

2.75 x5.25mm Silicon PIN Photodiode PD638C



Features

- Fast response times
- High photo sensitivity
- Small junction capacitance
- Pb free
- The product itself will remain within RoHS compliant version.
- Compliance with EU REACH

Description

- PD638C is a high speed and sensitive PIN photodiode in a cylindrical side view plastic package. The epoxy package itself is an IR filter , spectrally matched to IR emitter.

Applications

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

Device Selection Guide

Chip Materials	Lens Color
Silicon	Water clear

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V _R	32	V
Power Dissipation	P _d	150	mW
Operating Temperature	T _{opr}	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +100	°C
Soldering Temperature(*1)	T _{sol}	260	°C

Notes: *1: Soldering time ≤ 5 seconds.

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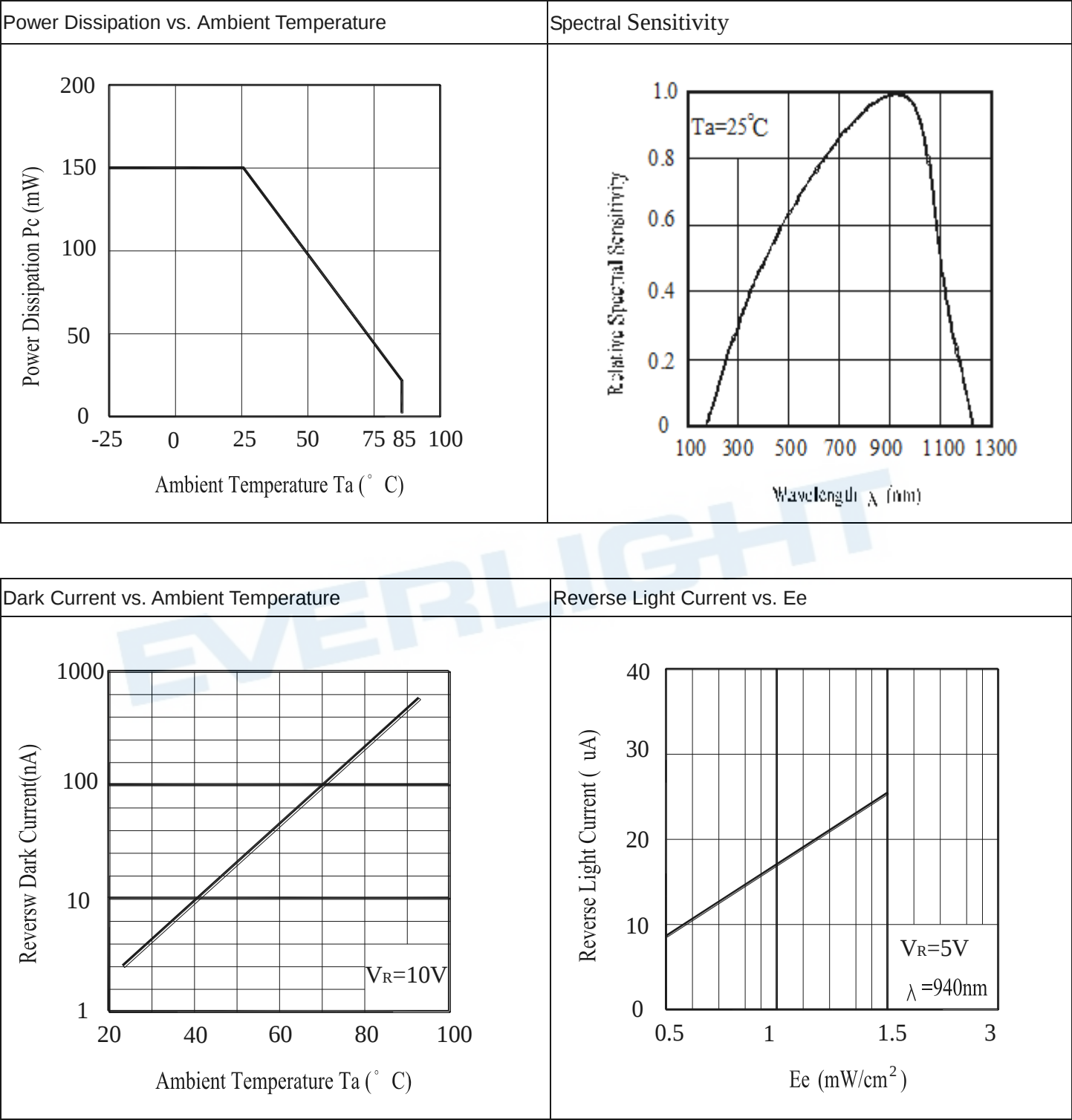
Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Rang of Spectral Bandwidth	$\lambda 0.5$	400	-----	1100	nm	-----
Wavelength of Peak Sensitivity	λ_p	-----	940	-----	nm	-----
Open-Circuit Voltage	VOC	-----	0.35	-----	V	Ee=5m W/cm2 $\lambda_p=940\text{nm}$
Short- Circuit Current	ISC	-----	18	-----	uA	Ee=1m W/cm2 $\lambda_p=940\text{nm}$
Reverse Light Current	I_L	10.2	18	-----	uA	Ee=1m W/cm2 $\lambda_p=940\text{nm}$ VR=5V
Dark Current	I_d	----	5	30	nA	Ee=0m W/cm2 VR=10V
Reverse Breakdown	BVR	32	170	-----	V	Ee=0m W/cm2 IR=100uA
Total Capacitance	Ct	----	25	----	pF	Ee=0m W/cm2 VR=3V f=1MHZ
Rise/Fall Time	tr/tf	----	50/50	----	nS	VR=10V RL=1KΩ

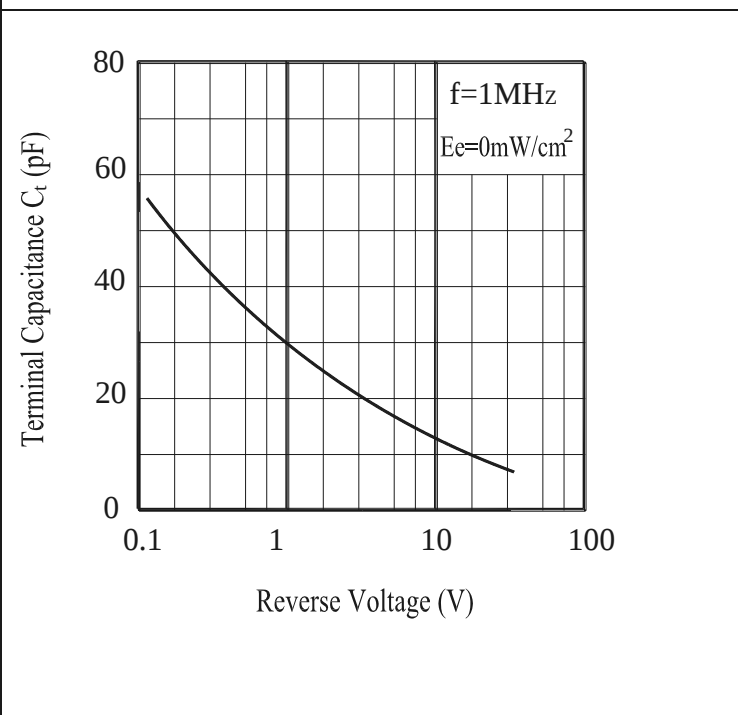
Note:

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

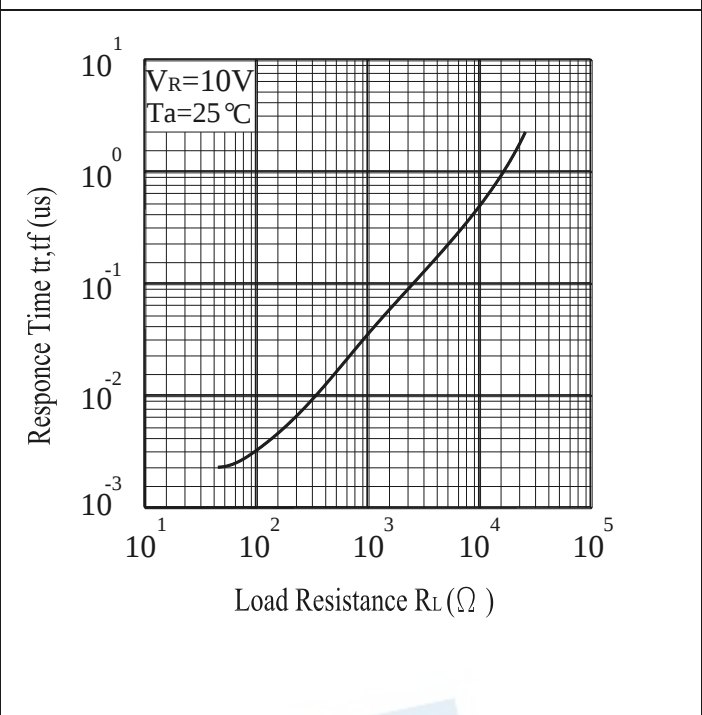
Typical Electro-Optical Characteristics Curves



Terminal Capacitance vs. Reverse Voltage

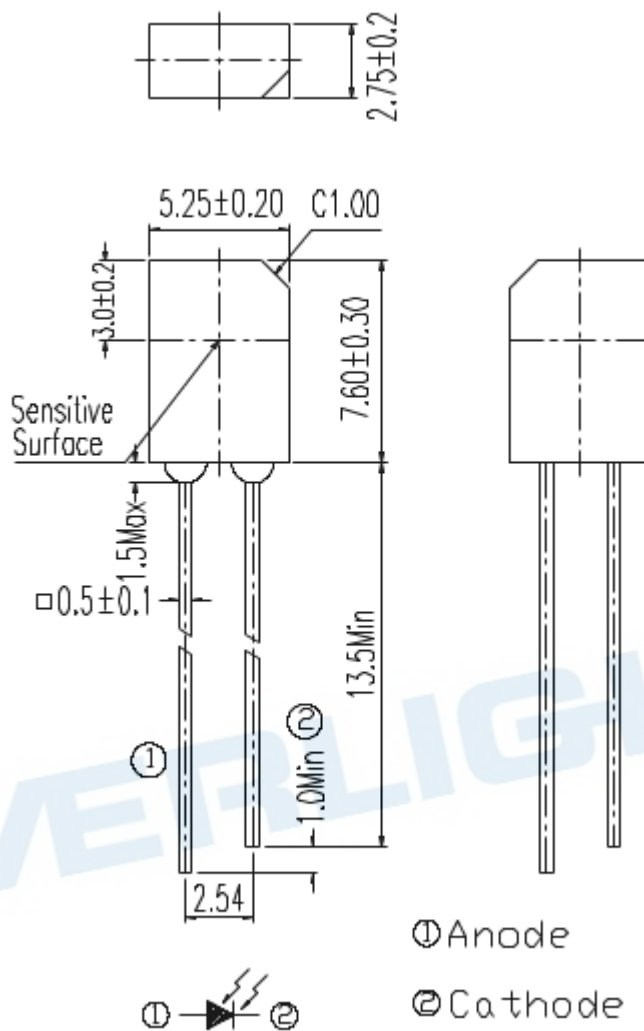


Response Time vs. Load Resistance



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Package Dimension



Note: Tolerances unless dimensions $\pm 0.25\text{mm}$

Packing Specification

■ Packing Quantity

1. 500 PCS/1 Bag, 6Bags/1 Inner Carton
2. 10Inner Cartons/1 Outside Carton

Label Form Specification

RoHS **EVERLIGHT** 5

CPN: XXXXXXXXXXXXXXXXXXXX

XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX

P/N: XXXXXXXXXXXX

XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX

LOT NO: Y150716XXX-XXXXXXXXXX-XXXXXXXXXX

QTY: 0123456789 HUE: XXXXXXXXXXXX

CAT: XXXXXXXXXXXX REF: XXXXXXXXXXXX

REFERENCE: BTPYYMDDXXXXX

MADE IN XXXXXX

- 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
- 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.
4. 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 the 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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