DATASHEET

5mm Silicon PIN Photodiode
PD333-3C/H0/L811

Features

- Fast response time
- High photo sensitivity
- Small junction capacitance
- Pb Free
- This product itself will remain within RoHS compliant version.
- Compliance with EU REACH
- Compliance Halogen Free .(Br <900 ppm ,Cl <900 ppm , Br+Cl < 1500 ppm)

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Description

PD333-3C/H0/L811is a high speed and high sensitive PIN photodiode in a standard 5ψplastic package. Due to its water clear epoxy the device is sensitive to visible and infrared radiation.

Applications

- High speed photo detector
- Security system
- Camera

Device Selection Guide

Chip Materials	Lens Color
Silicon	Water clear

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	35	V
Power Dissipation	Pd	150	mW
Lead Soldering Temperature	Tsol	260	℃
Operating Temperature	Topr	-25 ~ +85	℃
Storage Temperature	Tstg	-40 ~ +100	℃

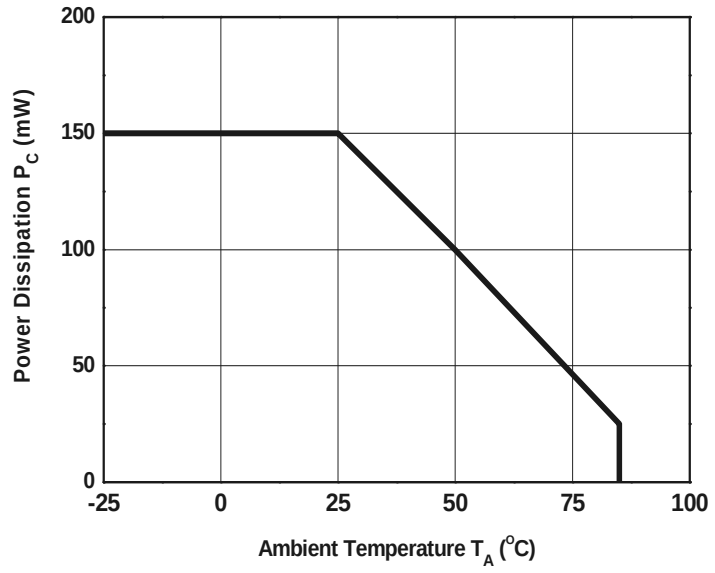
Notes: *1:Soldering time≦5 seconds.

Electro-Optical Characteristics (Ta=25℃)

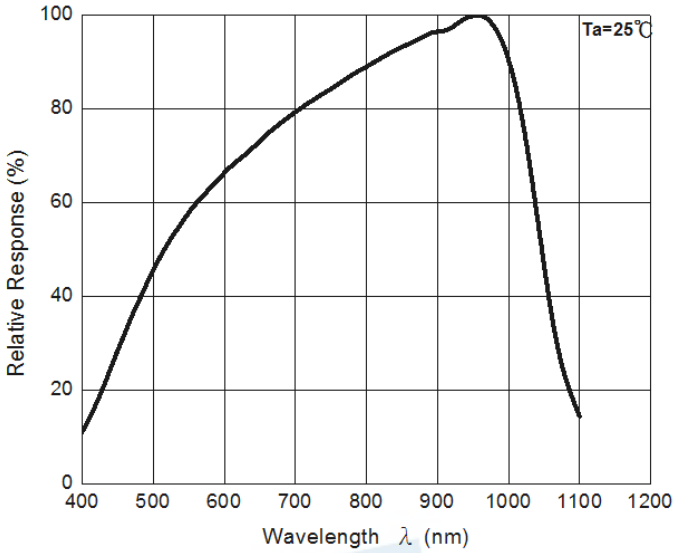
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Range Of Spectral Bandwidth	$\lambda_{0.1}$	400	---	1100	nm	-----
Wavelength Of Peak Sensitivity	λ_P	---	940	---	nm	-----
Open-Circuit Voltage	V_{OC}	---	0.38	---	V	Ee=1m W/cm^2 λ p=470nm
Short- Circuit Current	I_{SC}	---	45	---	μ A	Ee=1m W/cm^2 λ p=470nm
Reverse Light Current	I_L	30	46	---	μ A	Ee=1m W/cm^2 λ p=470nm V_R=5V
Reverse Light Current		50	60	---		Ee=1m W/cm^2 λ p=940nm V_R=5V
Reverse Dark Current	I_D	---	---	10	nA	Ee=0m W/cm^2 V_R=10V
Reverse Breakdown Voltage	V_{BR}	35	130	---	V	Ee=0m W/cm^2 I_R=100 μ A
View Angle	2θ1/2	--	80	--	deg	I_F=20mA

Typical Electrical/Optical/Characteristics Curves

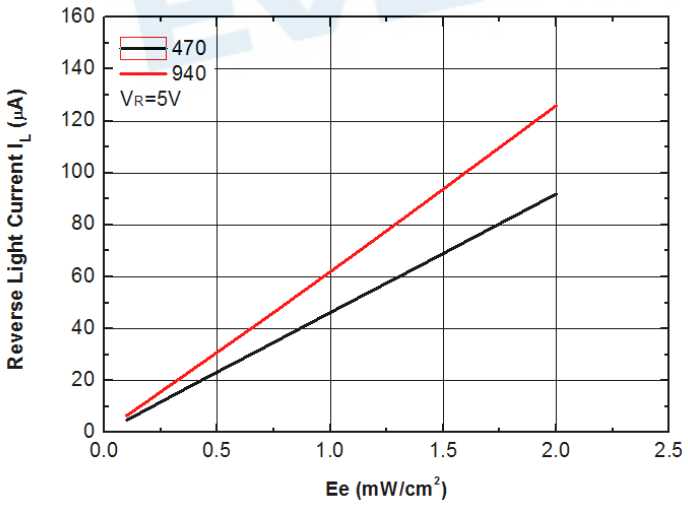
Power Dissipation vs. Ambient Temperature



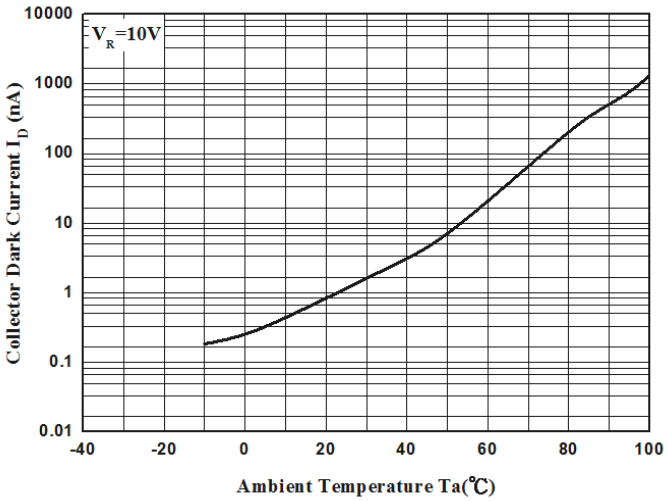
Spectral Sensitivity



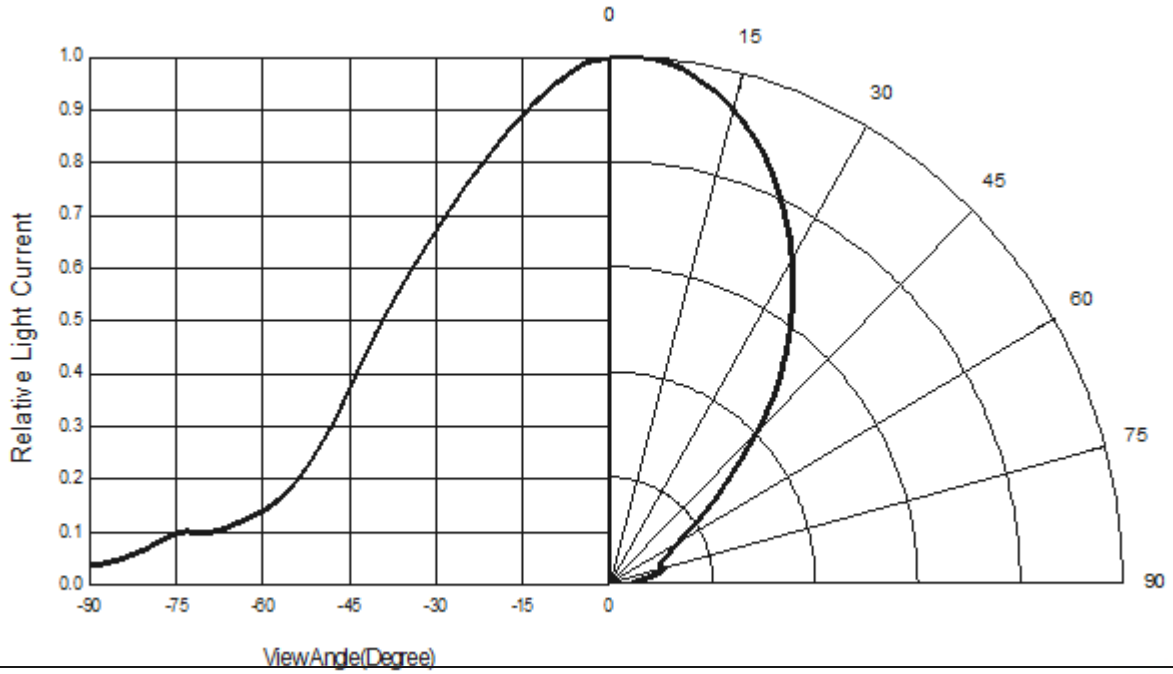
Reverse Light Current vs. Ee



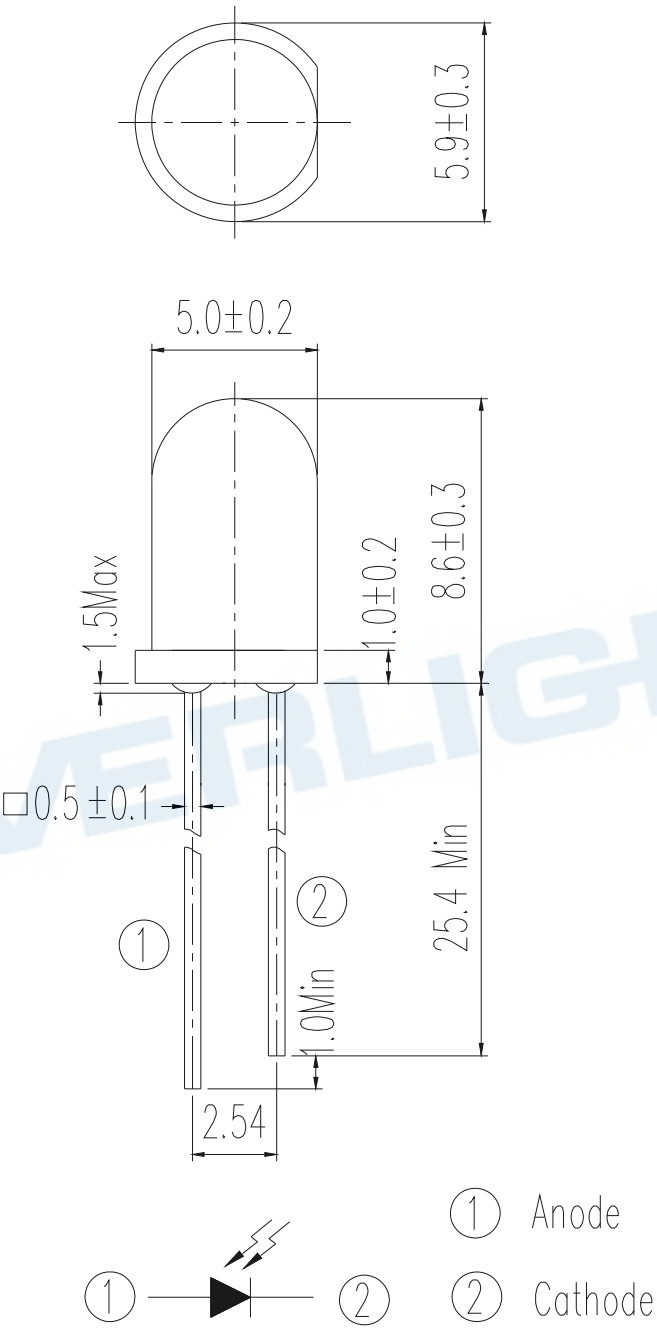
Dark Current vs. Ambient Temperature



Relative Light Current vs. Angular Displacement

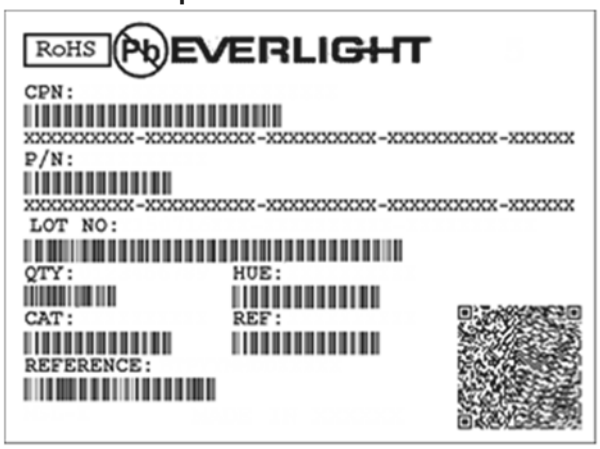


Package Dimension



Note: Tolerances unless dimensions ±0.25mm

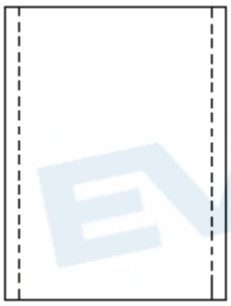
Label Form Specification



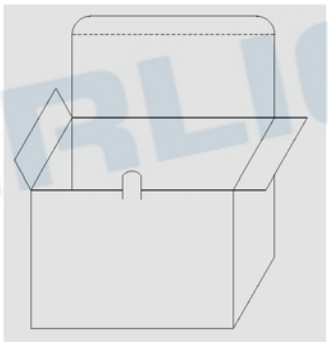
- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number
- X: Month
- Reference: Identify Label Number

Packing Specification

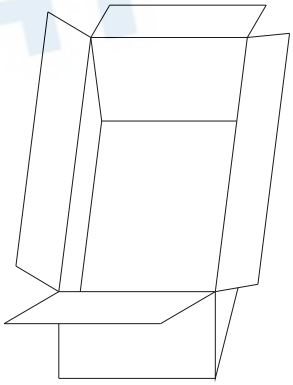
■ Anti-electrostatic bag



■ Inner Carton



■ Outside Carton



■ Packing Quantity
1. 500 PCS/1 Bag, 5 Bags/1 Inner Carton
2. 10 Inner Cartons/1 Outside Carton

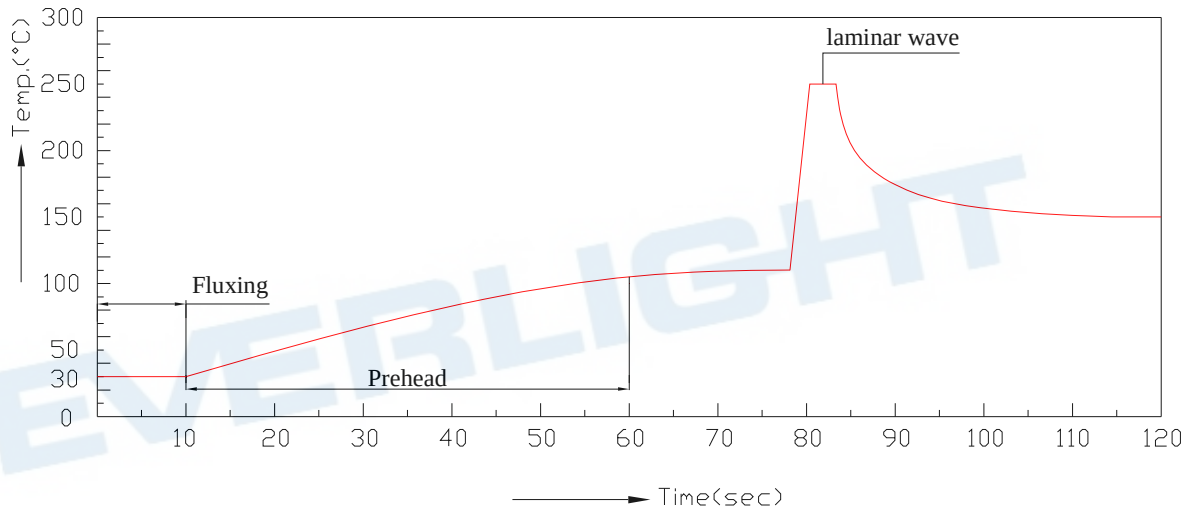
Notes

Soldering

- Careful attention should be paid during soldering. When soldering, leave more then 3mm from solder joint to epoxy bulb, and soldering beyond the base of the tie bar is recommended.
- Recommended soldering conditions:

Hand Soldering		DIP Soldering	
Temp. at tip of iron	350℃ Max. (30W Max.)	Preheat temp.	100℃ Max. (60 sec Max.)
Soldering time	3 sec Max.	Bath temp. & time	260 Max., 5 sec Max
Distance	3mm Min.(From solder joint to epoxy bulb)	Distance	3mm Min. (From solder joint to epoxy bulb)

- Recommended soldering profile



- Avoiding applying any stress to the lead frame while the LEDs are at high temperature particularly when soldering.
- Dip and hand soldering should not be done more than one time
- After soldering the LEDs, the epoxy bulb should be protected from mechanical shock or vibration until the LEDs return to room temperature.
- A rapid-rate process is not recommended for cooling the LEDs down from the peak temperature.
  Although the recommended soldering conditions are specified in the above table, dip or hand soldering at the lowest
  possible temperature is desirable for the LEDs.
- Wave soldering parameter must be set and maintain according to recommended temperature and dwell time in the solder wave.

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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