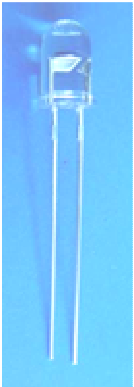


### 5mm Silicon PIN Photodiode PD333-3C/L793



#### 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)

#### Description

PD333-3C/L793 is a high speed and high sensitive PIN photodiode in a standard 5mm epoxy package. Due to it's 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°C)**

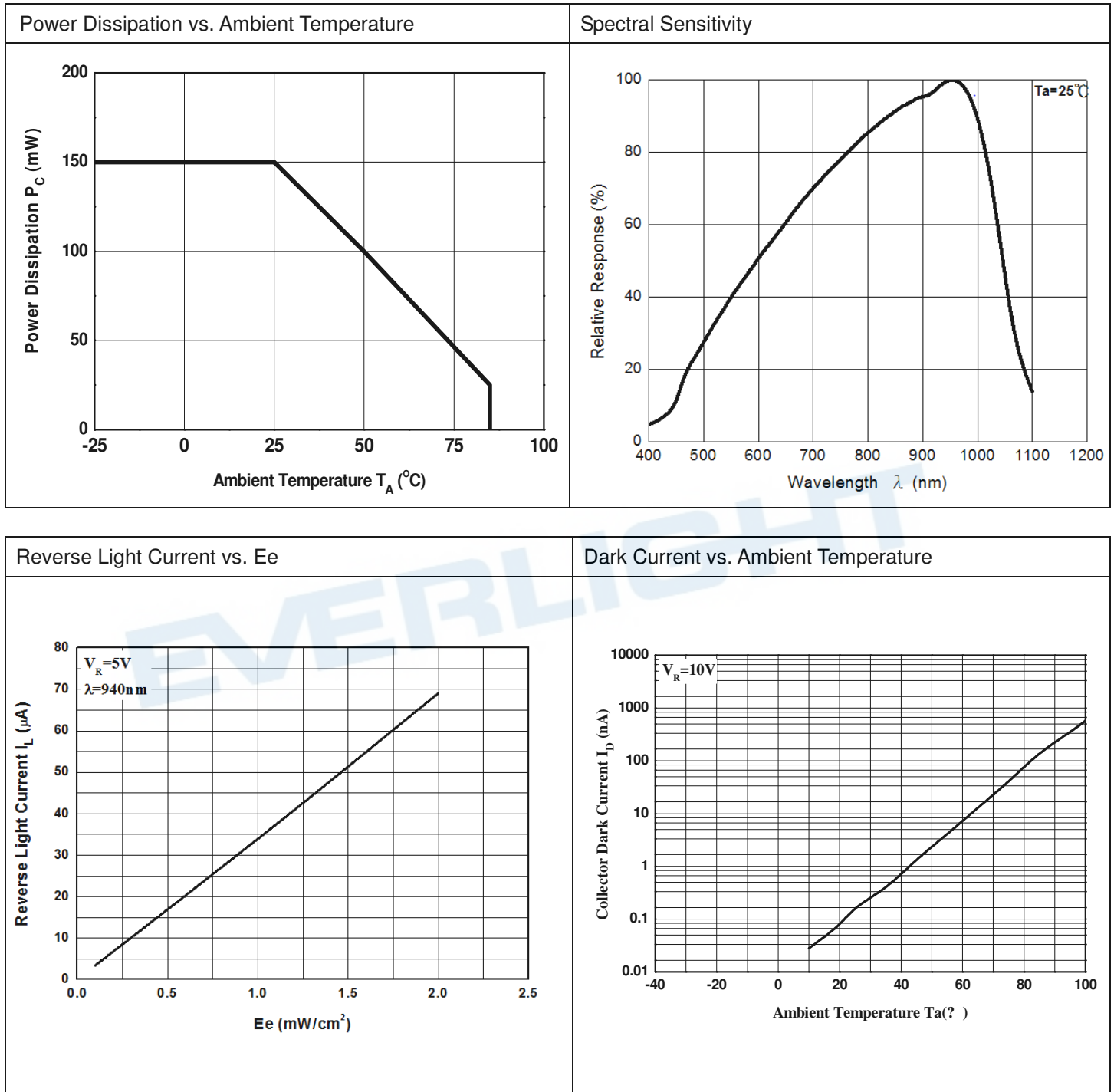
Parameter	Symbol	Rating	Unit
Reverse Voltage	V <sub>R</sub>	30	V
Power Dissipation	P <sub>d</sub>	150	mW
Lead Soldering Temperature	T <sub>sol</sub>	260	°C
Operating Temperature	T <sub>opr</sub>	-25 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +100	°C

**Notes:** \*1:Soldering time≤5 seconds.

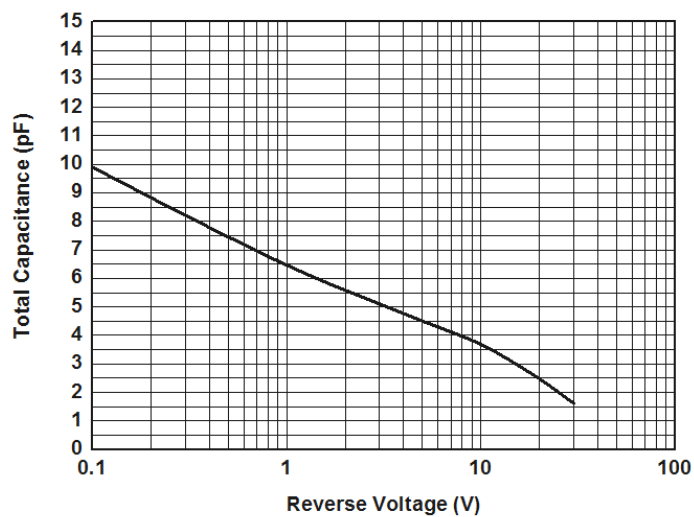
**Electro-Optical Characteristics (Ta=25°C)**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Range Of Spectral Bandwidth	$\lambda_{0.1}$	400	---	1100	nm	-----
Wavelength Of Peak Sensitivity	$\lambda_P$	---	940	---	nm	-----
Open-Circuit Voltage	$V_{OC}$	---	0.35	---	V	Ee=1m W/cm <sup>2</sup> $\lambda_p=940nm$
Short- Circuit Current	$I_{SC}$	---	30	---	$\mu A$	Ee=1m W/cm <sup>2</sup> $\lambda_p=940nm$
Reverse Light Current	$I_L$	20	33	45	$\mu A$	Ee=1m W/cm <sup>2</sup> $\lambda_p=940nm$ $V_R=5V$
Reverse Dark Current	$I_D$	---	---	10	nA	Ee=0m W/cm <sup>2</sup> $V_R=10V$
Reverse Breakdown Voltage	$V_{BR}$	30	170	---	V	Ee=0m W/cm <sup>2</sup> $I_R=100\mu A$
Total Capacitance	$C_t$	---	4.5	---	pF	Ee=0m W/cm <sup>2</sup> $V_R=3V$ $f=1MHz$
View Angle	2 $\theta_{1/2}$	--	40	--	deg	$I_F=20mA$

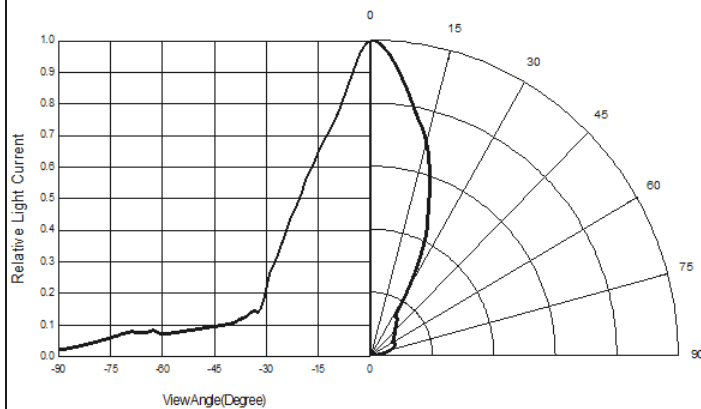
## Typical Electrical Optical Characteristics Curves



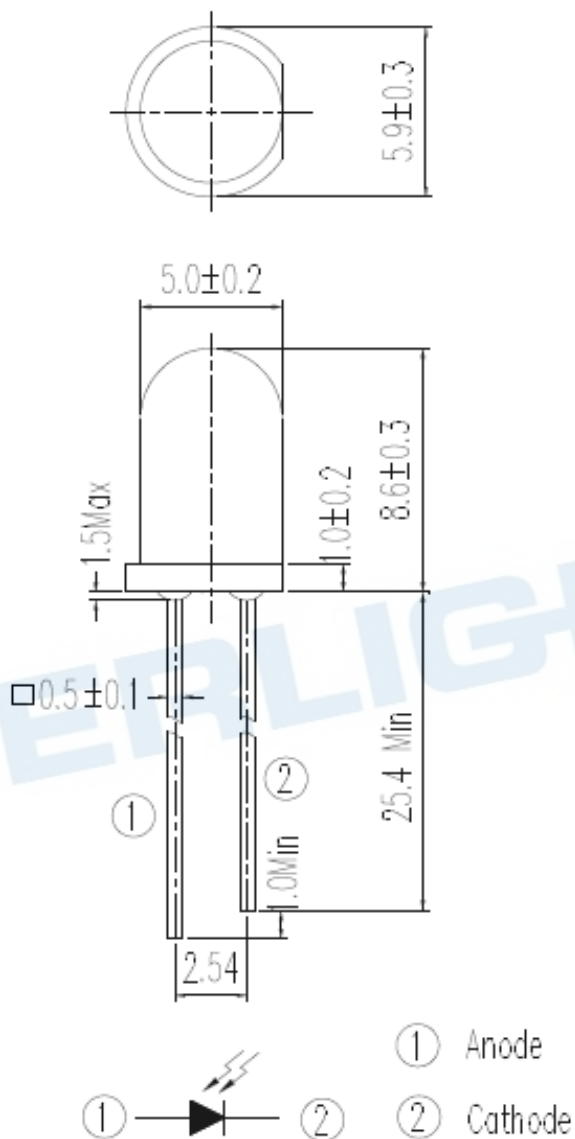
Terminal Capacitance vs. Reverse Voltage



Relative Light Current vs. Angular Displacement



## Package Dimension

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

## Label Form Specification

RoHS (Pb) EVERLIGHT

CPN:  
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX

P/N:  
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX

LOT NO:  
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX

QTY: HUE:  
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX

CAT: REF:  
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX

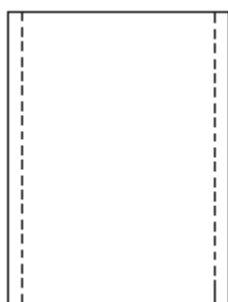
REFERENCE:  
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX

QR Code

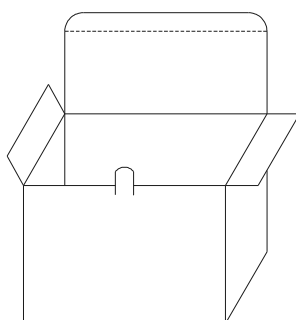
- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number
- X: Month
- Reference: Identify Label Number

## Packing Specification

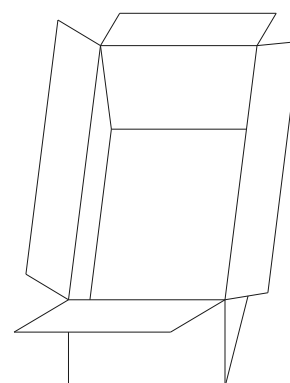
### ■ Anti-electrostatic bag



### ■ Inner Carton



### ■ Outside Carton



### ■ Packing Quantity

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

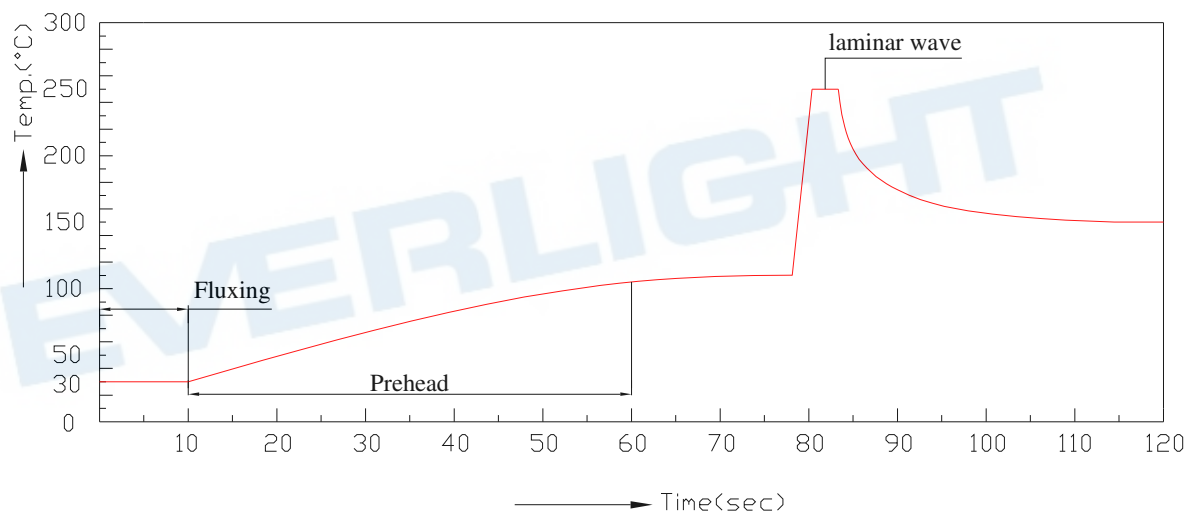
## Notes

### Soldering

- Careful attention should be paid during soldering. When soldering, leave more than 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°C Max. (30W Max.)	Preheat temp.	100 °C 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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