

2.75 ×5.25mm Silicon PIN Photodiode PD638B

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
- .Compliance Halogen Free. (Br<900ppm,Cl<900ppm,Br+Cl<1500ppm)

Description

- . PD638B is a high speed and sensitive PIN photodiode in a flat 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	Black

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 to +85	°C
Storage Temperature	T_{stg}	-40 to +100	°C
Soldering Temperature(*1)	T_{sol}	260	°C

Notes: *1: Soldering time $\leq$ 5 seconds.

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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	λp	-----	940	-----	nm	-----
Open-Circuit Voltage	VOC	-----	0.35	-----	V	Ee=5m W/cm2 $\lambda p=940nm$
Short- Circuit Current	ISC	-----	18	-----	uA	Ee=1m W/cm2 $\lambda p=940nm$
Reverse Light Current	IL	10.2	18	-----	uA	Ee=1m W/cm2 $\lambda p=940nm$ VR=5V
Dark Current	Id	----	5	30	nA	Ee=0m W/cm2 VR=10V
Reverse Breakdown	BVR	32	170	-----	V	Ee=0m W/cm2 IR=100μA
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:

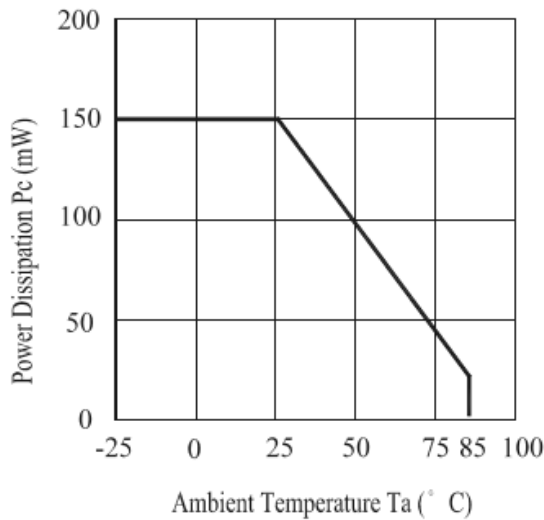
Tolerance of Luminous Intensity: ±10%
Tolerance of Dominant Wavelength: ±1nm
Tolerance of Forward Voltage: ±0.1V

Rank

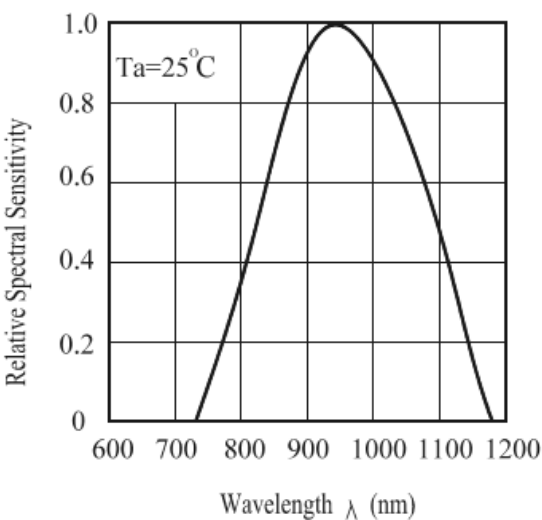
Parameter	Symbol	Min	Max	Unit	Test Condition
BIN1	IL	10.2	16.5	uA	Ee=1m W/cm2 $\lambda p=940nm$ VR=5V
BIN2		13.5	22.0		
BIN3		18.0	27.5		
BIN4		22.5	33.0		

Typical Electro-Optical Characteristics Curves

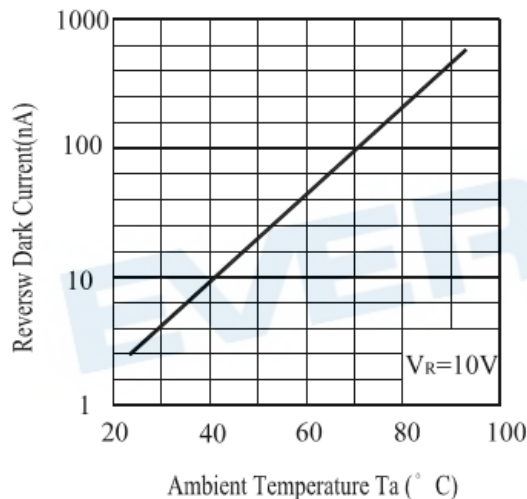
Power Dissipation vs. Ambient Temperature



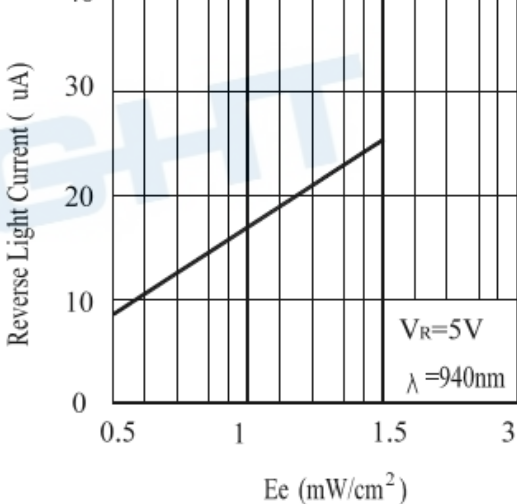
Spectral Sensitivity



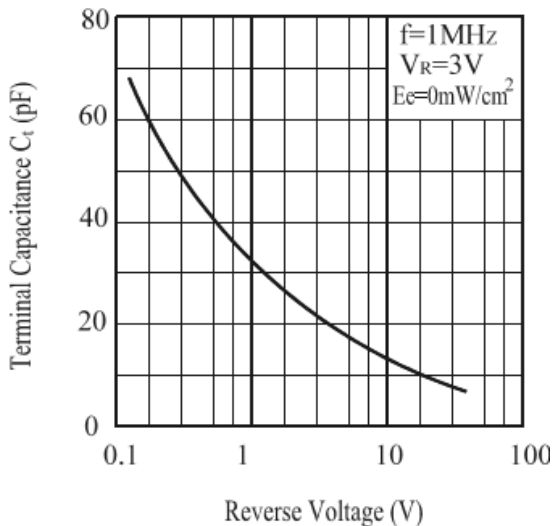
Dark Current vs. Ambient Temperature



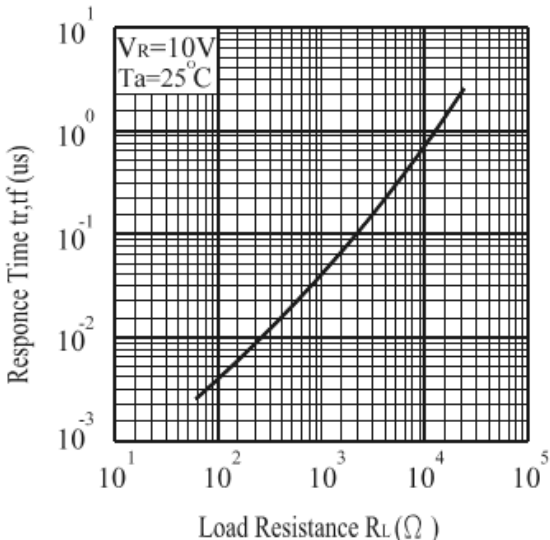
Reverse Light Current vs. E_e



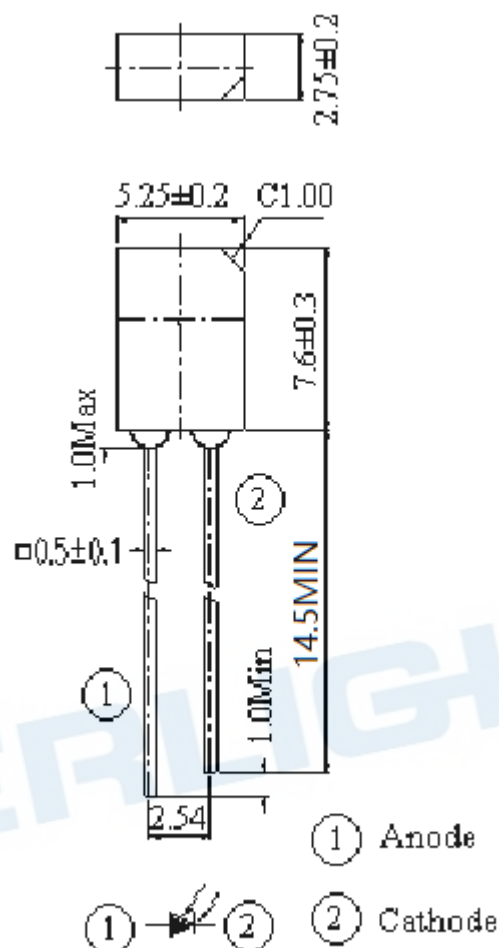
Terminal Capacitance vs. Reverse Voltage



Response Time vs. Load Resistance



Package Dimension



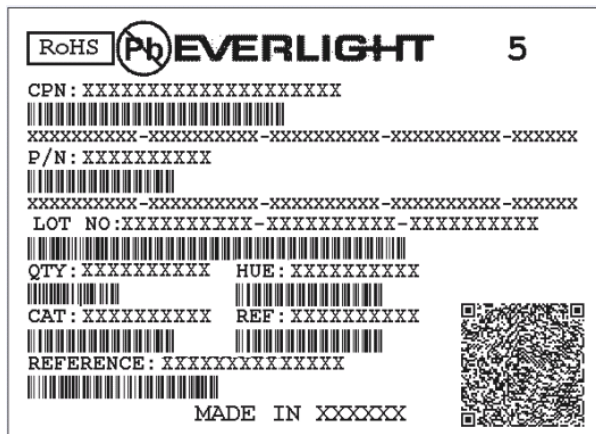
Note: Tolerances unless dimensions ± 0.25 mm
Note: Remark yellow line at back side

Packing Specification

■ Packing Quantity

1. 1000 PCS/1 Bag, 4 ags/1 Inner Carton
2. 10Inner Cartons/1 Outside Carton

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

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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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