

### 5mm photodiode PD333-3B/H0/L2

#### 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

#### Description

- PD333-3B/H0/L2 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<br>(or below)<br>25°C Free Air Temperature | $P_c$     | 150        | mW   |

## 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           | $V_{OC}$        | ----- | 0.39  | ----- | V    | Ee=1mW/cm <sup>2</sup><br>$\lambda_p$ =940nm              |
| Short- Circuit Current         | $I_{SC}$        | ----- | 35    | ----- | μA   | Ee=1mW/cm <sup>2</sup><br>$\lambda_p$ =940nm              |
| Reverse Light Current          | $I_L$           | 25    | 35    | ----- | μA   | Ee=1mW/cm <sup>2</sup><br>$\lambda_p$ =940nm<br>$V_R$ =5V |
| Reverse Dark Current           | $I_D$           | ----  | 5     | 30    | nA   | Ee=0mW/cm <sup>2</sup><br>$V_R$ =10V                      |
| Reverse Breakdown Voltage      | $V_{BR}$        | 32    | 170   | ----- | V    | Ee=0mW/cm <sup>2</sup><br>$I_R$ =100μA                    |
| Total Capacitance              | $C_t$           | ----- | 18    | ----- | pF   | Ee=0mW/cm <sup>2</sup><br>$V_R$ =5V<br>f=1MHz             |
| Rise Time/ Fall Time           | $t_r / t_f$     | ----- | 45    | ----- | ns   | $V_R$ =10V<br>$R_L$ =100Ω                                 |
| View Angle                     | 2θ1/2           | ----- | 80    | ----- | deg  | $I_F$ =20mA                                               |

Note:

Tolerance of Dominant Wavelength: ±1nm

Tolerance of Forward Voltage: ±0.1V

### $I_L$ Rank

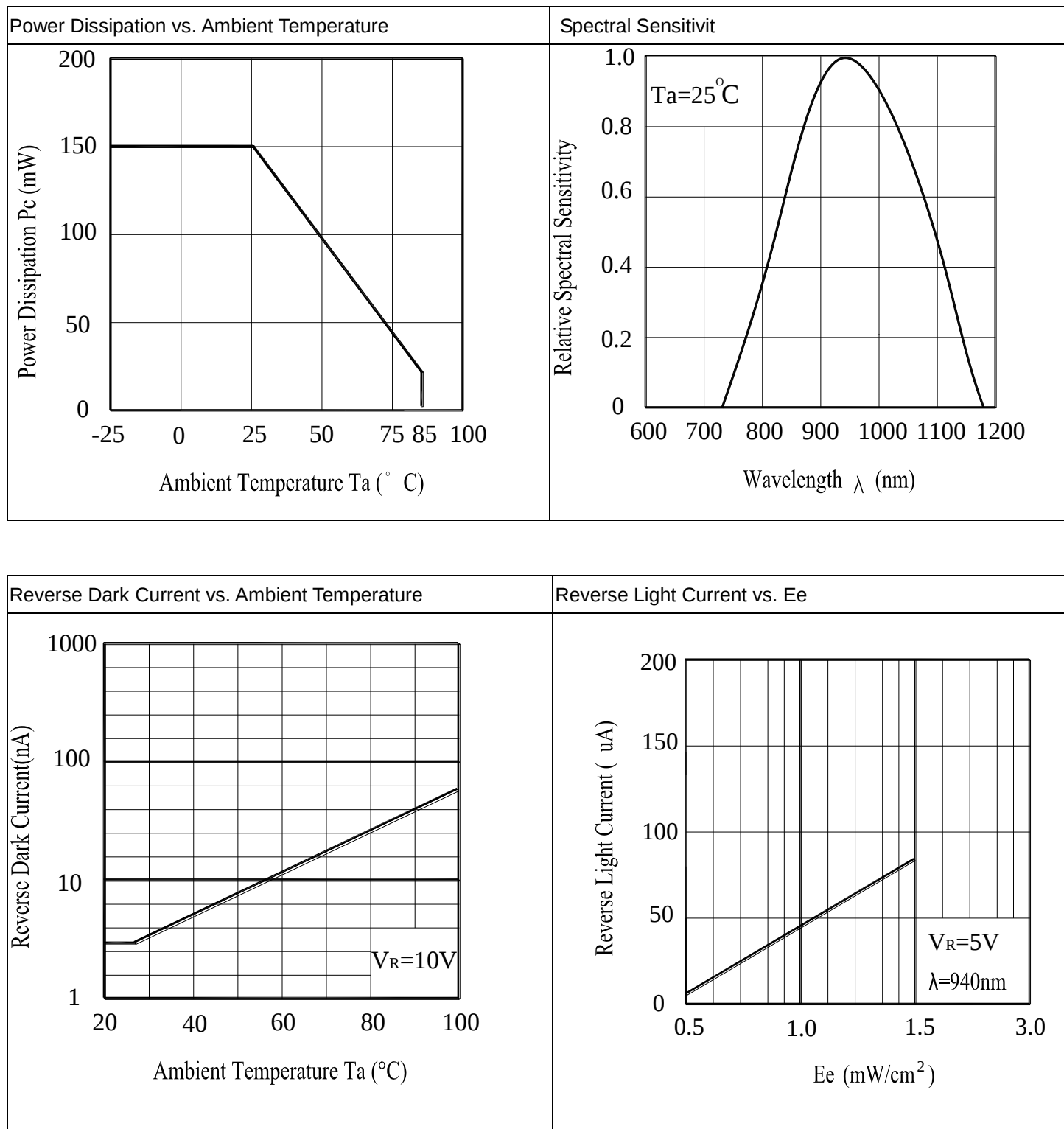
Condition : Ee=1mW/cm<sup>2</sup>、 $\lambda_p$ =940nm、 $V_R$ =5V

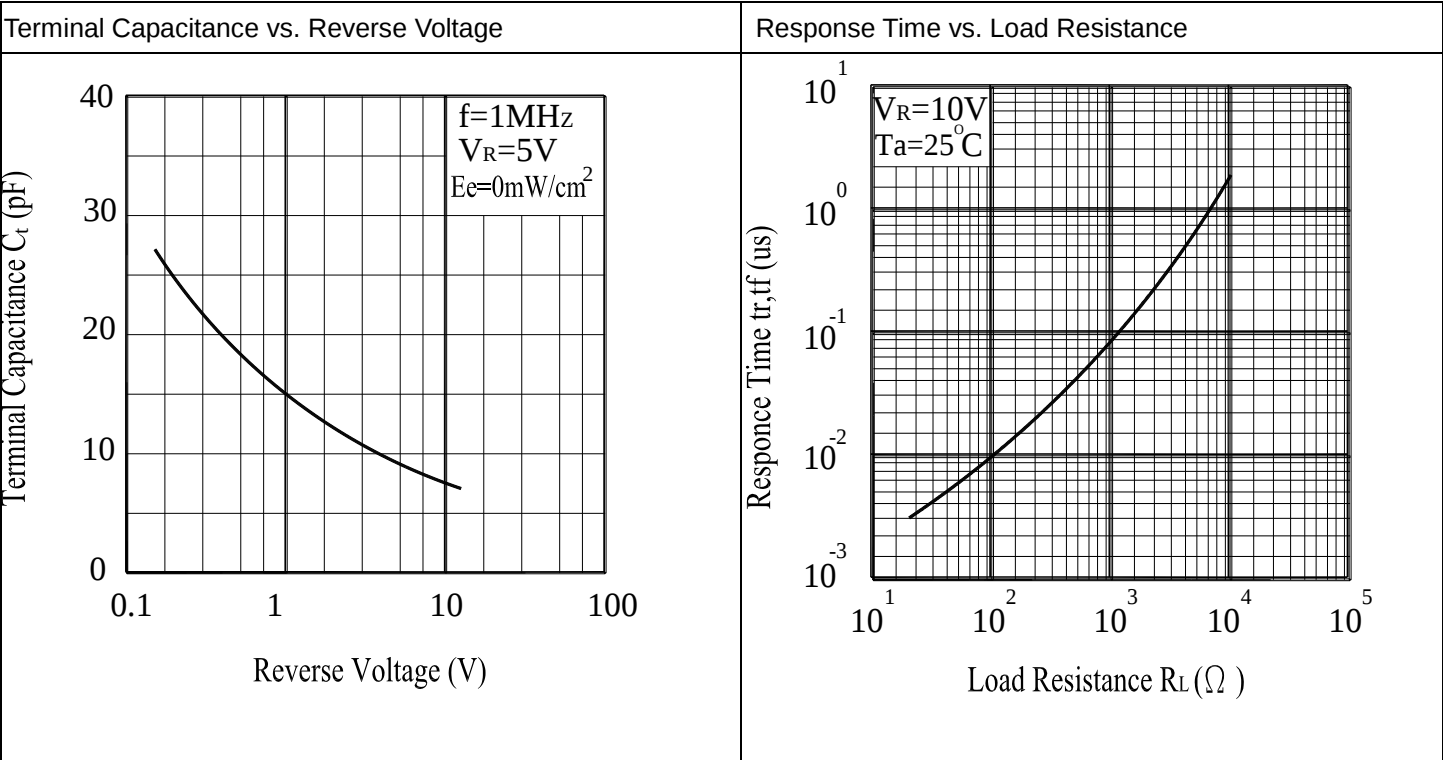
Unit : μA

| Bin Number | BIN1 | BIN2 | BIN3 | BIN4 | BIN5 |
|------------|------|------|------|------|------|
| Min        | 25   | 35   | 45   | 55   | 65   |
| Max        | 35   | 45   | 55   | 65   | 75   |

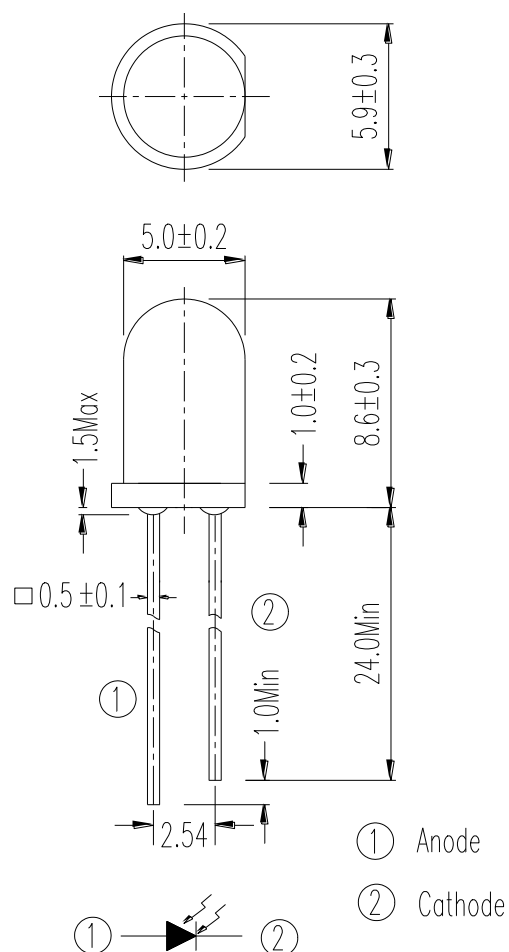
Tolerances: 20%

## Typical Electro-Optical Characteristics Curves





## 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

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