

### 3mm Infrared LED,T-1 3/4 EAILP03RDAB1



Preliminary

#### Features

- High reliability
- High radiant intensity
- Peak wavelength  $\lambda_p=940\text{nm}$
- 2.54mm Lead spacing
- Low forward voltage
- Pb Free
- This product itself will remain within RoHS compliant version.

#### Description

- EVERLIGHT's Infrared Emitting Diode (EAILP03RDAB1) is a high intensity diode , molded in a blue plastic package.
- The device is spectrally matched with phototransistor , photodiode and infrared receiver module.

#### Applications

- Free air transmission system
- Infrared remote control units with high power requirement
- Smoke detector
- Infrared applied system

## Device Selection Guide

Chip Materials	Lens Color
GaAlAs	blue

## Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Continuous Forward Current	$I_F$	100	mA
Peak Forward Current(*1)	$I_{FP}$	1.0	A
Reverse Voltage	$V_R$	5	V
Operating Temperature	$T_{opr}$	-40 ~ +85	°C
Storage Temperature	$T_{stg}$	-40 ~ +100	°C
Soldering Temperature	$T_{sol}$	260°C for 5sec	°C
Power Dissipation at (or below) 25°C Free Air Temperature	$P_d$	150	mW

**Notes:** \*1: $I_{FP}$  Conditions--Pulse Width  $\leq 100\mu s$  and Duty  $\leq 1\%$ .

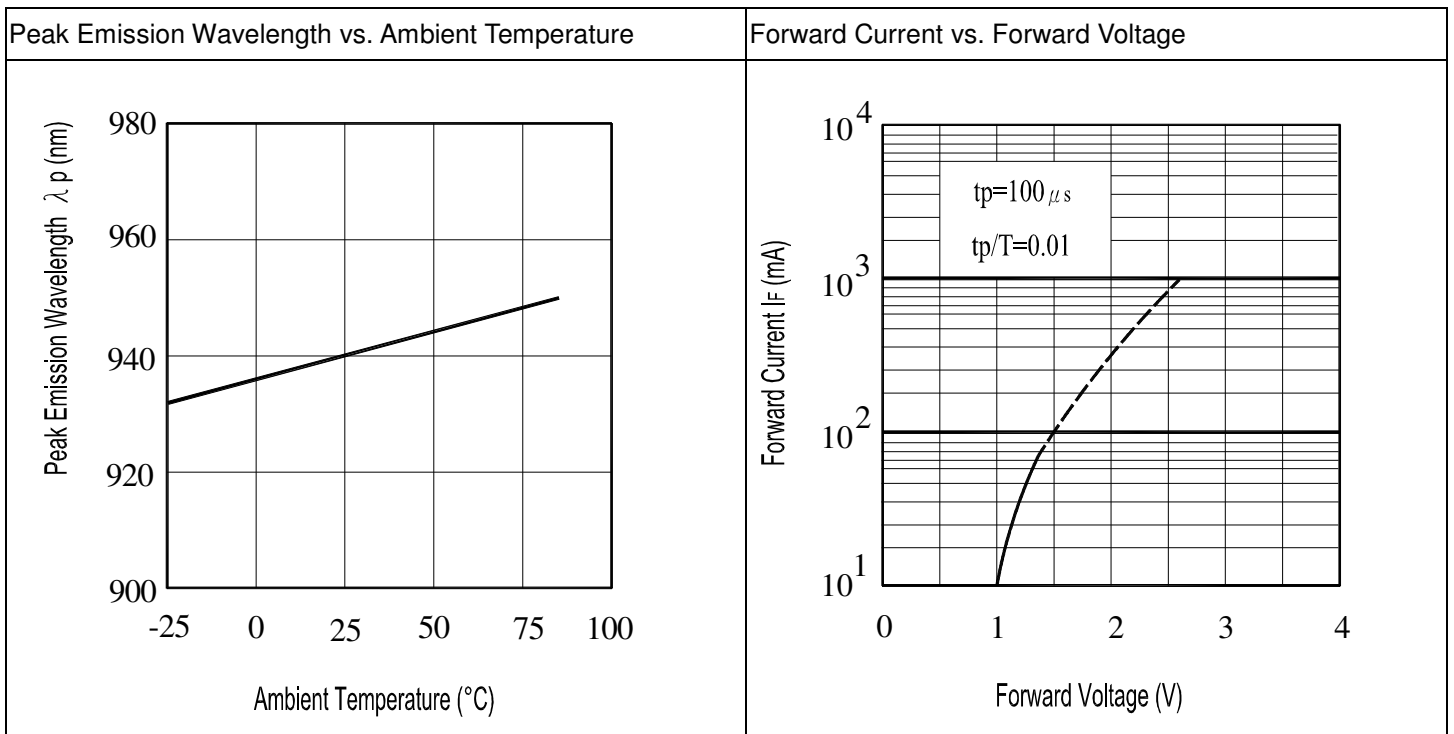
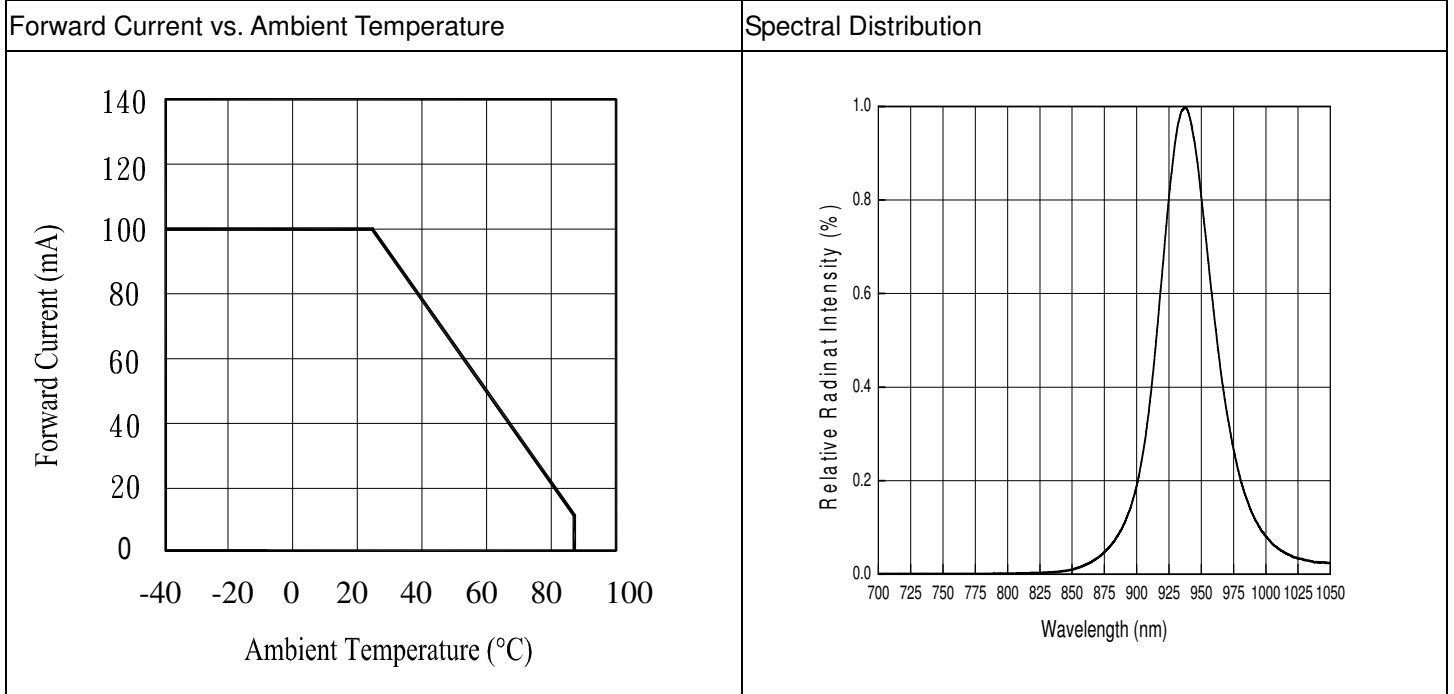
**Electro-Optical Characteristics (Ta=25°C)**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Radiant Intensity	I <sub>e</sub>	4.0	7.8	-----	mW/sr	I <sub>F</sub> =20mA
		-----	35	-----		I <sub>F</sub> =100mA Pulse Width ≤ 100μs ,Duty ≤ 1%
Peak Wavelength	λ <sub>p</sub>	-----	940	-----	nm	I <sub>F</sub> =20mA
Spectral Bandwidth	Δλ	-----	45	-----	nm	I <sub>F</sub> =20mA
Forward Voltage	V <sub>F</sub>	-----	1.2	1.5	V	I <sub>F</sub> =20mA
		-----	1.4	1.8		I <sub>F</sub> =100mA Pulse Width ≤ 100μs ,Duty ≤ 1%
Reverse Current	I <sub>R</sub>	----	----	10	uA	V <sub>R</sub> =5V
View Angle	2θ1/2	----	35	----	deg	I <sub>F</sub> =20mA

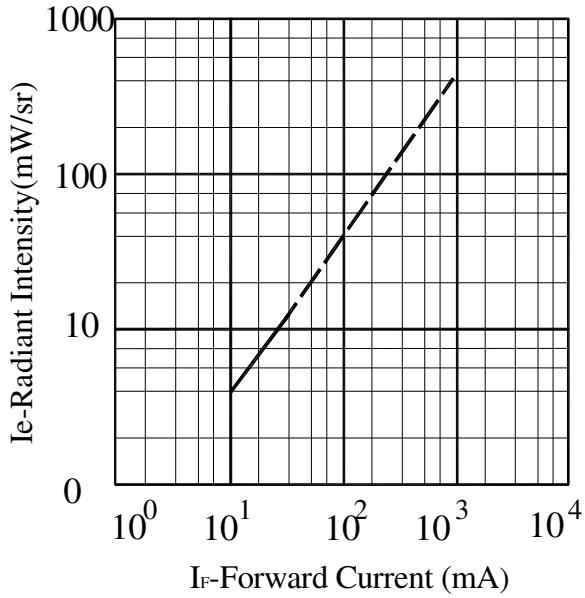
Rank  
Condition : I<sub>F</sub>=20mA  
Unit : mW/sr

Bin Number	<b>K</b>	<b>L</b>	<b>M</b>	<b>N</b>
Min	4.0	5.6	7.8	11.0
Max	6.4	8.9	12.5	17.6

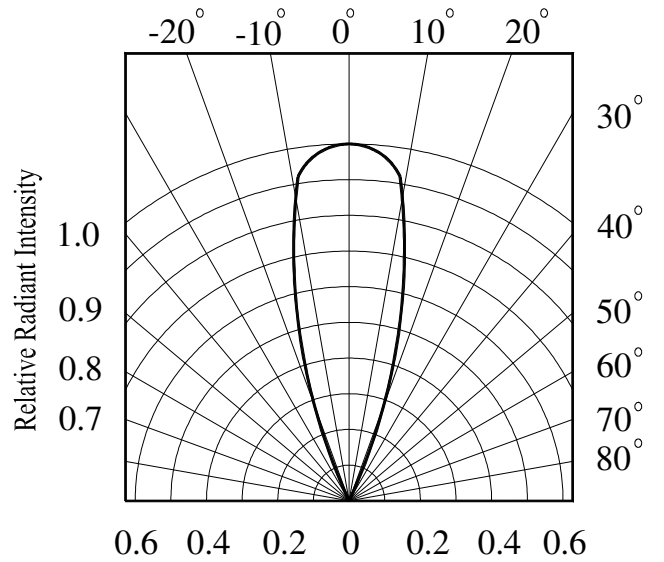
**Typical Electro-Optical Characteristics Curves**



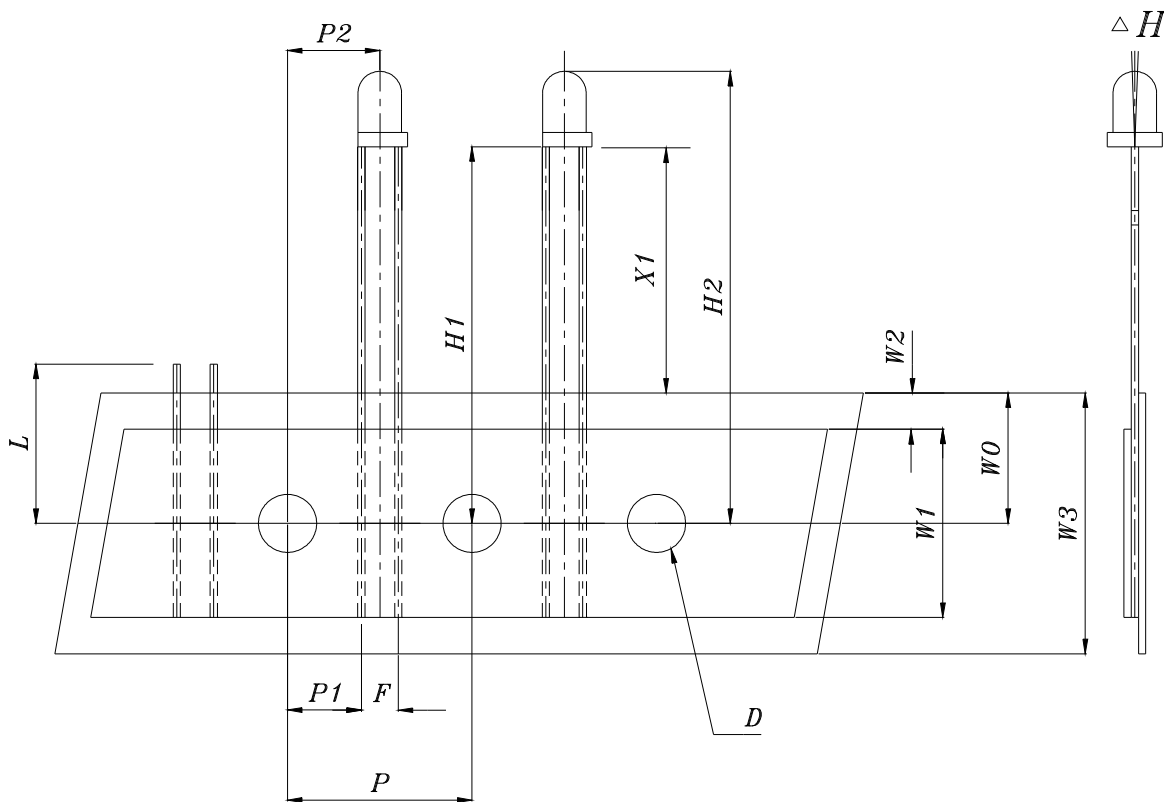
Radiant Intensity vs. Forward Current



Relative Radiant Intensity vs. Angular Displacement



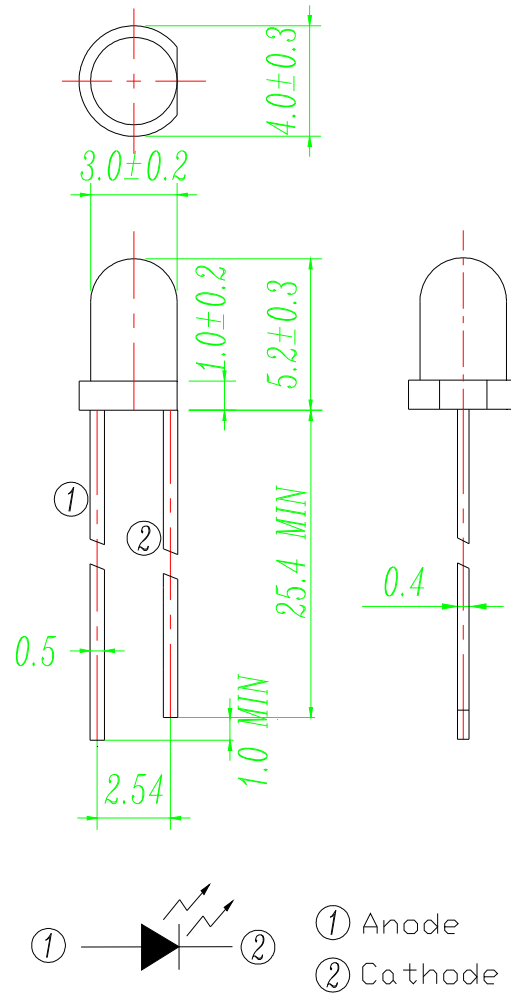
## Taping Dimensions



## Taping Sizes

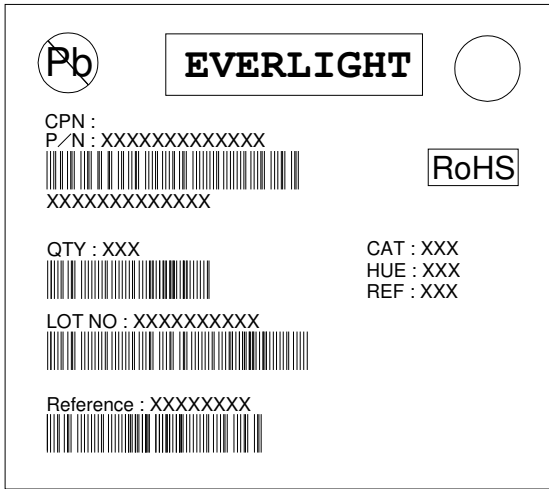
Symbol Item	Symbol	Specifications		
		Avg		Tolerance
		mm	Inch	mm
Tape Feed Hold Diameter	D	4.0	0.157	±0.2
Component Lead Pitch	F	2.54	0.1	+0.8/-0.2
Front-To-Rear Deflection	ΔH	0°	0	±5°
Feed Hole To Button Of Component	H1	18.5	0.728	±1.0
Feed Hole To Overall Component Height	H2	23.7	0.933	±1.0
Button Of Component To Overall Taped	X1	9.0	0.354	+1.0/-0
Lead Length After Component Height	L	11.0	0.433	Max
Feed Hold Pitch	P	12.7	0.500	±0.3
Lead Location	P1	5.08	0.200	±0.7
Center Of Component Location	P2	6.35	0.250	±1.2
Overall Taped Package Thickness	T	1.42	0.056	Max
Feed Hold Location	W0	9.0	0.354	±0.5
Adhesive Tape Width	W1	13.0	0.512	±0.5
Adhesive Tape Position	W2	2.0	0.079	Max
Tape Width	W3	18.0	0.709	±0.75

## Package Dimension



Note: Tolerances unless dimensions  $\pm 0.25$ mm

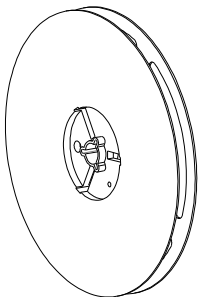
### Label Form Specification



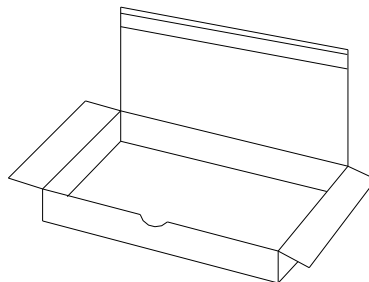
- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number
- Reference: Identify Label Number

### Packing Specification

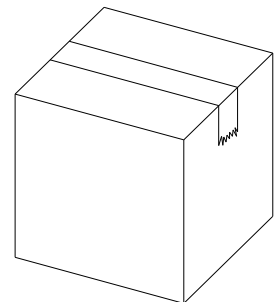
■ Tape



■ Inner Carton



■ Outside Carton



### Packing Quantity Specification

1. 2000PCS/1Tape , 2Tape/1Box,
2. 5Boxes/1Carton

**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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