

## 5mm Photodiode PD333-3B/L3

### Features

- Fast response time
- High photo sensitivity
- Small junction capacitance
- Pb free
- The product itself will remain within RoHS compliant version
- Compliance with EU REACH
- Compliance Halogen Free .(Br <900 ppm ,Cl <900 ppm , Br+Cl < 1500 ppm)

### Description

- PD333-3B/L3 is a high speed and high sensitive PIN photodiode in a standard 5Φ plastic package. Due to its black epoxy the device is sensitive to infrared radiation

### Applications

- High speed photo detector
- Security system
- Camera

## Device Selection Guide

Chip Materials	Lens Color
Silicon	Black

## Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse Voltage	$V_R$	32	V
Operating Temperature	$T_{opr}$	-25 ~ +85	°C
Storage Temperature	$T_{stg}$	-40 ~ +100	°C
Soldering Temperature	$T_{sol}$	260	°C
Power Dissipation at (or below) 25°C Free Air Temperature	$P_c$	150	mW

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## Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Range Of Spectral Bandwidth	$\lambda_{0.5}$	840	-----	1100	nm	-----
Wavelength Of Peak Sensitivity	$\lambda_P$	-----	940	-----	nm	-----
Open-Circuit Voltage	$V_{OC}$	-----	0.44	-----	V	$E_e=5mW/cm^2$ $\lambda_p=940nm$
Short- Circuit Current	$I_{SC}$	-----	10	-----	$\mu A$	$E_e=1mW/cm^2$ $\lambda_p=940nm$
Reverse Light Current	$I_L$	10	-----	-----	$\mu A$	$E_e=1mW/cm^2$ $\lambda_p=940nm$ $V_R=5V$
Reverse Dark Current	$I_D$	----	----	10	nA	$E_e=0mW/cm^2$ $V_R=10V$
Reverse Breakdown Voltage	$V_{BR}$	32	170	-----	V	$E_e=0mW/cm^2$ $I_R=100\mu A$
Total Capacitance	$C_t$	-----	10	-----	pF	$E_e=0mW/cm^2$ $V_R=5V$ $f=1MHz$
Rise Time/ Fall Time	$t_r / t_f$	-----	10	-----	ns	$V_R=10V$ $R_L=100\Omega$

### Note:

- Tolerance of Luminous Intensity:  $\pm 10\%$
- Tolerance of Dominant Wavelength:  $\pm 1nm$
- Tolerance of Forward Voltage:  $\pm 0.1V$

### $I_L$ Rank

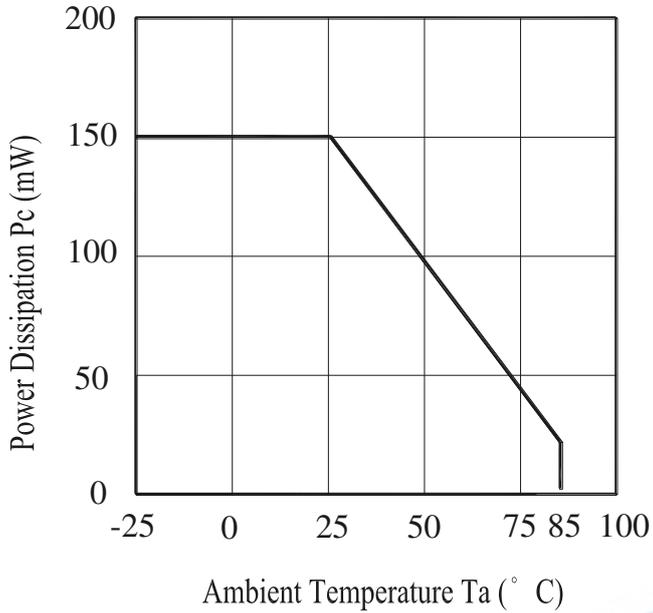
Condition :  $E_e=1mW/cm^2$ 、 $\lambda_p=940nm$ 、 $V_R=5V$

Unit :  $\mu A$

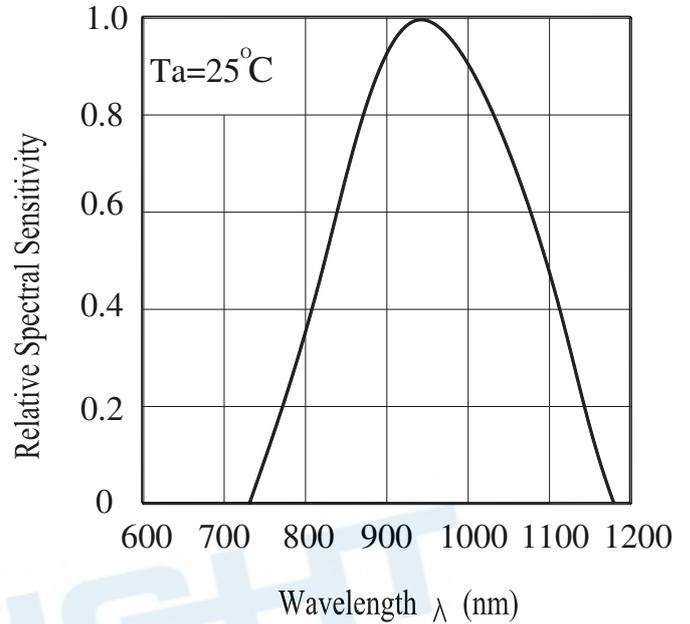
Bin Number	BIN1	BIN2	BIN3	BIN4
Min	10	20	30	40
Max	20	30	40	50

## Typical Electro-Optical Characteristics Curves

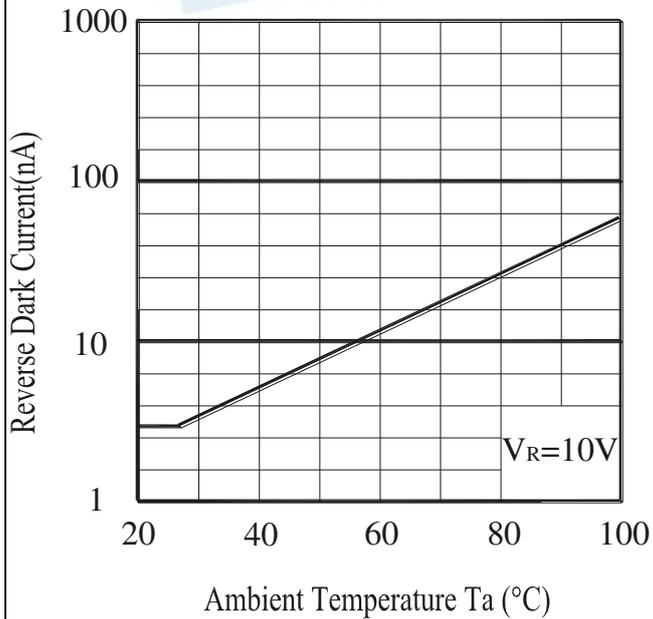
Power Dissipation vs. Ambient Temperature



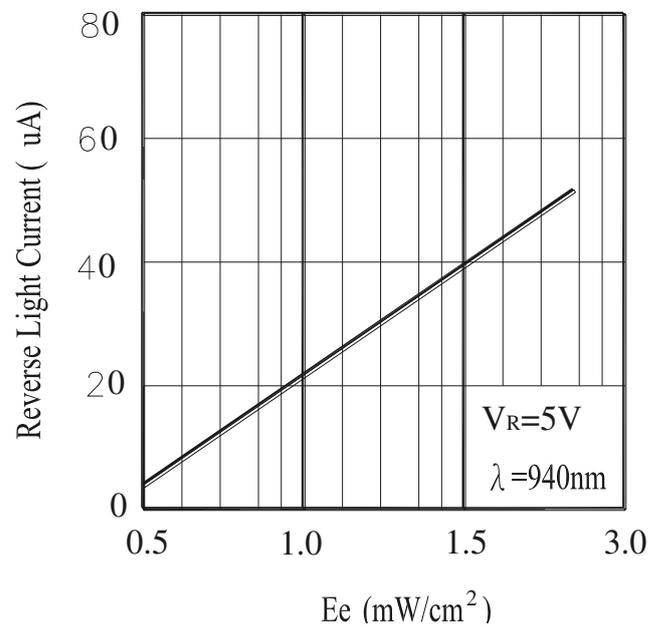
Spectral Sensitivity



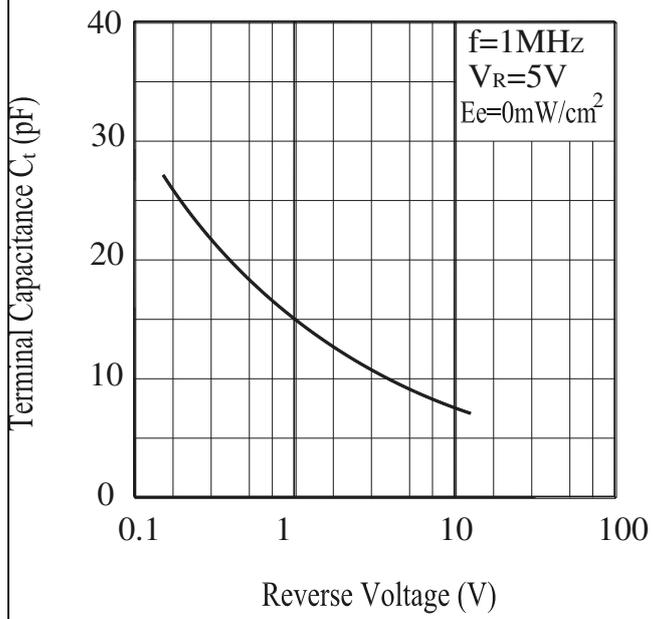
Reverse Dark Current vs. Ambient Temperature



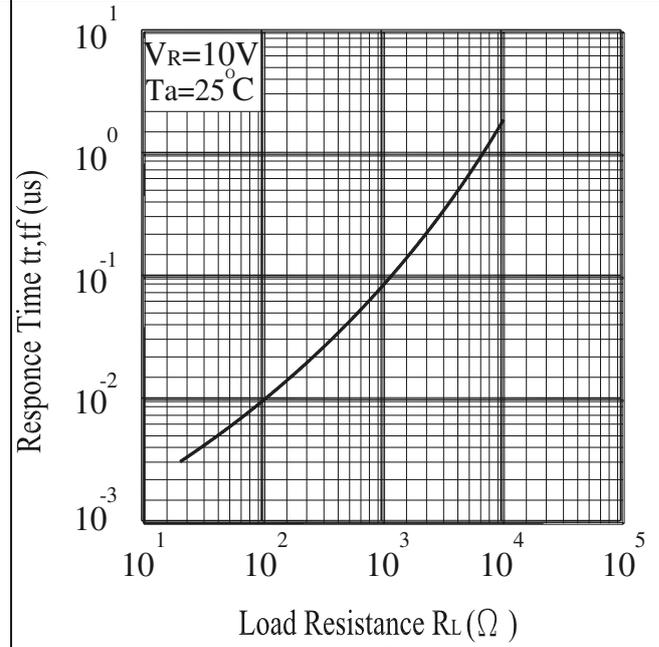
Reverse Light Current vs.  $E_e$



Terminal Capacitance vs. Reverse Voltage

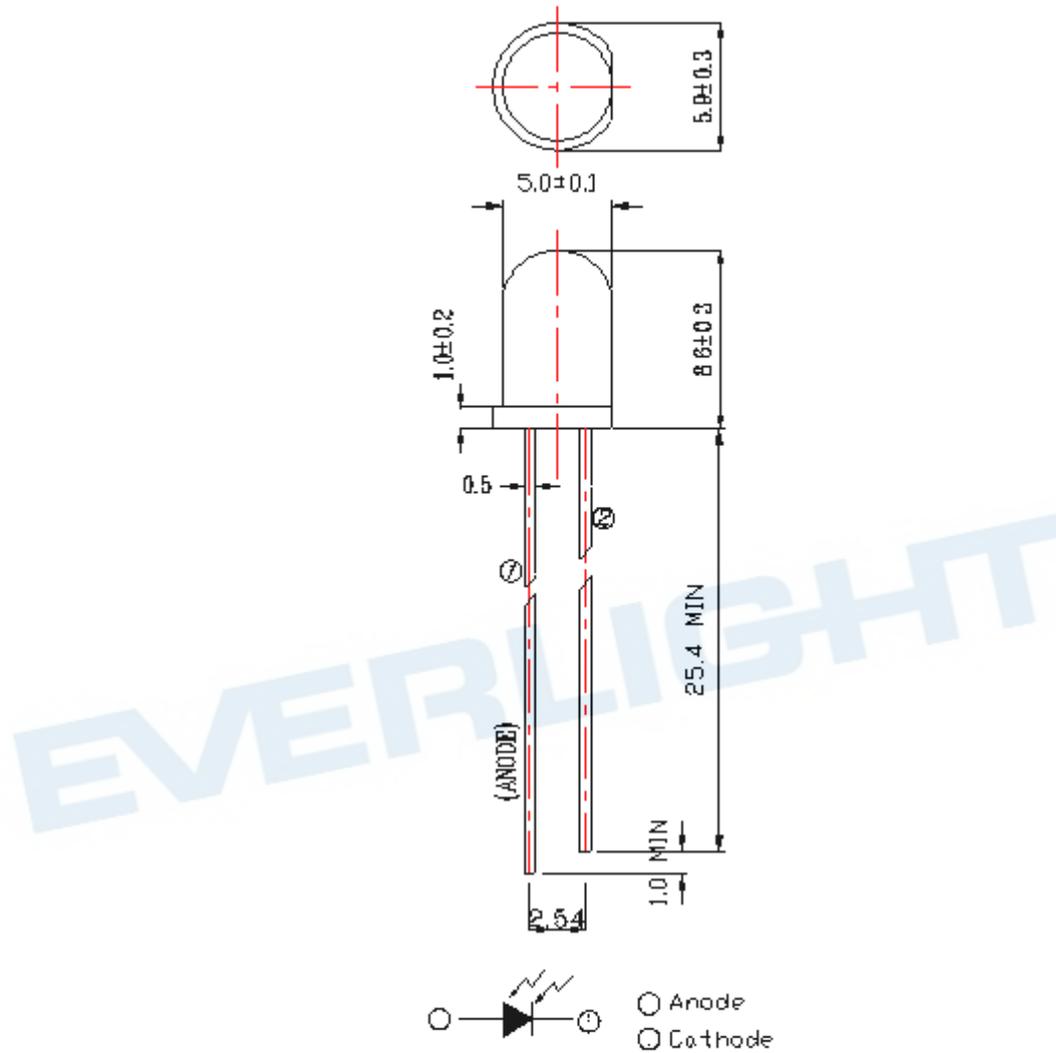


Response Time vs. Load Resistance



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## Package Dimension

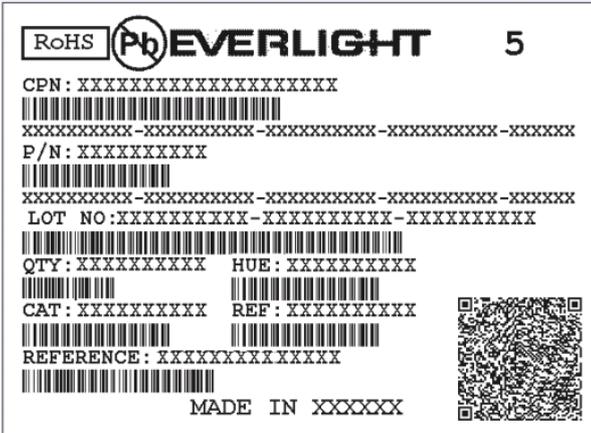


Note: Tolerances unless dimensions  $\pm 0.25$ mm

### Packing Quantity Specification

1.200~500PCS/1Bag , 5Bags/1Box  
2.10Boxes/1Carton

### Label Form Specification



- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number
- X: Month
- Reference: Identify Label Number

### DISCLAIMER

1. EVERLIGHT reserves the right(s) on the adjustment of product material mix for the specification.
2. The product meets EVERLIGHT published specification for a period of twelve (12) months from date of shipment.
3. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
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