

3mm Infrared LED , T-1 EAILP03RDAB3

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.

Descriptions

- EVERLIGHT's Infrared Emitting Diode (EAILP03RDAB3) is a high intensity diode , molded in a blue plastic package.
- The device is spectrally matched with phototransistor , photodiode and infrared receiver module.

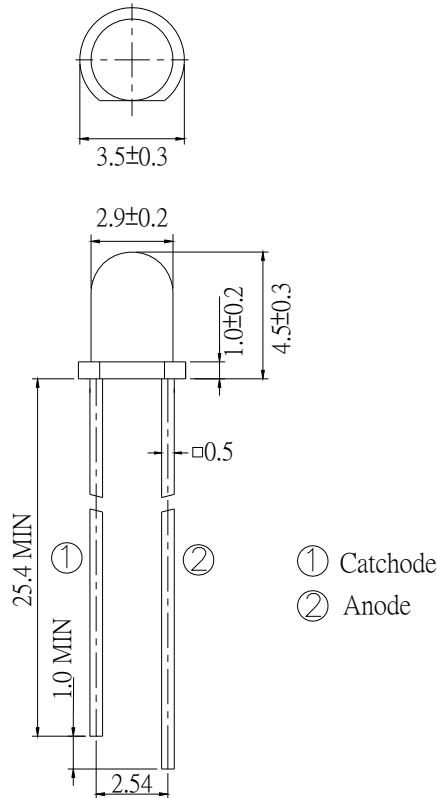
Applications

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

Device Selection Guide

LED Part No.	Chip	Lens Color
	Material	
IR	GaAlAs	Blue

Package Dimensions



- Notes:** 1.All dimensions are in millimeters
2.Tolerances unless dimensions $\pm 0.25\text{mm}$

Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

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

- Notes:** *1: I_{FP} Conditions--Pulse Width $\leq 100\mu\text{s}$ and Duty $\leq 1\%$.
*2:Soldering time ≤ 5 seconds.

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Radiant Intensity	I _e	I _F =20mA	--	5.6	--	mW/sr
		I _F =100mA Pulse Width ≤ 100Ps ,Duty ≤ 1%	--	28	--	
		I _F =1A Pulse Width ≤ 100Ps ,Duty ≤ 1%.	--	280	--	
Peak Wavelength	λ _p	I _F =20mA	--	940	--	nm
Spectral Bandwidth	Δλ	I _F =20mA	--	45	--	nm
Forward Voltage	V _F	I _F =20mA	--	1.2	1.5	V
		I _F =100mA Pulse Width ≤ 100Ps ,Duty ≤ 1%	--	1.4	1.8	
		I _F =1A Pulse Width ≤ 100Ps ,Duty ≤ 1%.	--	2.6	4.0	
Reverse Current	I _R	V _R =5V	--	--	10	PA
View Angle	2θ _{1/2}	I _F =20mA	--	60	--	deg

Typical Electro-Optical Characteristics Curves

Fig.1 Forward Current vs. Ambient Temperature

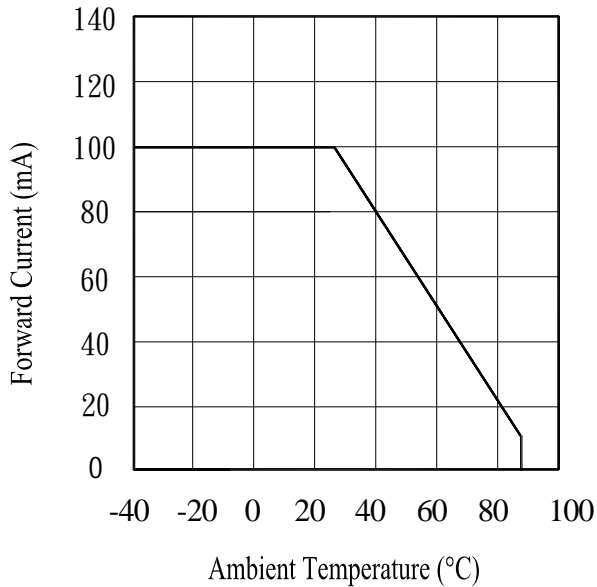


Fig.2 Spectral Distribution

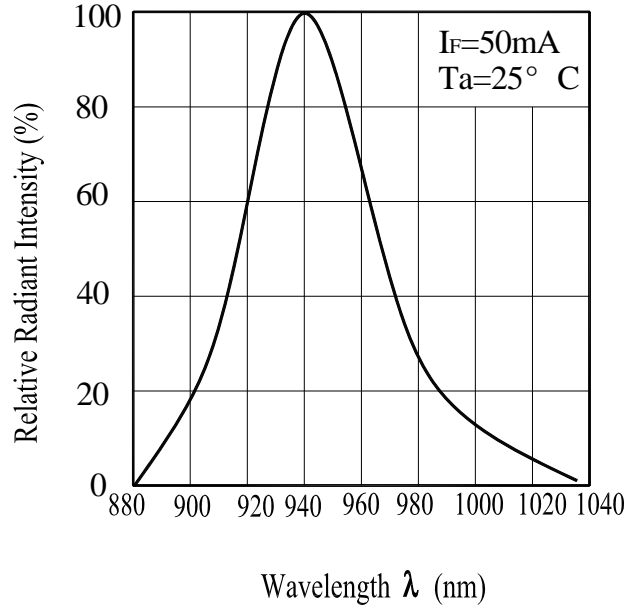


Fig.3 Peak Emission Wavelength vs. Ambient Temperature

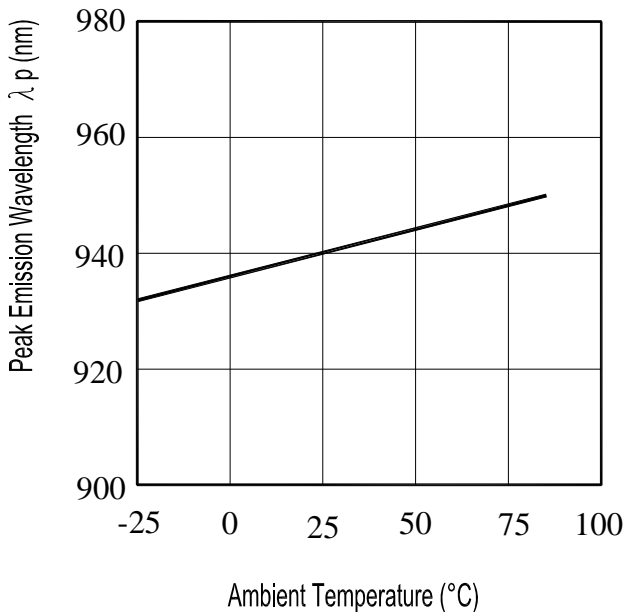
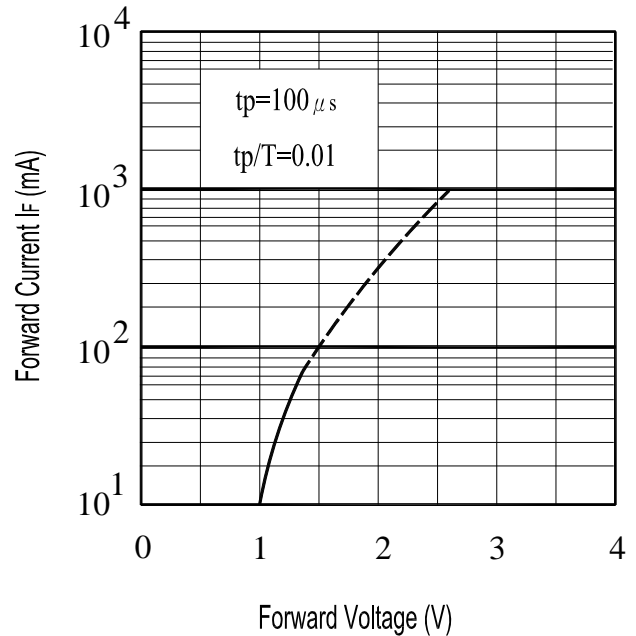


Fig.4 Forward Current vs. Forward Voltage



Typical Electro-Optical Characteristics Curves

Fig.5 Radiant Intensity vs.
Forward Current

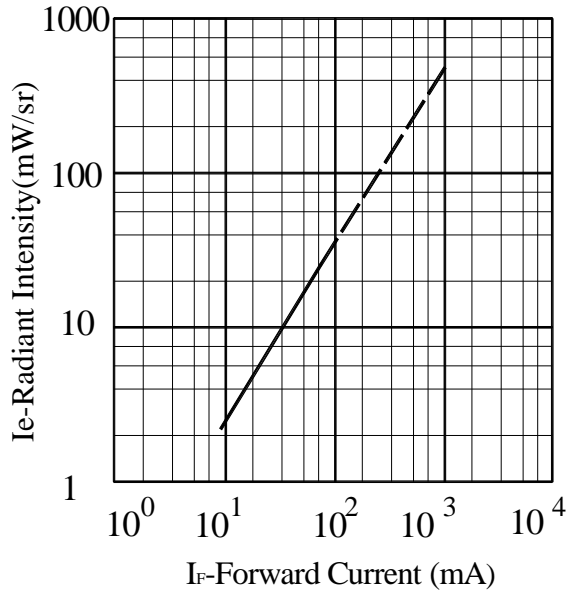
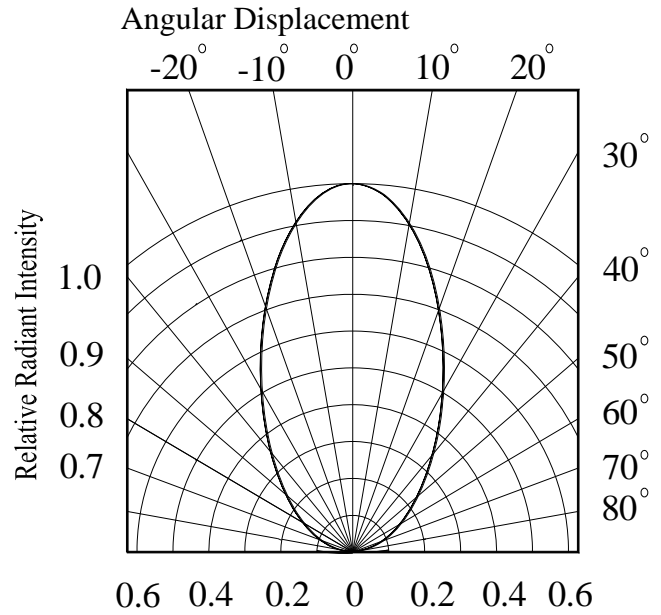


Fig.6 Relative Radiant Intensity vs.



Packing Quantity Specification

1. 1000PCS/1Bag,4Bags/1Box
2. 10Boxes/1Carton

Label Form Specification

The diagram shows a rectangular label form with the following elements:

- Top left: A circle containing 'Pb' (RoHS symbol).
- Top center: A box containing the word 'EVERLIGHT'.
- Top right: A circle containing 'X' (Month).
- Below 'Pb': 'CPN:' and 'P/N:' labels.
- Below 'EVERLIGHT': A barcode.
- Below the first barcode: 'EAILP03RDAB3'.
- Below 'EAILP03RDAB3': 'QTY:' label.
- Below 'QTY:': A barcode.
- Below the second barcode: 'LOT NO:' label.
- Below 'LOT NO:': A barcode.
- Below the third barcode: 'Reference' label.
- Below 'Reference': A barcode.
- Right side: A box containing 'RoHS'.
- Below 'RoHS': 'CAT:', 'HUE:', and 'REF:' labels.

CPN: Customer's Production Number

P/N : Production Number

QTY: Packing Quantity

CAT: Ranks

HUE: Peak Wavelength

REF: Reference

LOT No: Lot Number

X: Month

Reference: Identify Label Number

Notes

1. Above specification may be changed without notice. EVERLIGHT 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 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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