Technical Data Sheet

3.0x5.2mm Silicon PIN Photodiode: PD638C3

■ Features



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

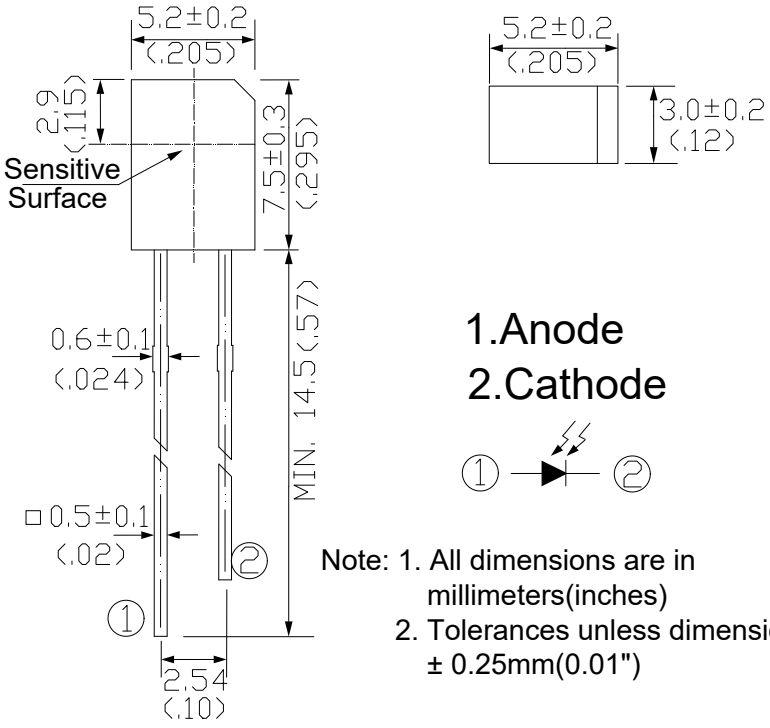
■ Descriptions

PD638C3 is a high speed and high sensitive PIN photodiode in a flat side view plastic package. Due to its water clear epoxy the device is sensitive to visible and infrared radiation.

■ Applications

. High speed photo detector
. VCRs , Video camera
. Camera
. Optoelectronic switch
. Scanning Gun

■ Package Dimensions



Note: 1. All dimensions are in millimeters(inches)
2. Tolerances unless dimensions ± 0.25mm(0.01")

■ Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Units
Reverse Voltage	VR	30	V
Power Dissipation	Pd	150	mW
Lead Soldering Temperature	Tsol	260	℃
Operating Temperature	Topr	-40 ~ +85	℃
Storage Temperature	Tstg	-40 ~ +85	℃

■ Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Range of Spectral Bandwidth	$\lambda_{0.5}$	---	400	---	1100	nm
Wavelength of Peak Sensitivity	λ_p	---	---	940	---	nm
Open-Circuit Voltage	V_{OC}	Ee=5m W/cm2 λ_p=940nm	---	0. 35	---	V
Short- Circuit Current	I_{SC}	Ee=5m W/cm2 λ_p=940nm	---	80	---	μA
Reverse Light Current	I_L	Ee=5m W/cm2 λ_p=940nm V_R=5V	70	80	---	μA
Dark Current	Id	Ee=0m W/cm2 V_R=10V	---	---	10	nA
Reverse Breakdown	BV_R	Ee=0m W/cm2 I_R=100 μA	30	---	---	V
Total Capacitance	Ct	Ee=0m W/cm2 V_R=3V f=1MHZ	---	25	---	pF
Rise/Fall Time	t_r/t_f	V_R=10V R_L=1K Ω		50/50		nS

■ Typical Electro-Optical Characteristics Curves

Fig.1 Power Dissipation vs. Ambient Temperature

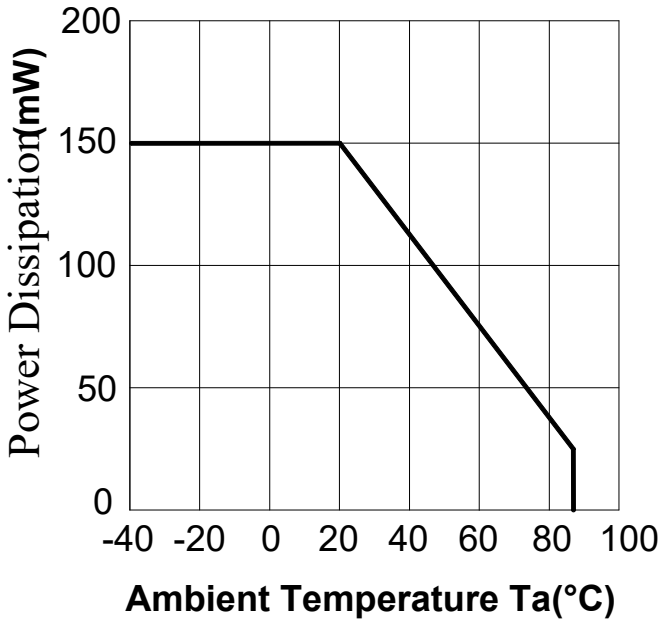


Fig.2 Spectral Sensitivity

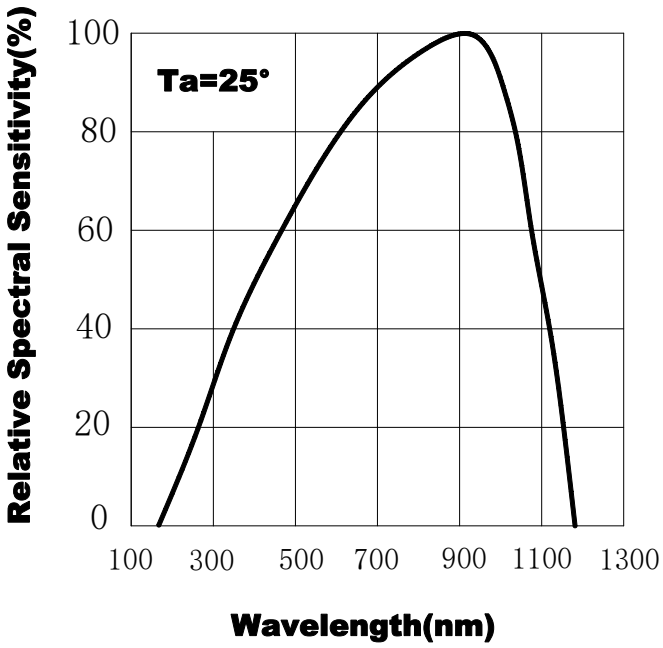


Fig.3 Dark Current vs. Ambient Temperature

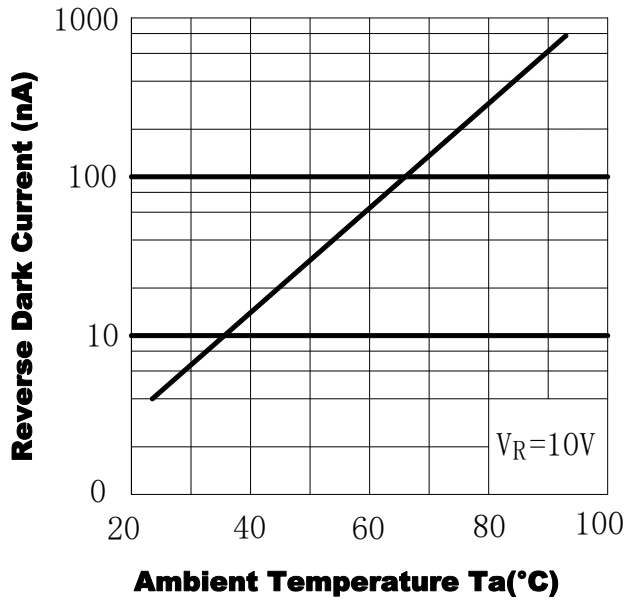


Fig.4 Reverse Light Current vs. Ee

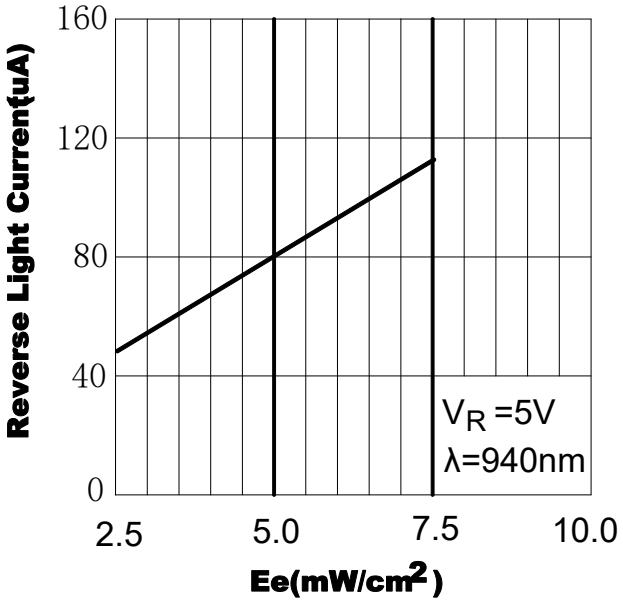


Fig.5 Terminal Capacitance vs. Reverse Voltage

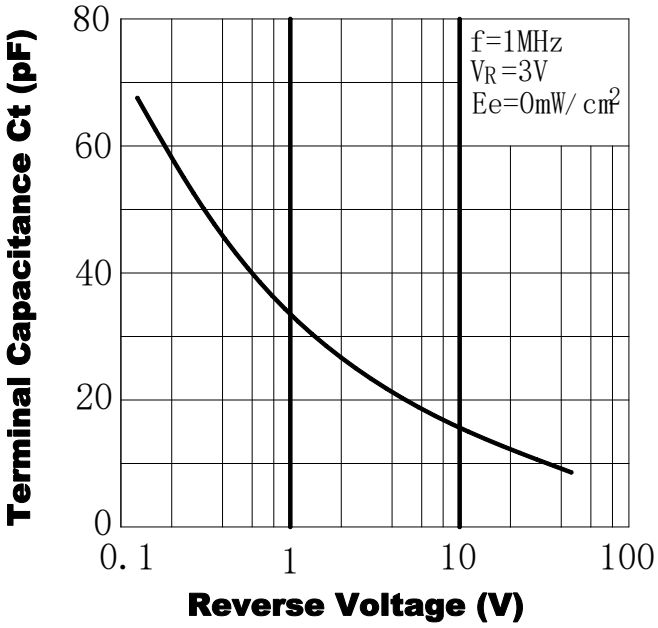
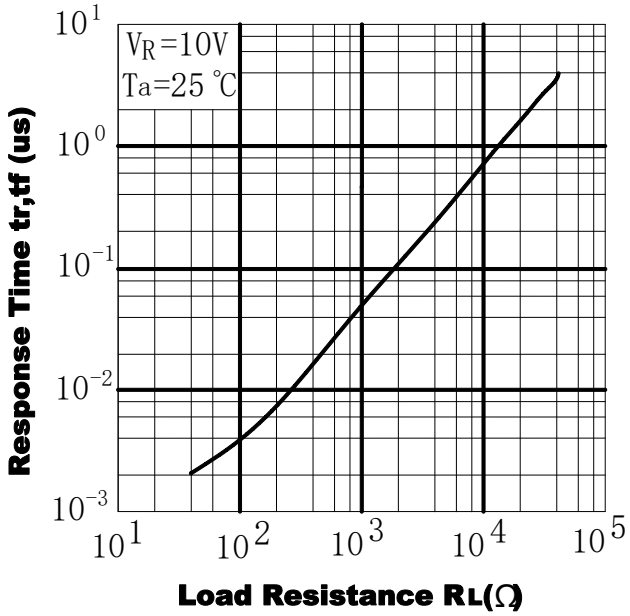


Fig.6 Response Time vs. Load Resistance



■ Packing Quantity Specification

1. 500PCS/1Bag

■ Notes

1. Above specification may be changed without notice. SHUGUAN 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. SHUGUAN 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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