\Omega$

5mm Silicon PIN PhotodiodeMODEL NO : PD333-3B/L4**■ Typical Electrical/Optical/Characteristics Curves**

Fig. 1 Power Dissipation vs. Ambient Temperature

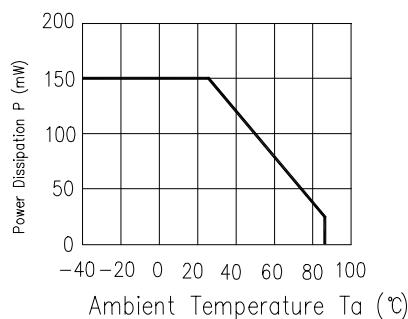


Fig.2 Spectral Sensitivity

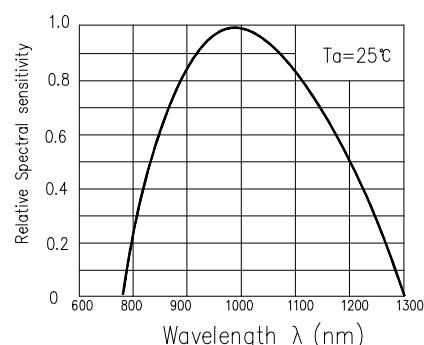


Fig.3 Dark Current vs. Ambient Temperature

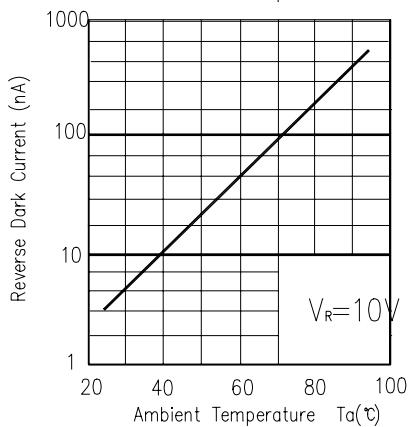


Fig.4 Reverse Light Current vs. Ee

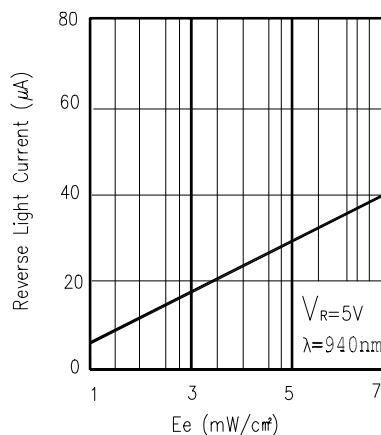


Fig.5 Terminal Capacitance vs. Reverse Voltage

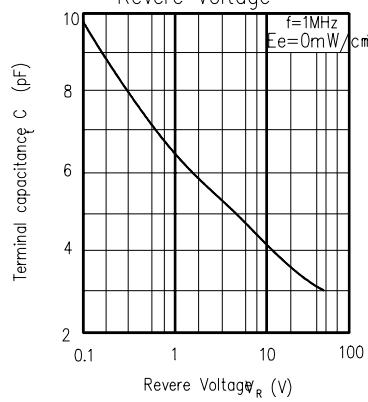
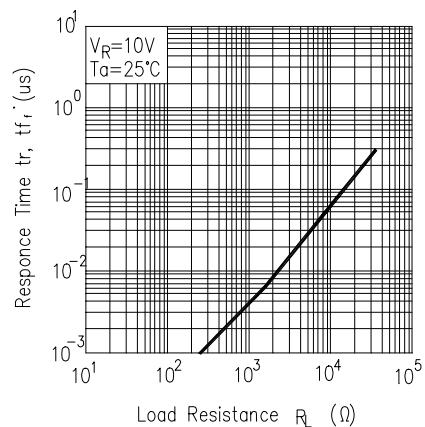


Fig.6 Response Time vs. Load Resistance



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

Confidence level:90%

LTPD:10%

NO.	Item	Test Conditions	Test Hours/Cycles	Sample Sizes	Failure Judgement Criteria	Ac/Re
1	Solder Heat	TEMP : 260°C ± 5 °C	10 sesc	22 pcs		0/1
2	Temperature Cycle	H : +85°C 30 mins L : -55°C 30 mins 5 mins	50 cycles	22 pcs	$I_L \leq L_x$ 0.8 L : Lower specification limit	0/1
3	Thermal Shock	H : +100°C 5 mins L : -10°C 5 mins 10 secs	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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5mm Silicon PIN Photodiode

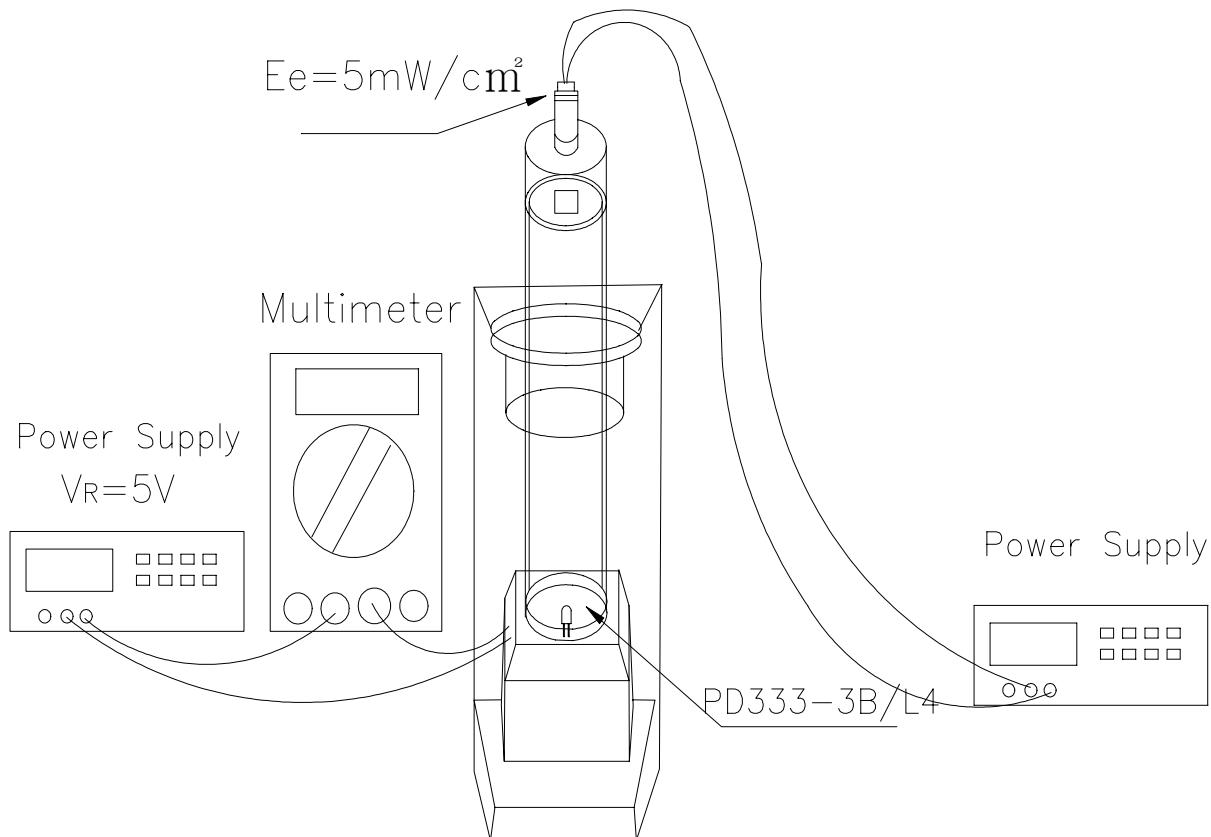
MODEL NO : PD333-3B/L4

■ Test Method For Reverse Light Current

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

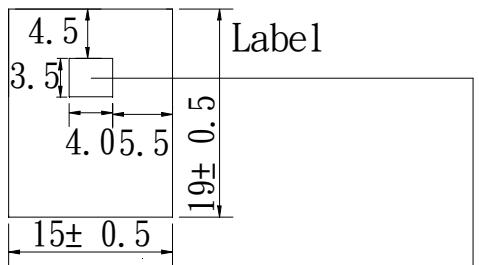
Test Item: Reverse Light Current

Unit : μA



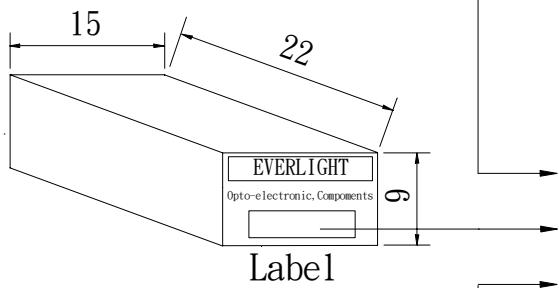
DEVICE NUMBER : DPD-033-056 REV : 1.1
ECN : _____ PAGE : 7/7**5mm Silicon PIN Photodiode**MODEL NO : PD333-3B/L4**■ Packing Specifications**

1. Bag



Label

2. Box



Label

EVERLIGHT

CPN:

P/N:



PD333-3B/L4

QTY:



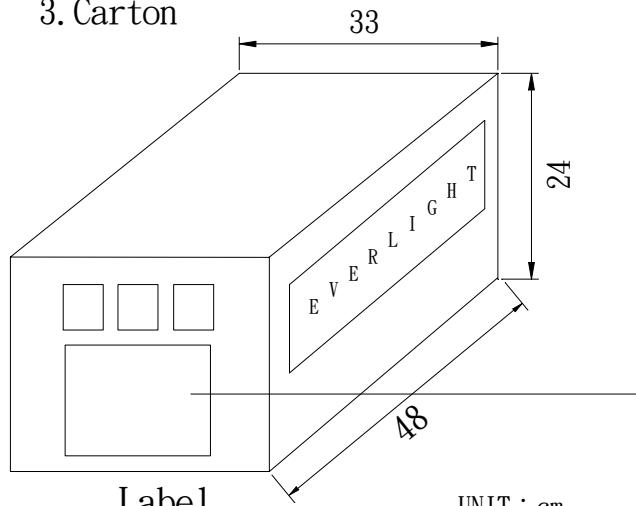
CAT:

HUE:

REF:

LOT NO:

3. Carton



Label

UNIT : cm

MADE IN TAIWAN

CPN : Customer's Production Number

P/N : Production Number

QTY : Packing Quantity

CAT : Ranks

HUE : Peak Wavelength

REF : Reference

LOT NO : Lot Number

MADE IN TAIWAN : Production place

■ Packing Quantity Specification

1. 500Pcs/1Bag , 6 Bags/1Box
2. 10 Boxes/1Carton