

### 3mm Phototransistor T-1 EAPLP03RDAA1



#### Features

- Fast response time
- High photo sensitivity
- Pb free
- The product itself will remain within RoHS compliant version.

#### Description

- EAPLP03RDAA1 is a high speed and high sensitive NPN silicon phototransistor molded in a standard  $\phi 3$  mm package. Due to its black epoxy the device is sensitive

#### Applications

- Infrared applied system
- Camera
- Printer
- Optoelectronic switch

## Device Selection Guide

Chip Materials	Lens Color
Silicon	Black

## Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Collector-Emitter Voltage	$V_{CEO}$	30	V
Emitter-Collector-Voltage	$V_{ECO}$	5	V
Collector Current	$I_C$	20	mA
Operating Temperature	$T_{opr}$	-25~+85	°C
Storage Temperature	$T_{stg}$	-40~ +100	°C
Lead Soldering Temperature	$T_{sol}$	260	°C
Power Dissipation at (or below) 25°C Free Air Temperature	$P_c$	75	mW

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

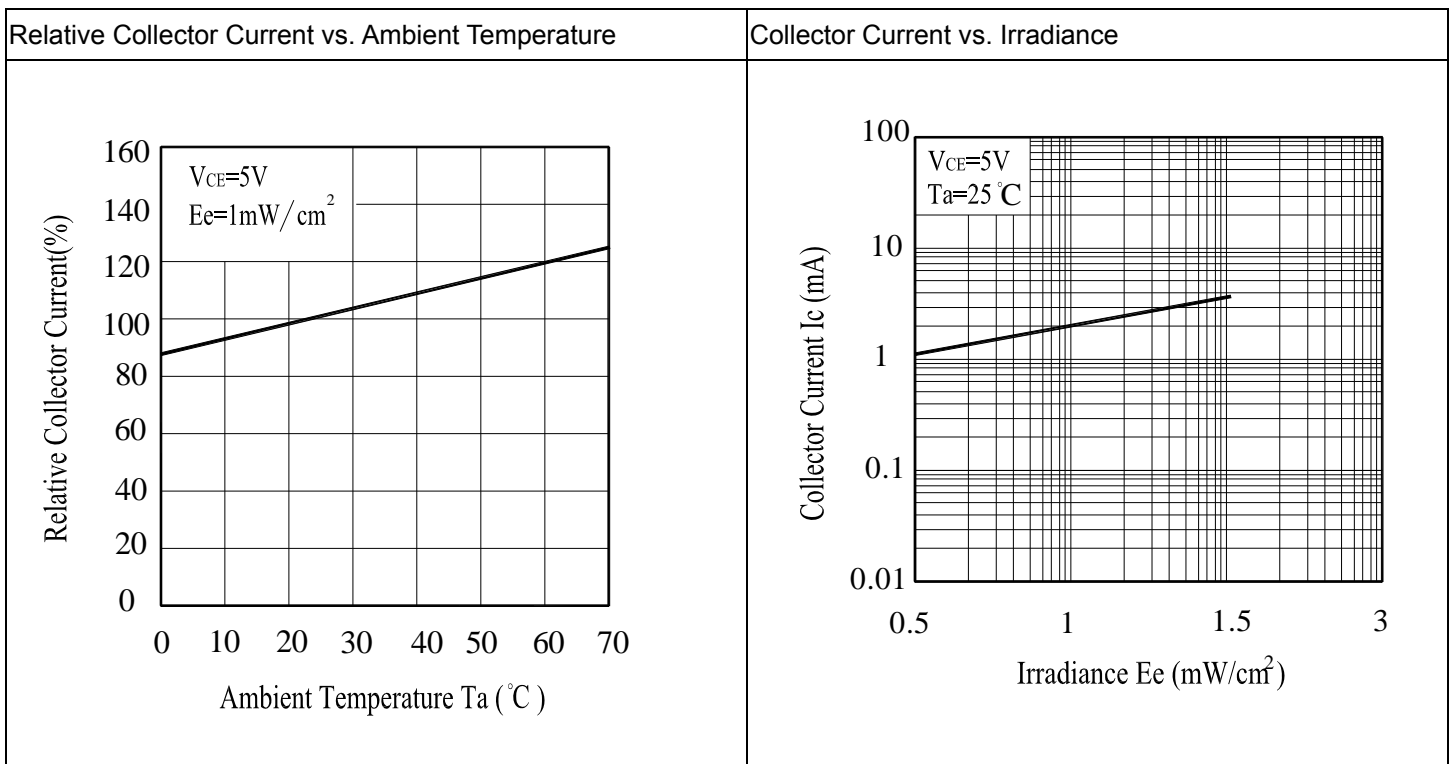
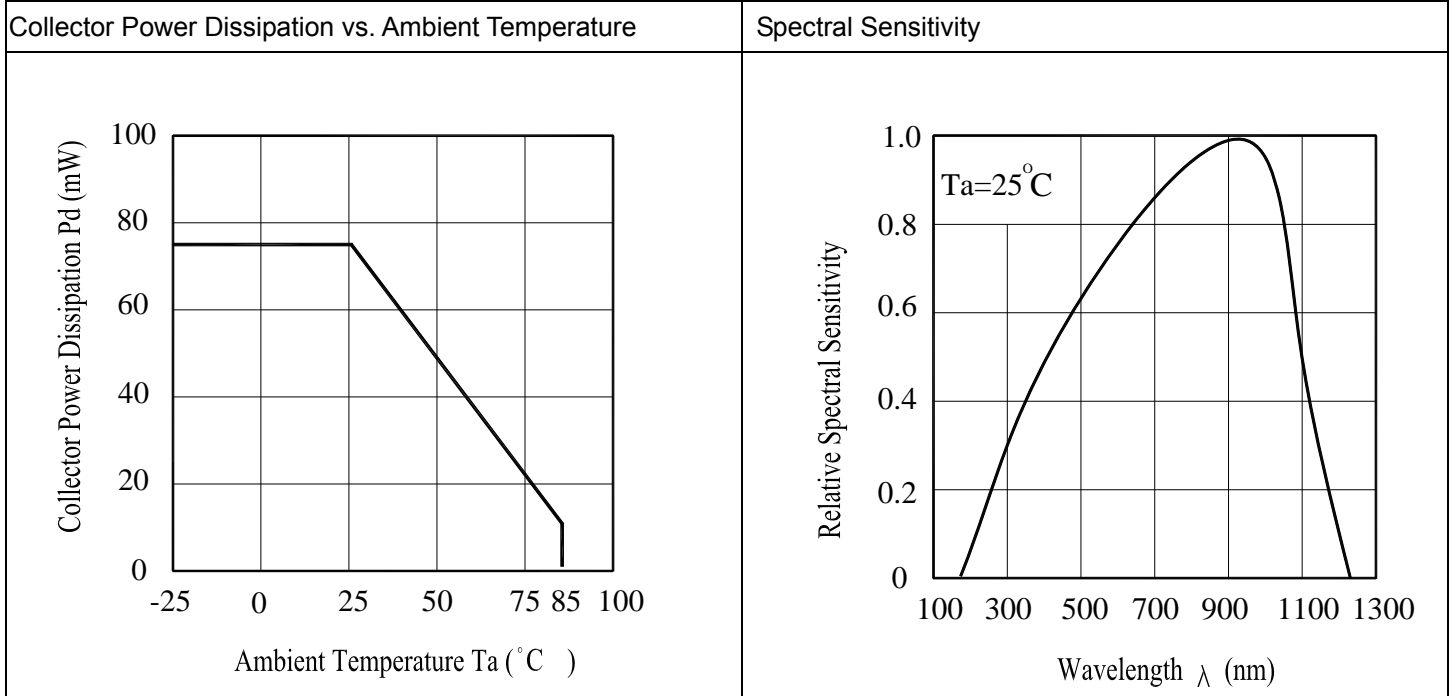
### Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Rang Of Spectral Bandwidth	$\lambda_{0.5}$	760	---	1100	nm	---
Wavelength Of Peak Sensitivity	$\lambda_p$	---	940	---	nm	---
Collector – Emitter Breakdown Voltage	$BV_{CEO}$	30	---	---	V	$I_C=100 \mu A$ $E_e=0mW/cm^2$
Emitter-Collector Breakdown Voltage	$BV_{ECO}$	5	---	---	V	$I_E=100 \mu A$ $E_e=0mW/cm^2$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	---	---	0.4	V	$I_C=2mA$ $E_e=1mW/cm^2$
Rise Time	$t_r$	---	15	---	$\mu S$	$V_{CE}=5V$ $I_C=1mA$ $R_L=1000 \Omega$
Fall Time	$t_f$	---	15	---		
Collector Dark Current	$I_{CEO}$	---	---	100	nA	$E_e=0mW/cm^2$ $V_{CE}=20V$
On State Collector Current	$I_{C(on)}$	0.7	---	5.07	mA	$E_e=1mW/cm^2$ $V_{CE}=5V$

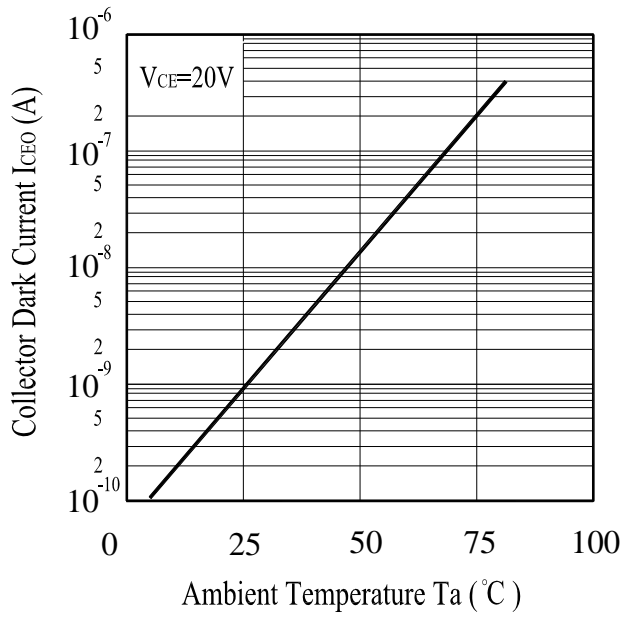
### Rankings

Parameter	Symbol	Min	Max	Unit	Test Condition
G	$I_{C(ON)}$	0.70	1.90	mA	$V_{CE}=5V$ $E_e=1mW/cm^2$
H		1.14	2.60		
J		1.77	3.61		
K		2.67	5.07		

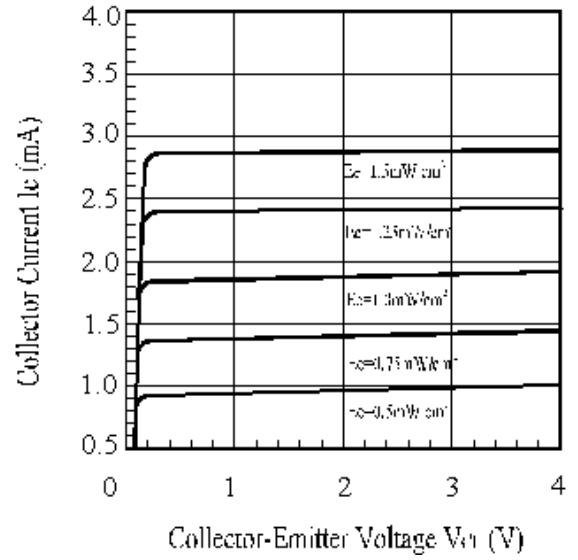
**Typical Electro-Optical Characteristics Curves**



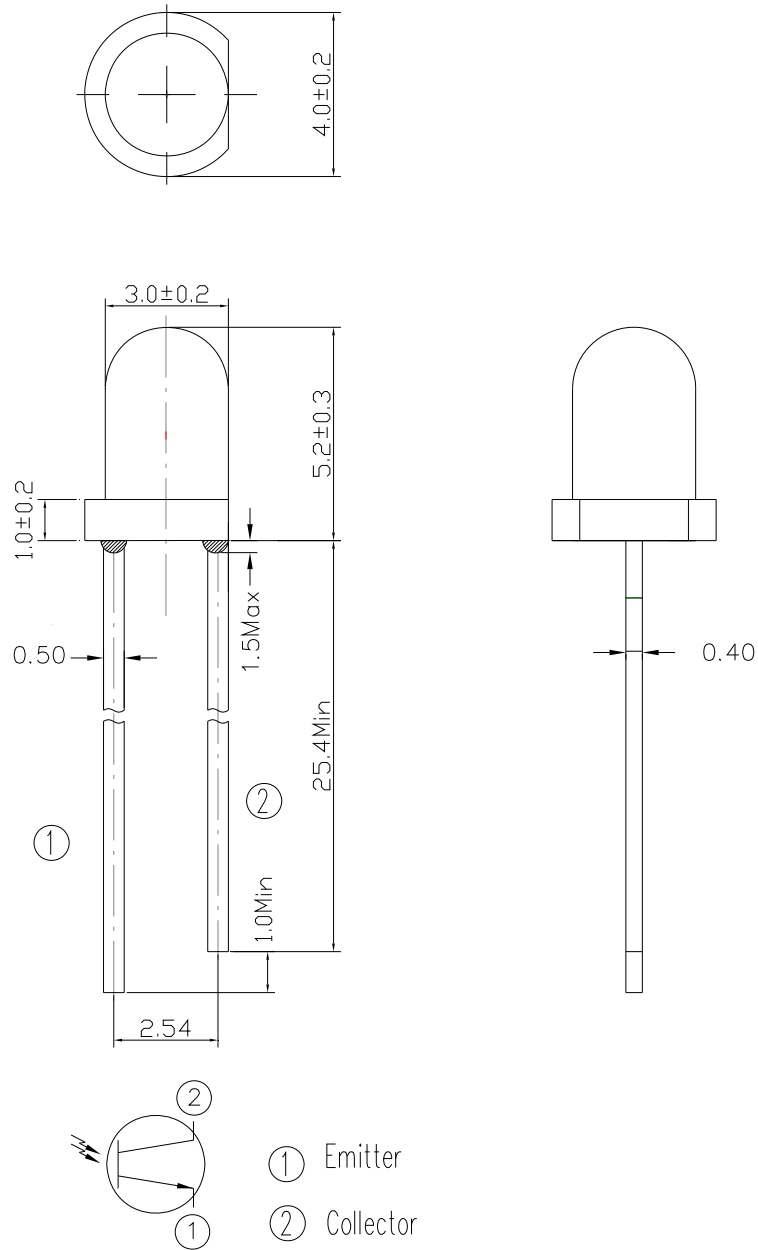
Collector Dark Current vs. Ambient Temperature



Collector Current vs. Collector-Emitter Voltage

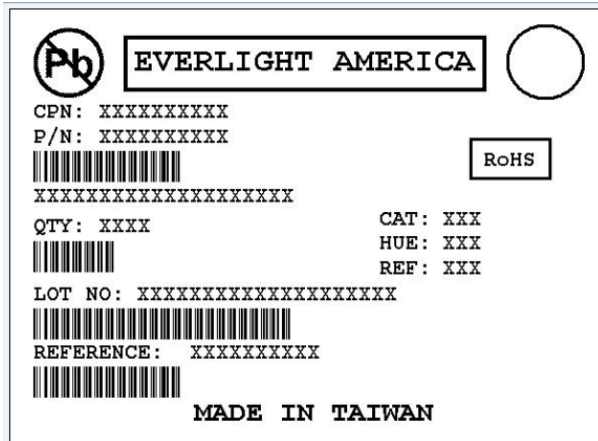


### Package Dimension



Note: 1.All dimensions are in millimeters  
2.Tolerances unless dimensions  $\pm 0.25$ mm

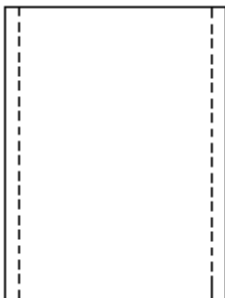
### Label Form Specification



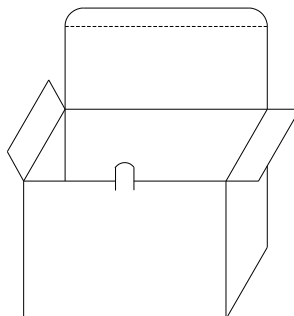
- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number
- Reference: Identify Label Number

### Packing Specification

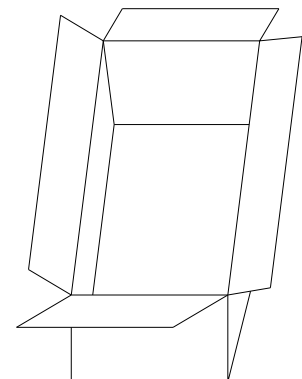
■ Anti-electrostatic bag



■ 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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