

### 3mm Photodiode, T-1 EAPDLP03RDAA1



#### Features

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

#### Description

EAPDLP03RDAA1 is a high speed and high sensitive PIN photodiode in a standard 3Φ plastic package.

Due to its water clear epoxy the device is sensitive to visible and infrared radiation.

#### Applications

- Automatic door sensor
- Camera
- Game machine
- High speed photo detector

### Device Selection Guide

Chip Materials	Lens Color
Silicon	Water clear

### Absolute Maximum Ratings (Ta=25°C)

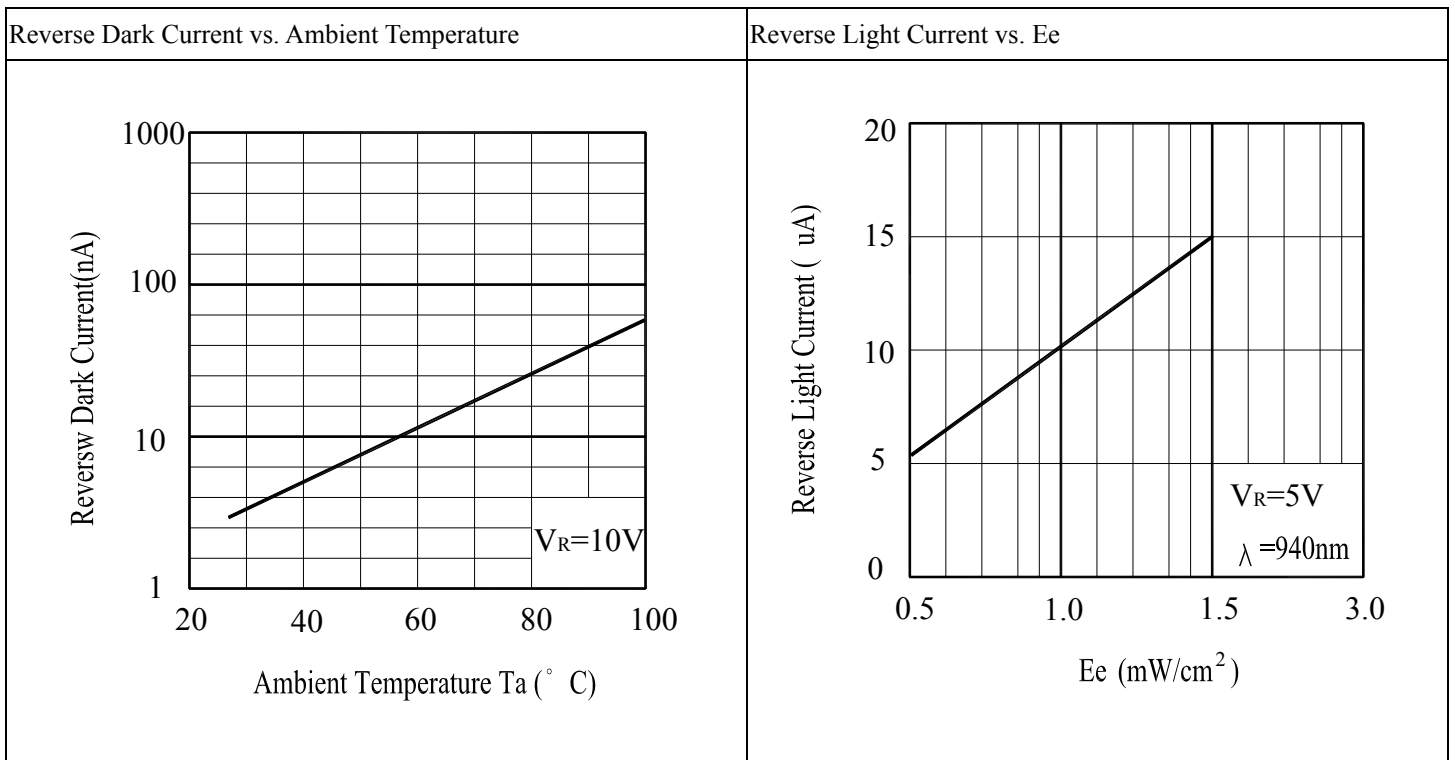
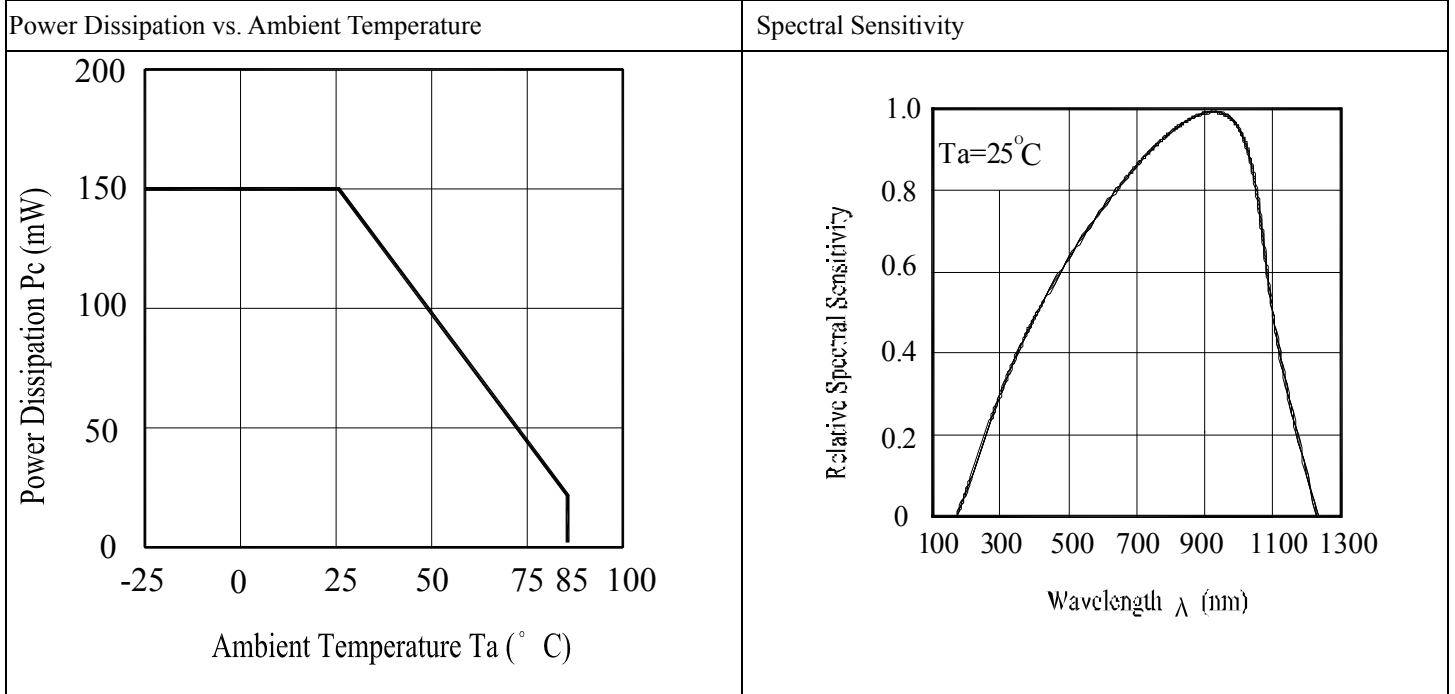
Parameter	Symbol	Rating	Unit
Reverse Voltage	V <sub>R</sub>	32	V
Operating Temperature	T <sub>opr</sub>	-40 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +100	°C
Soldering Temperature	T <sub>sol</sub>	260	°C
Power Dissipation at (or below) 25°C Free Air Temperature	P <sub>c</sub>	150	mW

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

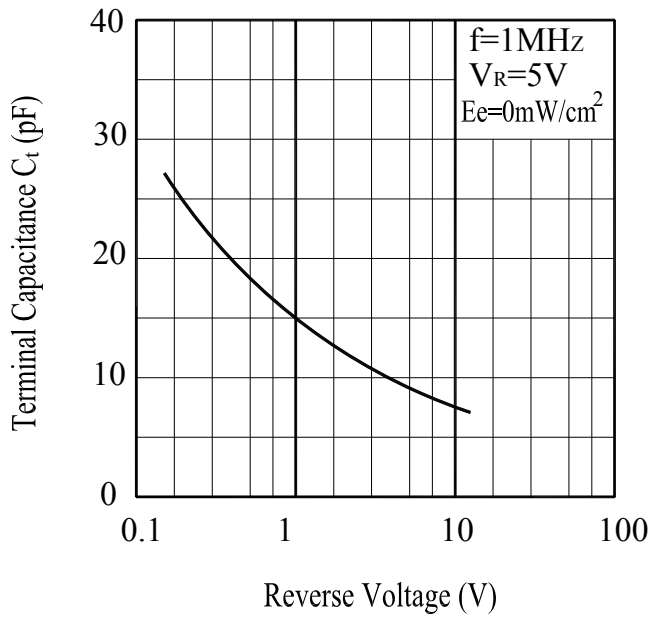
**Electro-Optical Characteristics (Ta=25°C)**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Range Of Spectral Bandwidth	$\lambda_{0.5}$	400	---	1100	nm	----
Wavelength Of Peak Sensitivity	$\lambda_P$	---	940	---	nm	----
Open-Circuit Voltage	$V_{OC}$	---	0.44	---	V	Ee=5mW/cm <sup>2</sup> $\lambda_P=940\text{nm}$
Short- Circuit Current	$I_{SC}$	---	10	---	$\mu\text{A}$	Ee=1mW/cm <sup>2</sup> $\lambda_P=940\text{nm}$
Reverse Light Current	$I_L$	---	10	---	$\mu\text{A}$	Ee=1mW/cm <sup>2</sup> $\lambda_P=940\text{nm}$ $V_R=5\text{V}$
Reverse Dark Current	$I_D$	---	---	10	nA	Ee=0mW/cm <sup>2</sup> $V_R=10\text{V}$
Reverse Breakdown Voltage	$V_{BR}$	32	170	---	V	Ee=0mW/cm <sup>2</sup> $I_R=100\mu\text{A}$
Total Capacitance	$C_t$	---	10	---	pF	Ee=0mW/cm <sup>2</sup> $V_R=5\text{V}$ $f=1\text{MHz}$
Rise Time/ Fall Time	$t_r / t_f$	----	10	----	ns	$V_R=10\text{V}$ $R_L=100\Omega$
View Angle	2 $\theta_{1/2}$	----	45	----	deg	$I_F=20\text{mA}$

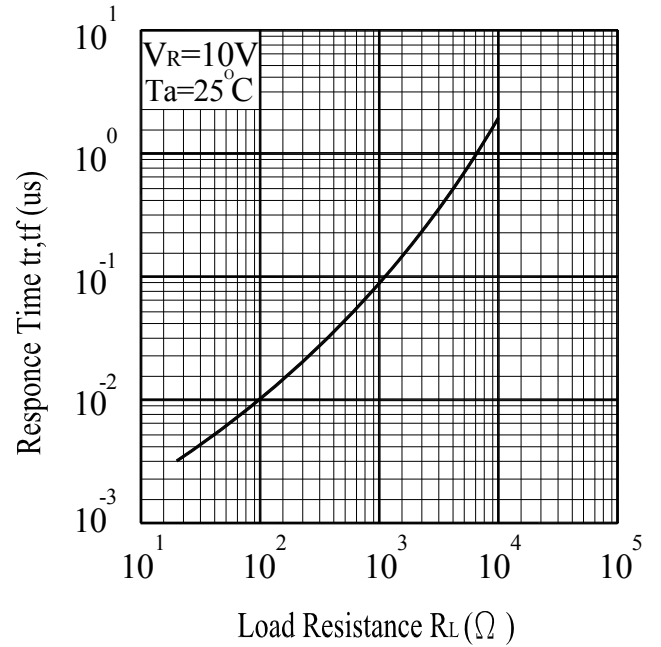
**Typical Electro-Optical Characteristics Curves**



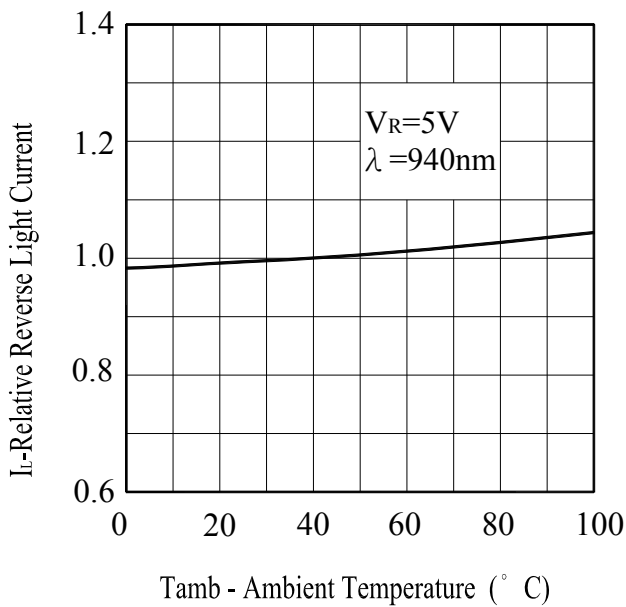
Terminal Capacitance vs. Reverse Voltage



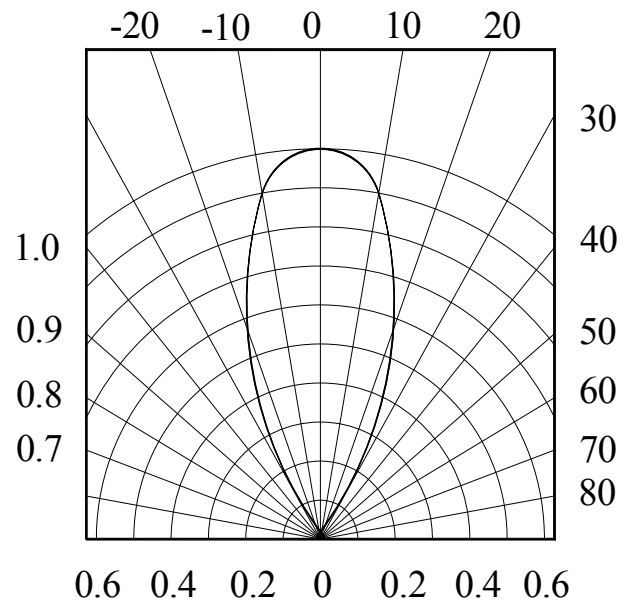
Response Time vs. Load Resistance



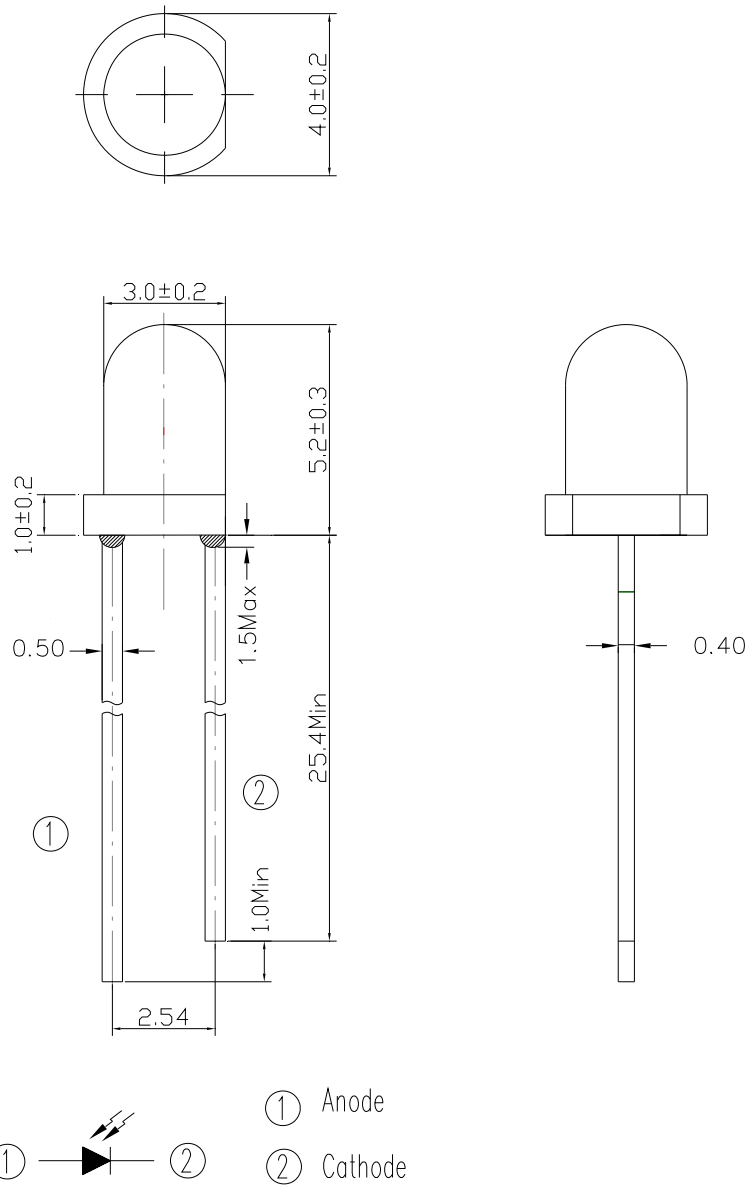
Relative Reverse Light Current vs. Ambient Temperature



Sensitivity Diagram

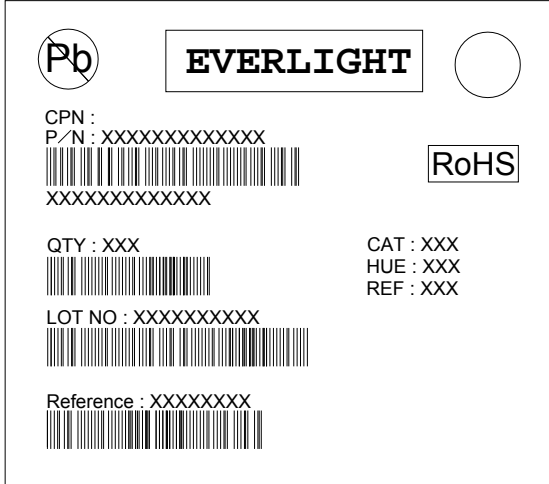


### Package Dimension



Note: Tolerances unless dimensions  $\pm 0.25$ mm

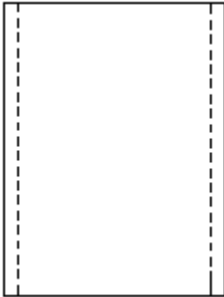
### Label Form Specification



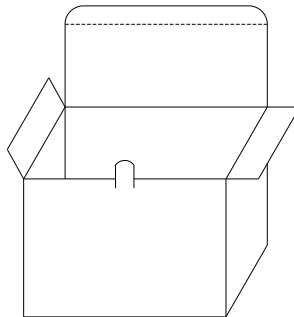
- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number
- X: Month
- Reference: Identify Label Number

### Packing Specification

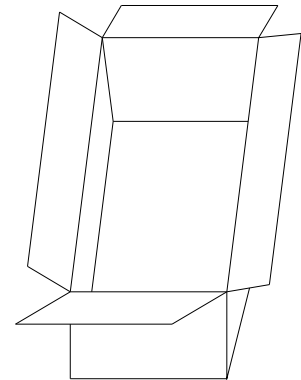
#### ■ Anti-electrostatic bag



#### ■ Inner Carton



#### ■ Outside Carton



#### ■ Packing Quantity

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

**Notes**

1. Above specification may be changed without notice. Everlight Americas 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. Everlight Americas 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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