

5mm Silicon Phototransistor EAPLP05RDPA0



Features

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

Description

- EAPLP05RDPA0 is a high speed and high sensitive NPN silicon phototransistor molded in a standard $\phi 5$ mm package. Due to its black epoxy the device is sensitive to visible and near infrared radiation..

Applications

- Infrared applied system
- Camera
- Printer
- Cockroach catcher

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	°C
Power Dissipation at (or below) 25°C Free Air Temperature	P_c	75	mW

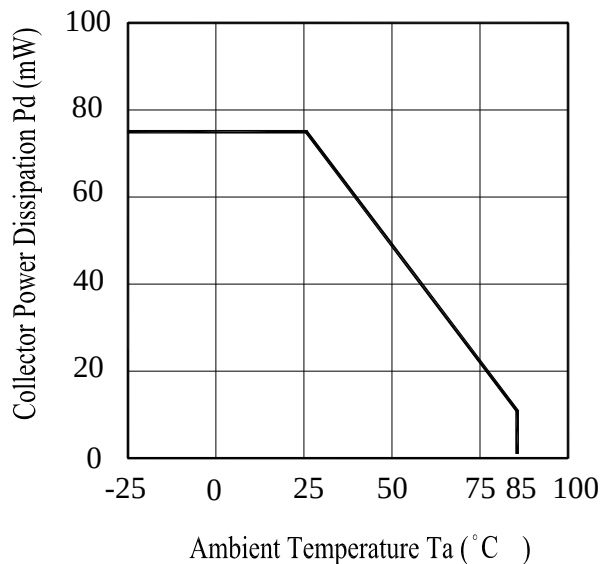
Notes: *1: Soldering time $\leq$ 10 seconds.

Electro-Optical Characteristics (Ta=25°C)

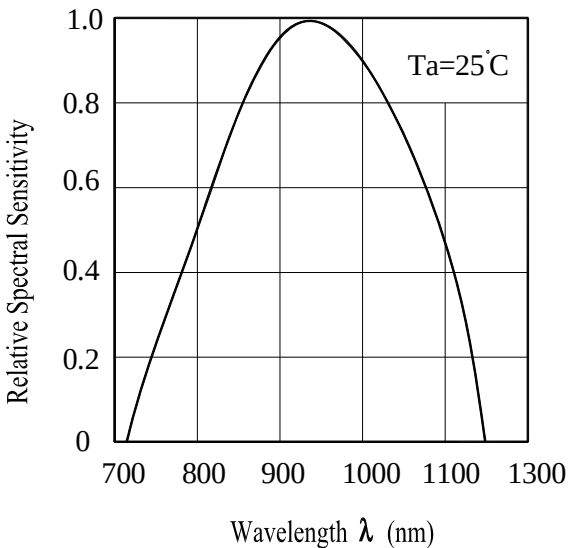
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Collector – Emitter Breakdown Voltage	BV_{CEO}	30	-----	-----	V	$I_C=100\mu A$ $E_e=0mW/cm^2$
Emitter-Collector Breakdown Voltage	BV_{ECO}	5	-----	-----	V	$I_E=100\mu A$ $E_e=0mW/cm^2$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-----	-----	0.4	V	$I_C=2mA$ $E_e=1mW/cm^2$
Rise Time	t_r	-----	15	-----	μS	$V_{CE}=5V$ $I_C=1mA$ $RL=1000\Omega$
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	1.2	-----	mA	$E_e=1mW/cm^2$ $V_{CE}=5V$ $\lambda_p=940nm$
Rang Of Spectral Bandwidth	$\lambda_{0.5}$	800	-----	1100	nm	----
Wavelength of Peak Sensitivity	λ_p	-----	940	-----	nm	----

Typical Electro-Optical Characteristics Curves

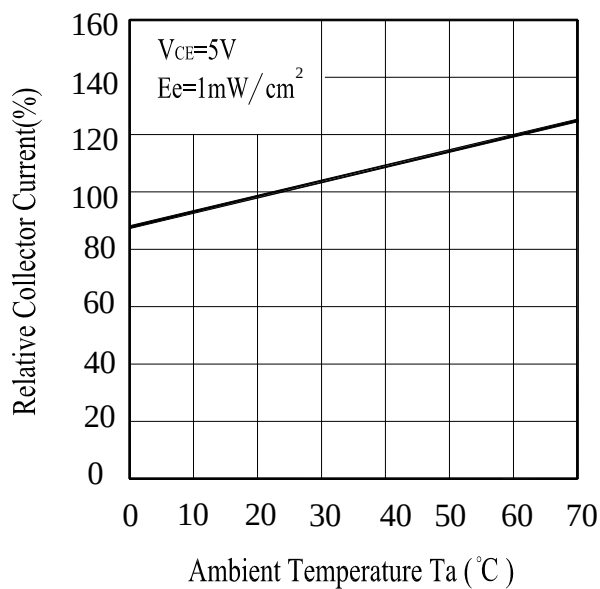
Collector Power Dissipation vs. Ambient Temperature



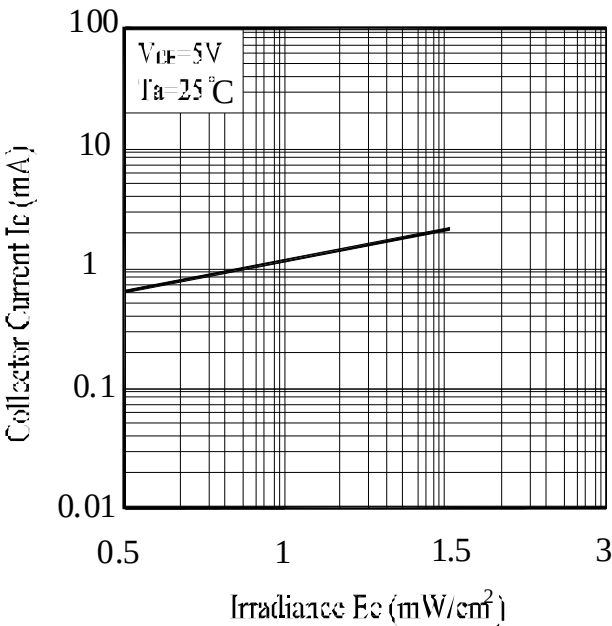
Spectral Sensitivity



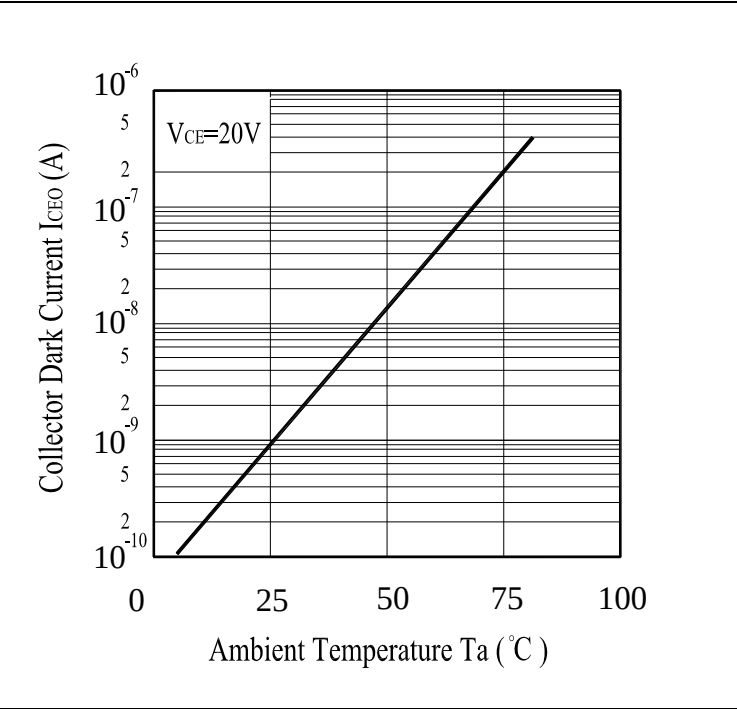
Relative Collector Current vs. Ambient Temperature



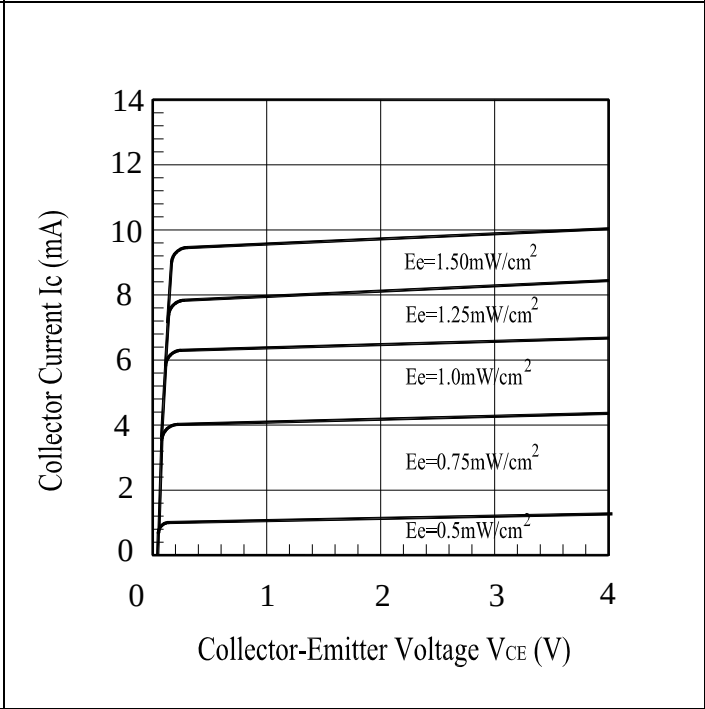
Collector Current vs. Irradiance



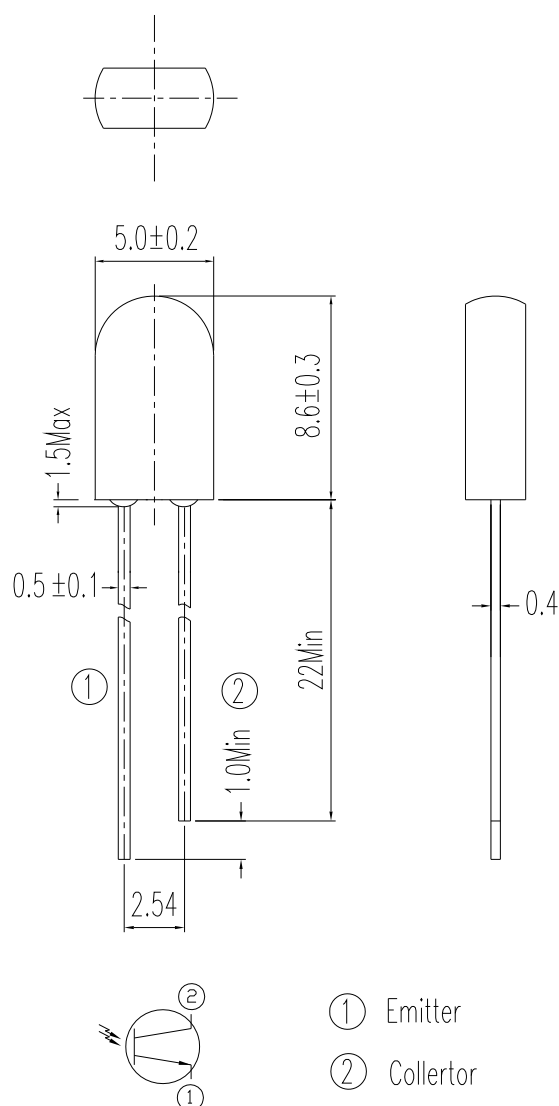
Collector Dark Current vs. Ambient Temperature



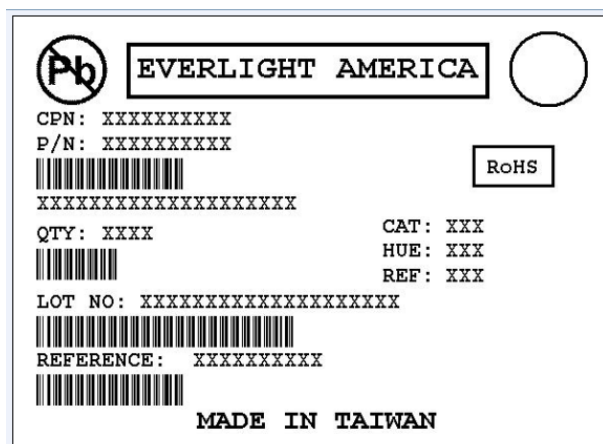
Collector Current vs. Collector-Emitter Voltage



Package Dimension



Note: 1.All dimensions are in millimeters
2.Tolerances unless dimensions ± 0.1 mm

Label Form Specification


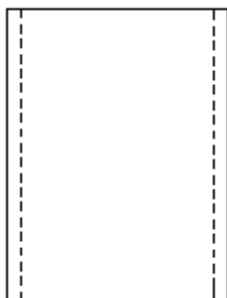
The label form includes the following elements:

- Logo:** A circle containing the letters "Pb".
- Brand Name:** EVERLIGHT AMERICA (in a rectangular box).
- CPN:** XXXXXXXXXX
- P/N:** XXXXXXXXXX
- Barcode:** A standard 1D barcode.
- RoHS:** A small rectangular box containing the text "RoHS".
- QTY:** XXXX
- CAT:** XXX
- HUE:** XXX
- REF:** XXX
- LOT NO:** XXXXXXXXXXXXXXXXXXXX
- Barcode:** A standard 1D barcode.
- REFERENCE:** XXXXXXXXXX
- Barcode:** A standard 1D barcode.
- MADE IN TAIWAN** (at the bottom center).

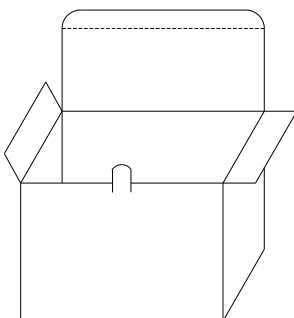
- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number
- Reference: Identify Label Number

Packing Specification

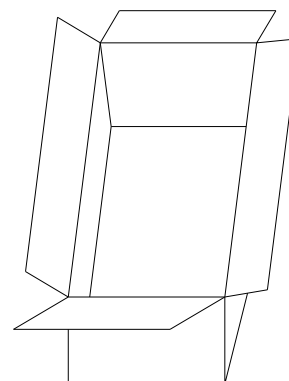
■ Anti-electrostatic bag



■ Inner Carton



■ Outside Carton



■ Packing Quantity

1. 500 PCS/1 Bag, 5 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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