DATASHEET

Side Face Silicon Phototransistor
EAPLP04RRLA0

Features

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

Description

- EAPLP04RRLA0 is a high speed and high sensitive dual phototransistor molded in a black plastic package with plat side view.
- The device is spectrally matched with IR emitters.

Applications

- Mouse
- Optoelectronic Switch
- Photo Interrupter

Device Selection Guide

Chip Materials	Lens Color
Si	Black

Absolute Maximum Ratings (Ta=25℃)

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	Topr	-25 ~ +85℃	℃
Storage Temperature	Tstg	-40 ~ +85℃	℃
Lead Soldering Temperature(*1)	Tsol	260	℃
Power Dissipation at (or below) 25℃ Free Air Temperature	P_D	75	mW

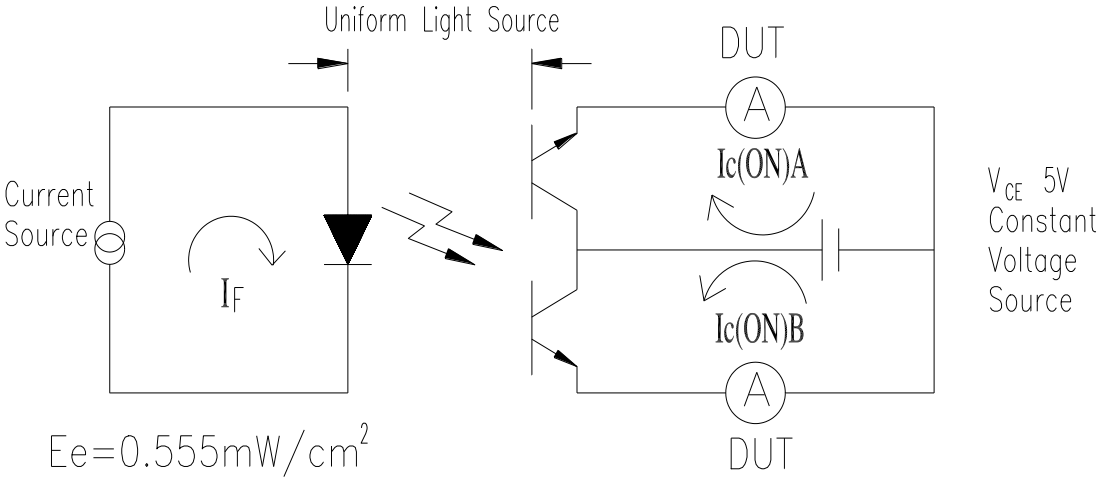
Notes: *1:Soldering time≦5 seconds.

Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Collector – Emitter Breakdown Voltage	BV_{CEO}	I_C=100μA Ee=0mW/cm^2	30	---	---	V
Emitter-Collector Breakdown Voltage	BV_{ECO}	I_E=100μA Ee=0mW/cm^2	5	---	---	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=2mA Ee=1mW/cm^2	---	---	0.4	V
Rise Time	t_r	V_{CE}=5V I_C=1mA R_L =1000Ω	---	15	---	μS
Fall Time	t_f		---	15	---	
Collector Dark Current	I_{CEO}	Ee=0mW/cm^2 V_{CE}=20V	---	---	100	nA
On State Collector Current	$I_{C(on)}$	V_{CE}=5V, Ee=0.555mW/cm^2	129	---	1085	μA
Wavelength of Peak Sensitivity	λp	---	---	940	---	nm
Rang of Spectral Bandwidth	$\lambda_{0.5}$	---	760	---	1100	nm

Test Method For On State Collector Current :

Condition : Ee=0.555mW/cm^2 , V_{CE}=5V
Test Item : Collector Current [$I_{C(on)}$]
Unit : μA



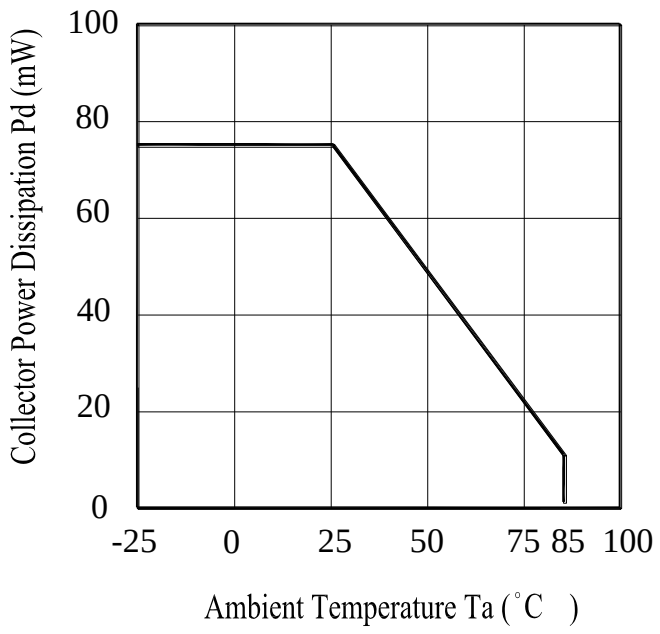
To Distinguish Intensity:
Condition:V_{CE}:5V Ee:0.555mW/cm^2
Ranks

Color Code	Ranks	Symbol	Min	Typ	Max	Unit	Test Condition
Red	A1	$I_{C(ON)}$	129	---	226	μ A	Ee=0.555mW/c㎡ V_{CE}=5V
Blue	A2	$I_{C(ON)}$	195	---	306	μ A	Ee=0.555mW/c㎡ V_{CE}=5V
Yellow	A3	$I_{C(ON)}$	262	---	380	μ A	Ee=0.555mW/c㎡ V_{CE}=5V
Silver	A4	$I_{C(ON)}$	330	---	461	μ A	Ee=0.555mW/c㎡ V_{CE}=5V
Green	A5	$I_{C(ON)}$	398	---	544	μ A	Ee=0.555mW/c㎡ V_{CE}=5V
Purple	A6	$I_{C(ON)}$	468	---	625	μ A	Ee=0.555mW/c㎡ V_{CE}=5V
White	A7	$I_{C(ON)}$	536	---	703	μ A	Ee=0.555mW/c㎡ V_{CE}=5V
Brown	A8	$I_{C(ON)}$	604	---	785	μ A	Ee=0.555mW/c㎡ V_{CE}=5V
Orange	A9	$I_{C(ON)}$	673	---	862	μ A	Ee=0.555mW/c㎡ V_{CE}=5V
Golden	A10	$I_{C(ON)}$	742	---	944	μ A	Ee=0.555mW/c㎡ V_{CE}=5V
Pink	A11	$I_{C(ON)}$	812	---	1018	μ A	Ee=0.555mW/c㎡ V_{CE}=5V
Red,Blue	A12	$I_{C(ON)}$	882	---	1085	μ A	Ee=0.555mW/c㎡ V_{CE}=5V

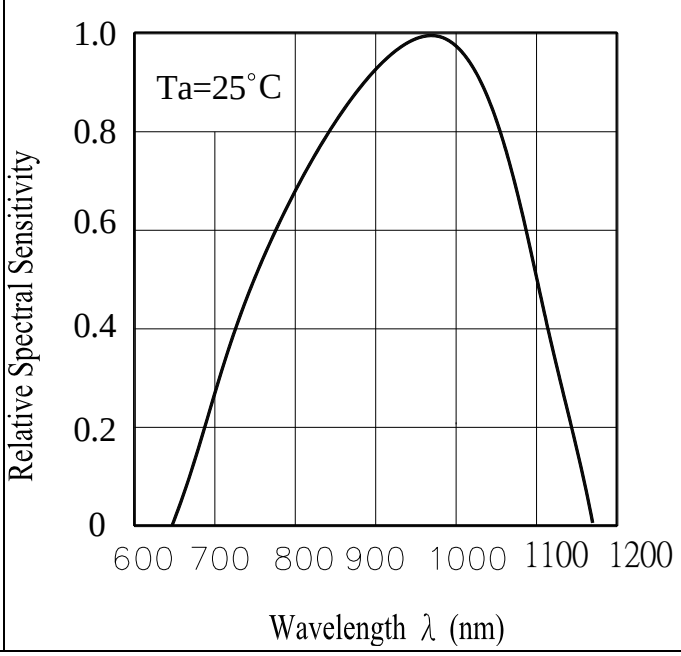
*** IC(ON)=[IC(ON)A+ IC(ON)B]/2**

Typical Electro-Optical Characteristics Curves

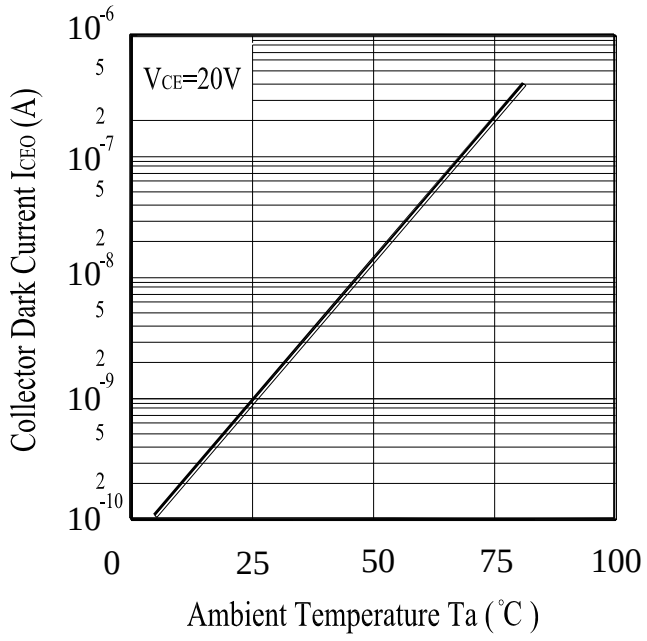
Power Dissipation vs. Ambient Temperature



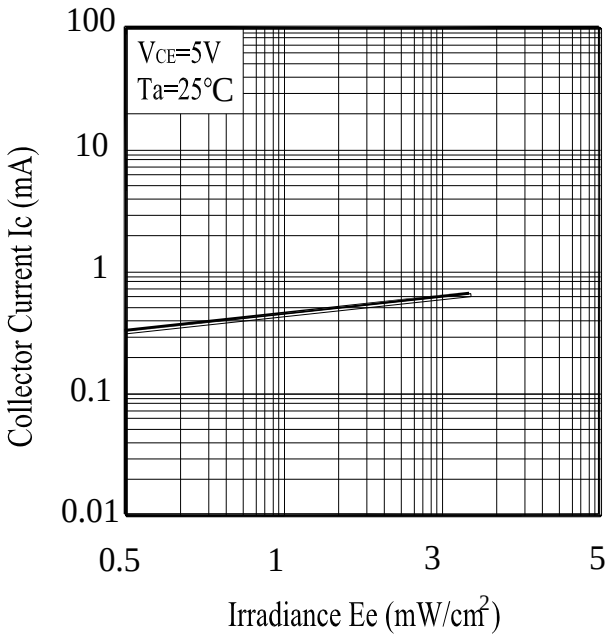
Spectral Sensitivity



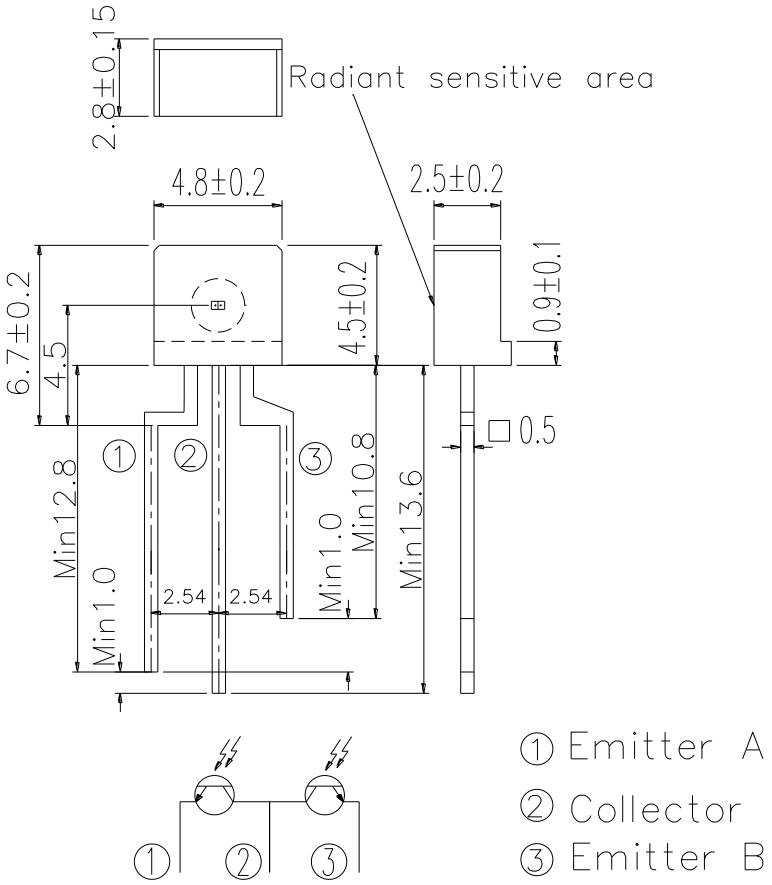
Dark Current vs. Ambient Temperature



Collector Current vs. Irradiance Ee



Package Dimension



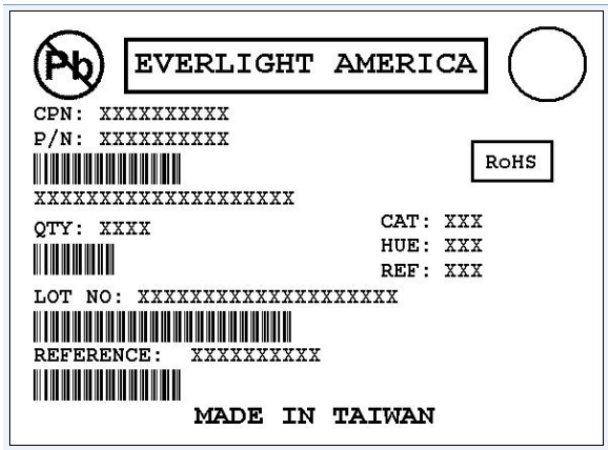
Note: Tolerances unless dimensions ±0.25mm

Packing Quantity Specification

1. 1000Pcs/1Bag，8Bags/1Box

2. 10Boxes/1Carton

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
- X: Month
- Reference: Identify Label Number

Notes

1. Above specification may be changed without notice. EVERLIGHT Americas will reserve authority on material change for above specification.
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