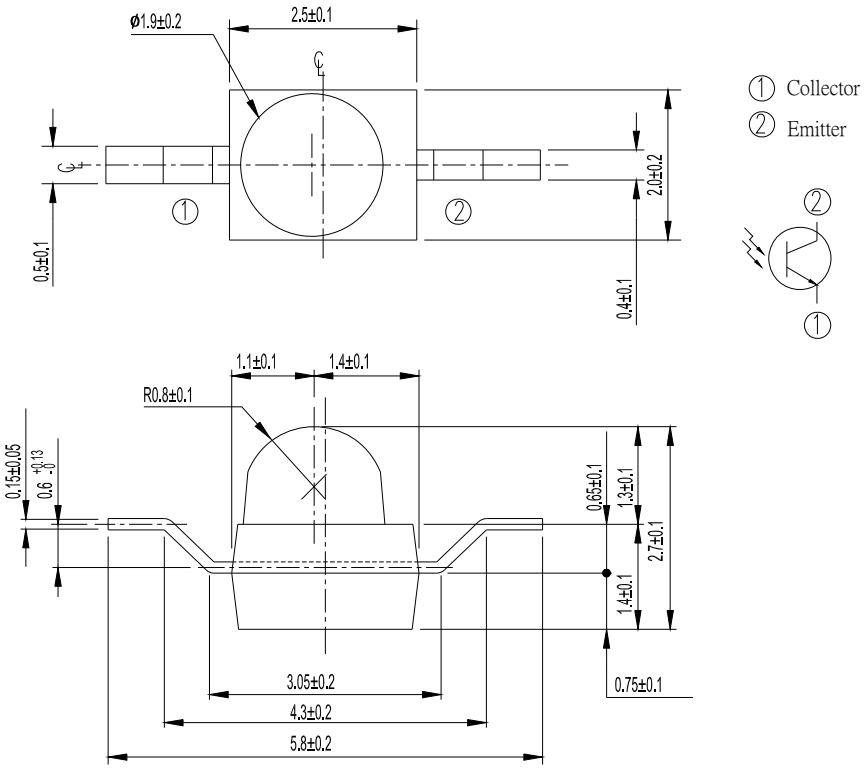
Package Dimensions



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

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Units
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	℃
Storage Temperature	T_{stg}	-40 ~ +100	℃
Soldering Temperature *1	T_{sol}	260	℃
Power Dissipation at (or below) 25℃ Free Air Temperature	P_c	75	mW

Notes: *1:Soldering time≦5 seconds.

Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Units	Condition
Rang of Spectral Bandwidth	$\lambda_{0.5}$	400	---	1100	nm	---
Wavelength of Peak Sensitivity	λ_P	---	940	---	nm	---
Collector Emitter Breakdown Voltage	BV_{CEO}	30	---	---	V	I_C=100μA Ee=0mW/cm^2
Emitter Collector Breakdown Voltage	BV_{ECO}	5	---	---	V	I_E=100μA Ee=0mW/cm^2
Collecto Emitter Saturation Voltage	$V_{CE(sat)}$	---	---	0.4	V	I_C=2mA Ee=1m W/cm^2
Collector Dark Current	I_{CEO}	---	---	100	nA	V_{CE}=20V Ee=0mW/cm^2
On State Collector Current	$I_{C(ON)}$	1.0	1.5	---	mA	V_{CE}=5V Ee=1mW /cm^2
Rise Time	t_r	---	15	---	μS	V_{CE}=5V I_C=1mA R_L=1000Ω
Fall Time	t_f	---	15	---		

Intensity Specifications for Bin Grading

Rank	Test Condition	Min	Max	Units
Bin1	Ee=1mW/cm^2 V_{CE}=5V	1.0	2.0	mA
Bin2		1.5	3.0	
Bin3		2.0	4.0	
Bin4		2.5	5.0	
Bin5		3.0	6.0	

Typical Electrical/Optical/Characteristics Curves

Fig.1 Collector Power Dissipation vs. Ambient Temperature

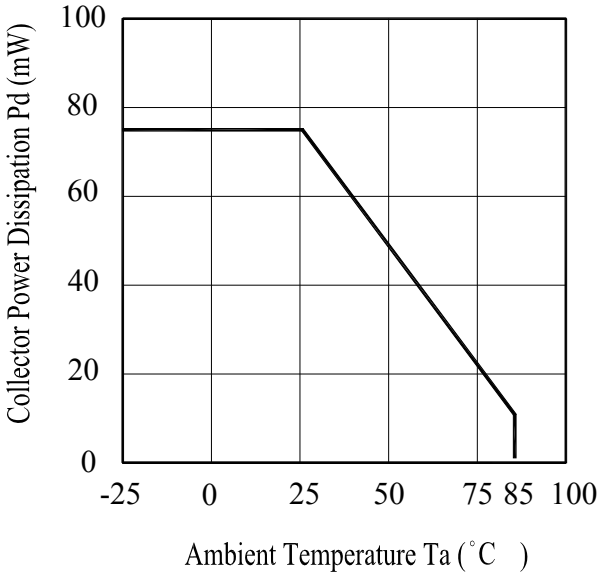


Fig.2 Spectral Sensitivity

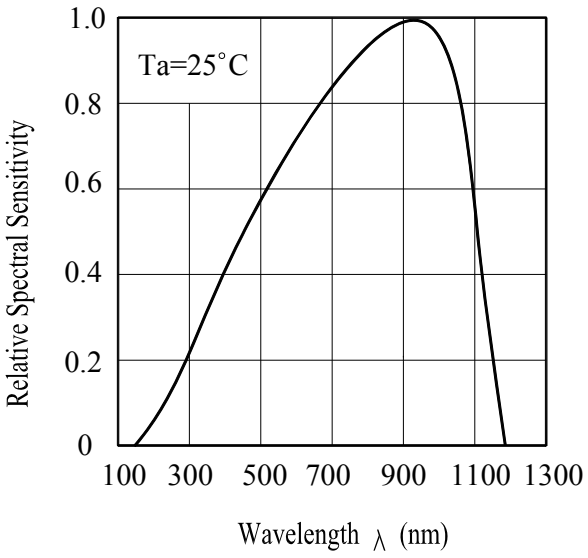


Fig.3 Relative Collector Current vs. Ambient Temperature

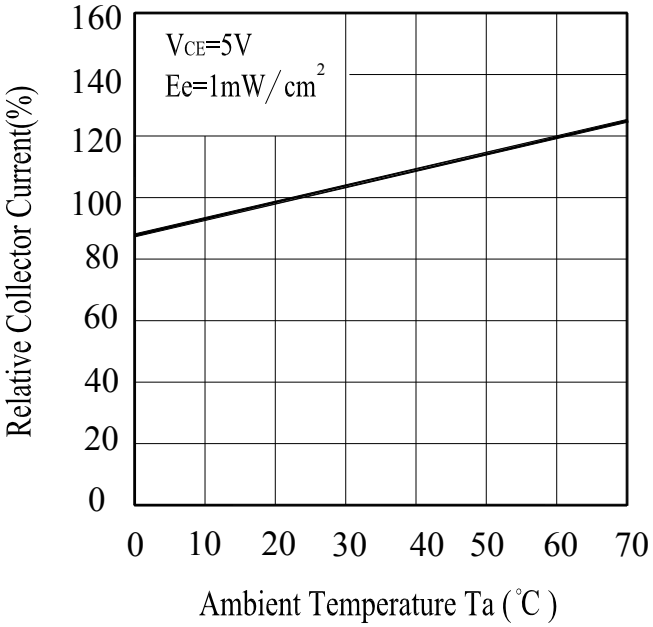
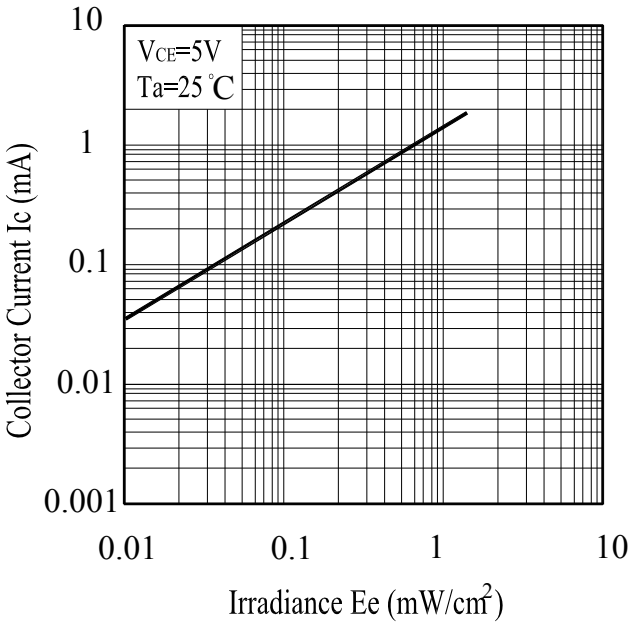


Fig.4 Collector Current vs. Irradiance



Typical Electro-Optical Characteristics Curves

Fig.5 Collector Dark Current vs. Ambient Temperature

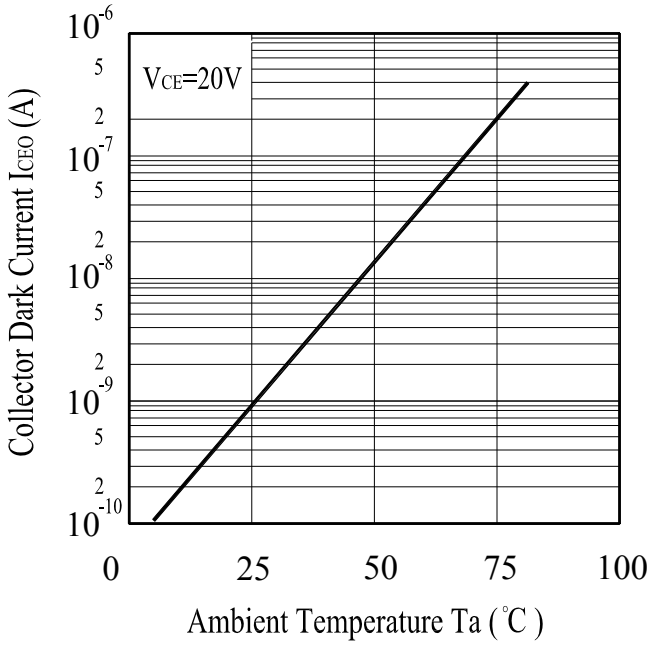
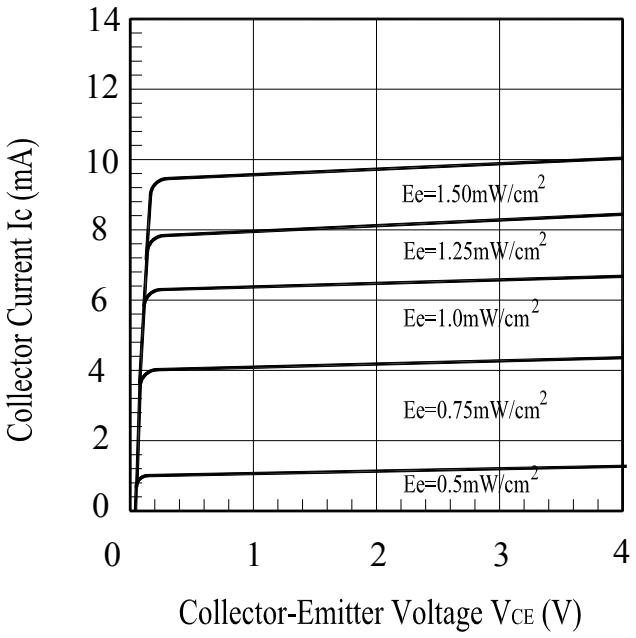


Fig.6 Collector Current vs. Collector-Emitter Voltage



Precautions For Use

1. Over-current-proof

   Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage

   2.1 Do not open moisture proof bag before the products are ready to use.

   2.2 Before opening the package, the Phototransistor should be kept at 10℃~30℃ and 90%RH or less.

   2.3 The Phototransistor suggested be used within one year.

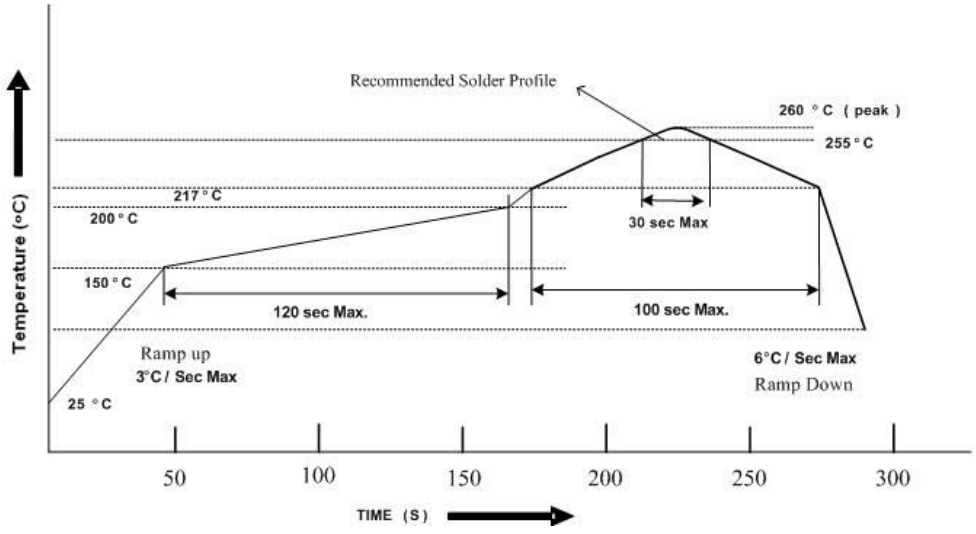
   2.4 After opening the package, the devices must be stored at 10°C~30°C and ≤ 60%RH, and used within 168 hours (floor life). If unused Phototransistor remain, it should be stored in moisture proof packages.

   2.5 If the moisture absorbent material (desiccant material) has faded or unopened bag has exceeded the shelf life or devices (out of bag) have exceeded the floor life, baking treatment is required.

   2.6 If baking is required, refer to IPC/JEDEC J-STD-033 for bake procedure or recommend the following conditions:
   96 hours at 60°C ± 5°C and < 5 % RH (reeled/tubed/loose units)

3. Soldering Condition

   3.1 Pb-free solder temperature profile



   3.2 Reflow soldering should not be done more than two times.

   3.3 When soldering, do not put stress on the Phototransistor during heating.

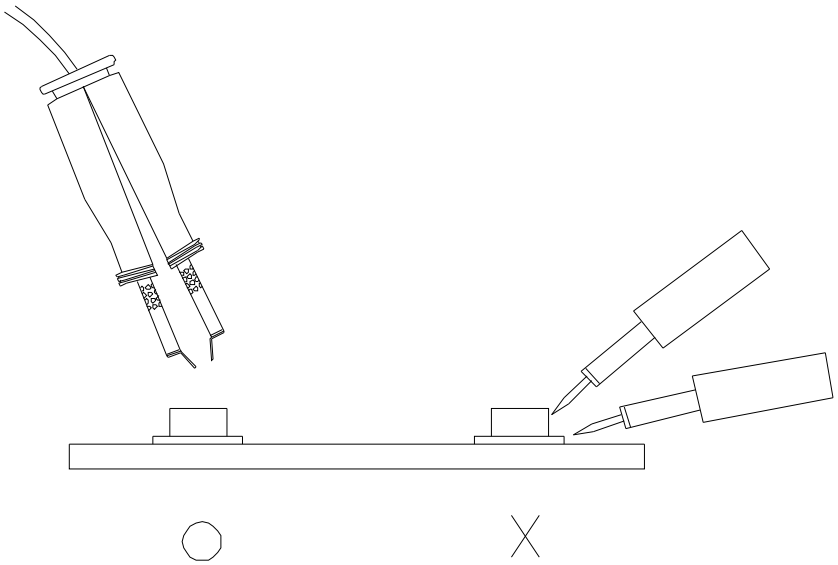
   3.4 After soldering, do not warp the circuit board.

4. Soldering Iron

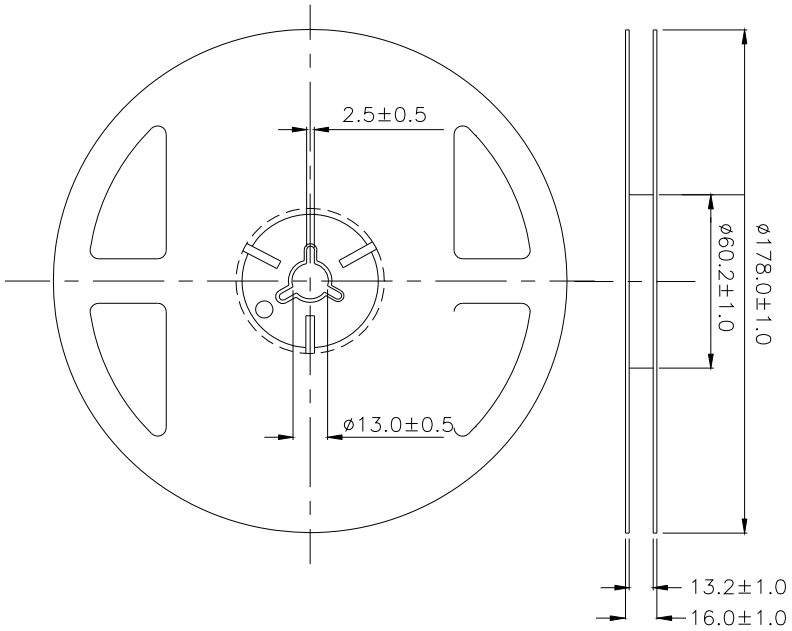
Each terminal is to go to the tip of soldering iron temperature less than 350℃ for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

5. Repairing

Repair should not be done after the Phototransistor have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the Phototransistor will or will not be damaged by repairing.

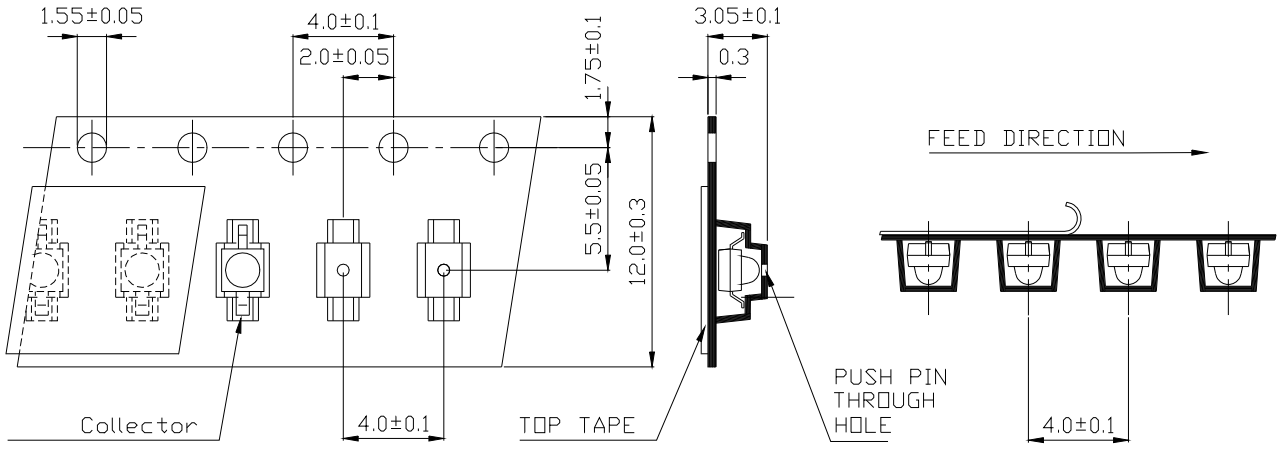


Package Dimensions



Note: The tolerances unless mentioned are ±0.1, Unit: mm.

Carrier Taping Dimensions: (Quantity: 1000PCS/Reel)



Note: The tolerances unless mentioned are ±0.1, Unit: mm.

Label Form Specification

CPN: Customer’s Production Number
P/N : Production Number
QTY: Packing Quantity
CAT: Ranks
HUE: Peak Wavelength
REF: Reference
LOT No: Lot Number

DISCLAIMER

1. EVERLIGHT reserves the right(s) on the adjustment of product material mix for the specification.
2. The product meets EVERLIGHT published specification for a period of twelve (12) months from date of shipment.
3. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
4. 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 the 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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