

3mm Phototransistor T-1 EAPLP03RDAA2



Preliminary

Features

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

Description

- EAPLP03RDAA2 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.

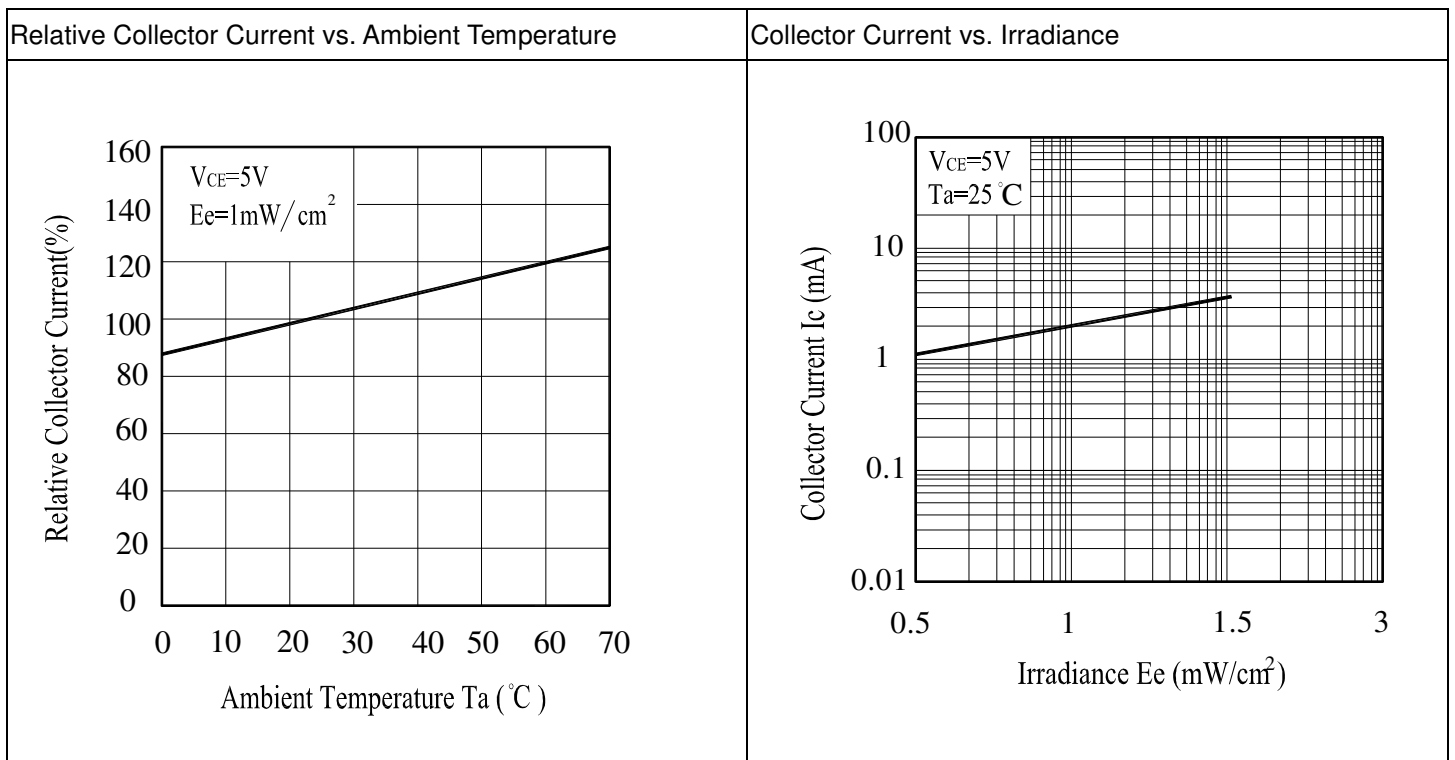
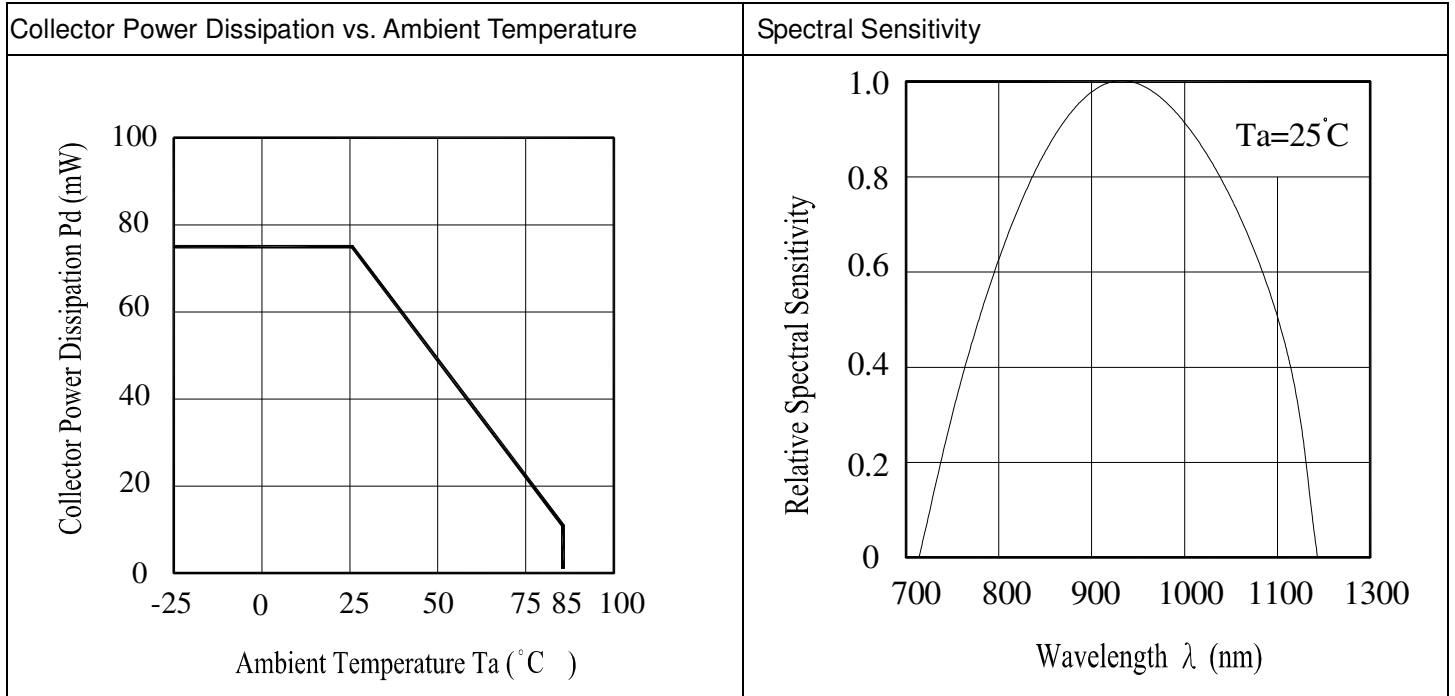
Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Rang Of Spectral Bandwidth	$\lambda_{0.5}$	760	---	1100	nm	---
Wavelength Of Peak Sensitivity	λ_p	---	940	---	nm	---
Collector – Emitter Breakdown Voltage	BV_{CEO}	30	---	---	V	$I_C=100\ \mu\text{A}$ $E_e=0\text{mW}/\text{cm}^2$
Emitter-Collector Breakdown Voltage	BV_{ECO}	5	---	---	V	$I_E=100\ \mu\text{A}$ $E_e=0\text{mW}/\text{cm}^2$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	---	---	0.4	V	$I_C=2\text{mA}$ $E_e=1\text{mW}/\text{cm}^2$
Rise Time	t_r	---	15	---	μS	$V_{CE}=5\text{V}$ $I_C=1\text{mA}$ $R_L=1000\ \Omega$
Fall Time	t_f	---	15	---		
Collector Dark Current	I_{CEO}	---	---	100	nA	$E_e=0\text{mW}/\text{cm}^2$ $V_{CE}=20\text{V}$
On State Collector Current	$I_{C(on)}$	1.77	---	7.07	mA	$E_e=1\text{mW}/\text{cm}^2$ $V_{CE}=5\text{V}$

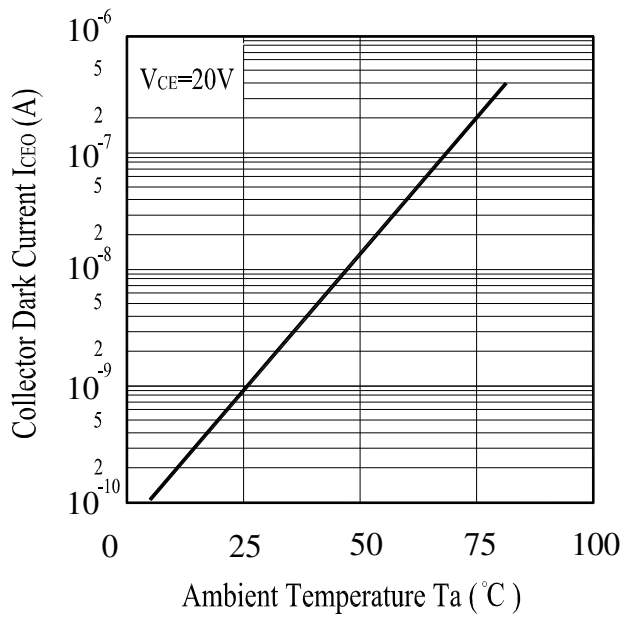
Rankings

Parameter	Symbol	Min	Max	Unit	Test Condition
J	$I_{C(ON)}$	1.77	3.61	mA	$V_{CE}=5\text{V}$ $E_e=1\text{mW}/\text{cm}^2$
K		2.67	5.07		
L		4.18	7.07		

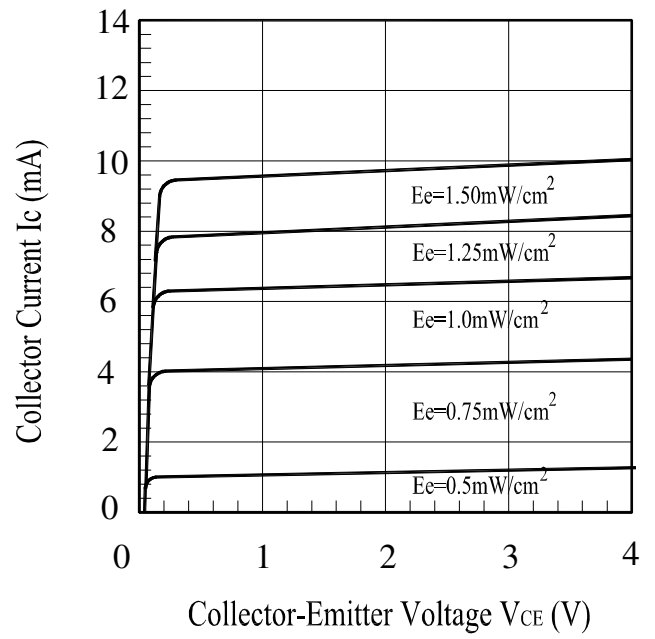
Typical Electro-Optical Characteristics Curves



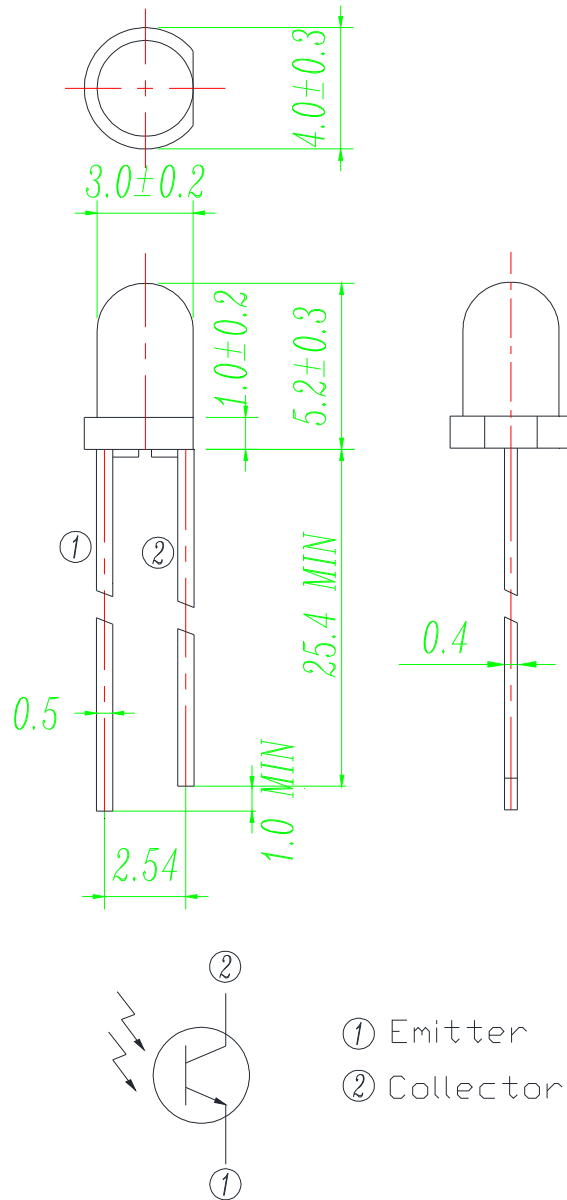
Collector Dark Current vs. Ambient Temperature



Collector Current vs. Collector-Emitter Voltage

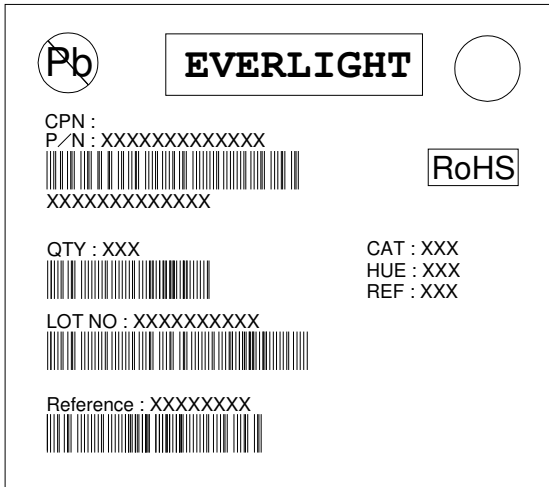


Package Dimension



Note: 1.All dimensions are in millimeters
2.Tolerances unless dimensions ± 0.25 mm

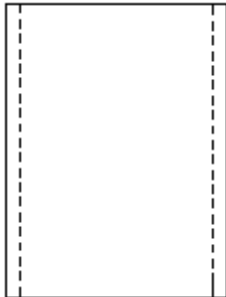
Label Form Specification



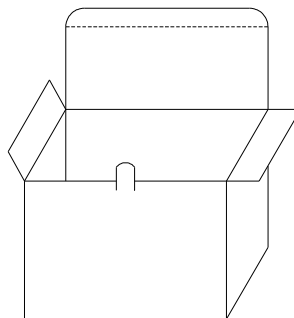
- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number
- Reference: Identify Label Number

Packing Specification

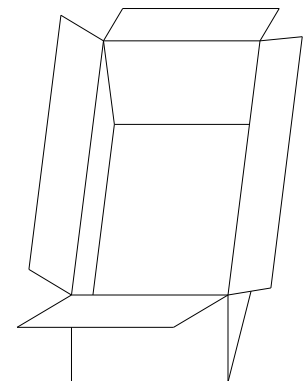
■ Anti-electrostatic bag



■ 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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