

5mm Phototransistor PD333-3B/L3

Features

- Fast response time
- High photo sensitivity
- Small junction capacitance
- Pb free
- The product itself will remain within RoHS compliant version

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

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	λ_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	-----	μA	$E_e=1mW/cm^2$ $\lambda_p=940nm$
Reverse Light Current	I_L	10	-----	-----	μA	$E_e=1mW/cm^2$ $\lambda_p=940nm$ $V_R=5V$
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	$V_R=10V$ $R_L=100\Omega$

I_L Rank

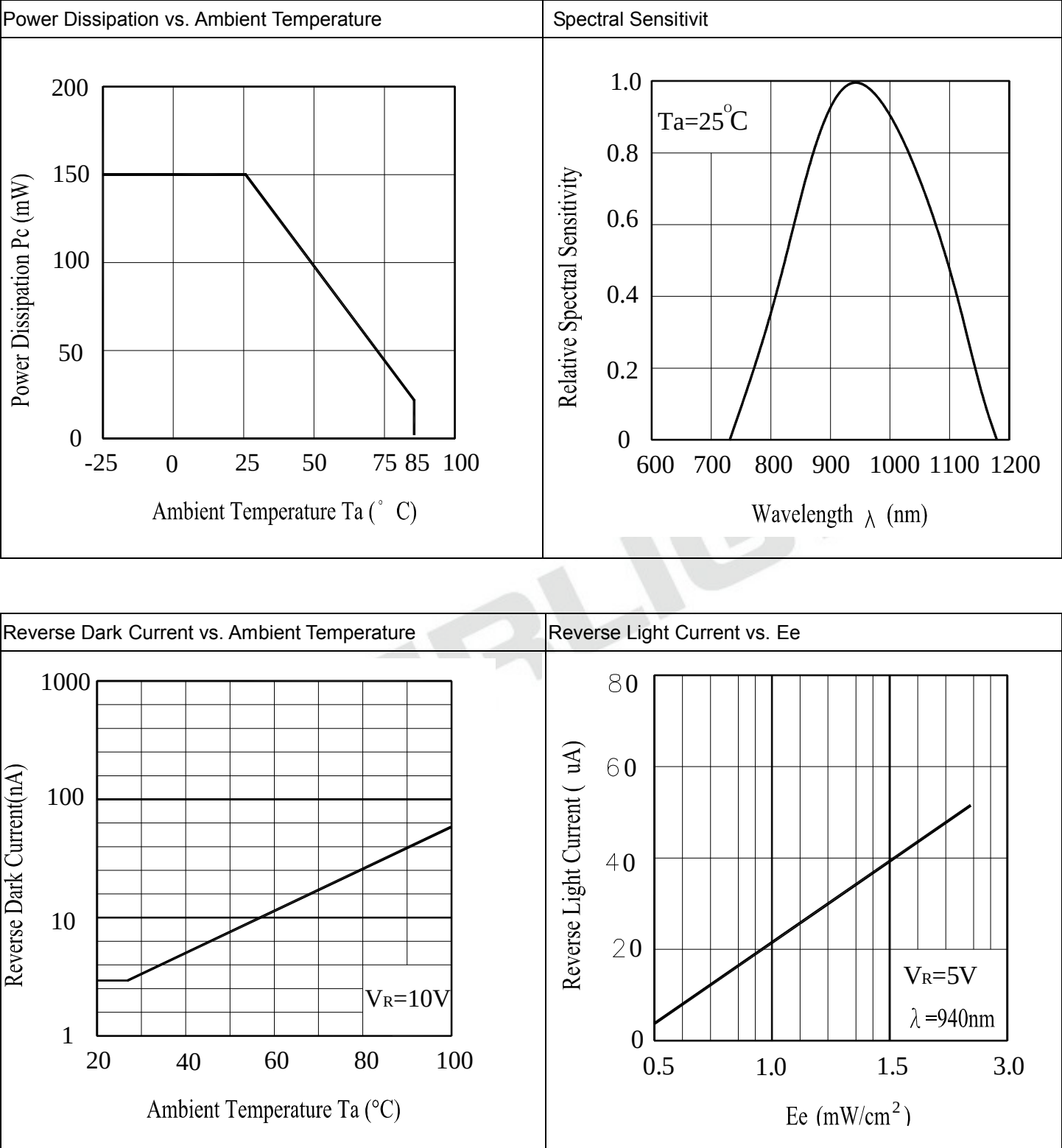
Condition : $E_e=1mW/cm^2$ 、 $\lambda_p=940nm$ 、 $V_R=5V$

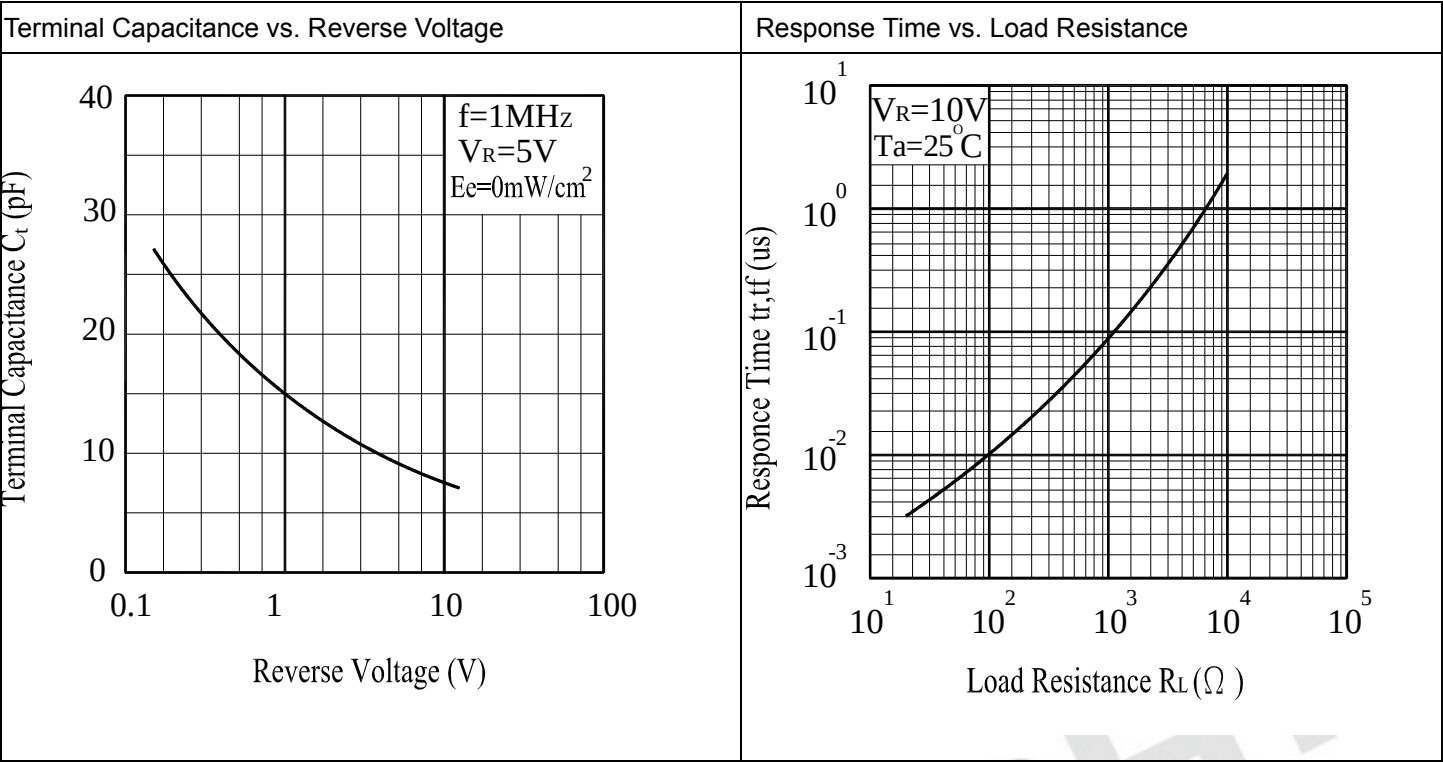
Unit : μA

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

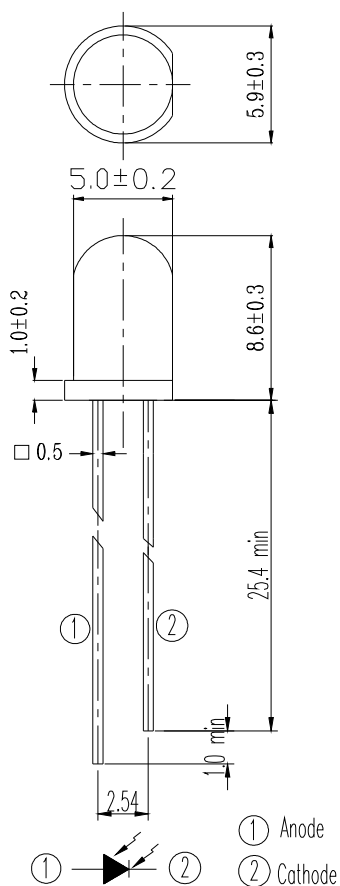
Tolerances : 20%

Typical Electro-Optical Characteristics Curves





Package Dimension



Note: Tolerances unless dimensions ± 0.25 mm

Packing Quantity Specification

1.500PCS/1Bag, 5Bags/1Box

2.10Boxes/1Carton

Label Form Specification

The diagram shows a rectangular label form with the following elements:

- Top left: A circle containing 'Pb' (Pb-free symbol).
- Top center: A rectangle containing the 'EVERLIGHT' logo.
- Top right: A circle containing 'X' (Month indicator).
- Below 'Pb': The text 'CPN:' followed by 'P/N:'.
- Below 'P/N:': A barcode.
- Below the barcode: The text 'PD333-3B/L3'.
- Below 'PD333-3B/L3': The text 'QTY:' followed by a barcode.
- Below the 'QTY' barcode: The text 'LOT NO:' followed by a barcode.
- Below the 'LOT NO' barcode: The text 'Reference' followed by a barcode.
- Below 'QTY:': The text 'CAT:', 'HUE:', and 'REF:' stacked vertically.
- Below 'HUE:': The text 'RoHS' in a box.

- 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

Notes

1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for using 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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