

1206 Package Infrared Chip LED With Inner Lens EAIST3015A1



Features

- .Small double-end package
- .High reliability
- .Low forward voltage
- .Good spectral matching to Si photodetector
- .Package in 8mm tape on 7" diameter reel
- .Pb free
- .The product itself will remain within RoHS compliant version
- .Compliance with EU REACH
- .Compliance Halogen Free .(Br <900 ppm ,Cl <900 ppm , Br+Cl < 1500 ppm).

Descriptions

- .EAIST3015A1 is an infrared emitting diode in miniature SMD package which is molded in a water clear plastic With flat top view lens.
- .The device is spectrally matched with silicon photodiode and phototransistor.

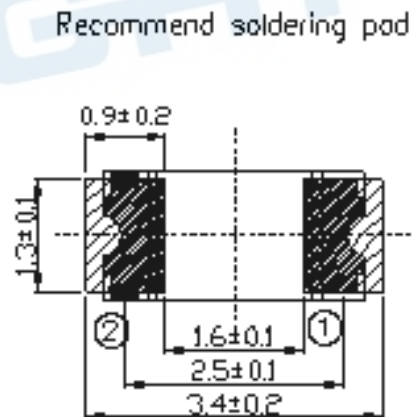
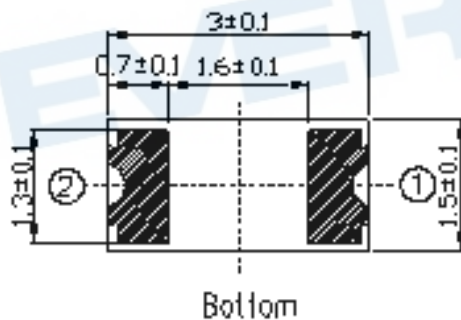
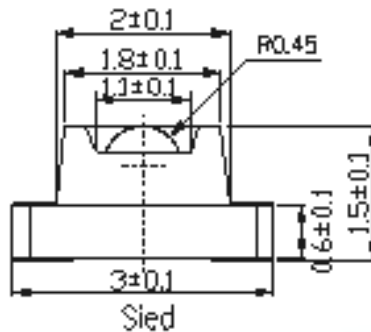
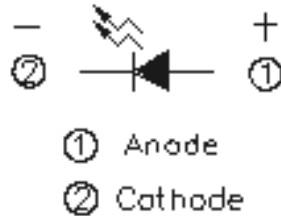
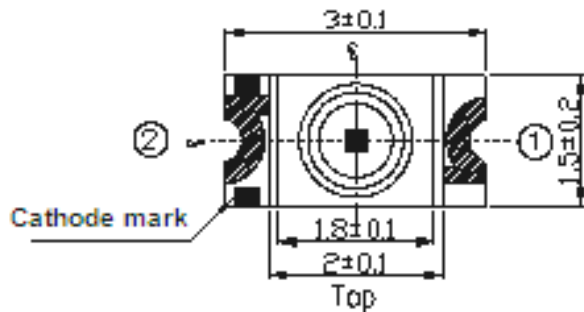
Applications

- .PCB mounted infrared sensor
- .Infrared emitting for miniature light barrier
- .Floppy disk drive
- .Optoelectronic switch
- .Smoke detector

Device Selection Guide

Part NO	Chip Material	Resin Color
EAIST3015A1	GaAlAs	Water Clear

Package Dimensions



- Notes:**
1. All dimensions are in millimeters
 2. Tolerances unless dimensions ± 0.1 mm
 3. Suggested pad dimension is just for reference only
Please modify the pad dimension based on individual need

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Units
Continuous Forward Current	I_F	65	mA
Reverse Voltage	V_R	5	V
Operating Temperature	T_{opr}	-25 ~ +85	°C
Storage Temperature	T_{stg}	-40 ~ +100	°C
Soldering Temperature *1	T_{sol}	260	°C
Power Dissipation at (or below) 25°C Free Air Temperature	P_d	130	mW
Soldering Temperature	T_{sol}	Reflow Soldering: 260°C for 10sec Hand Soldering: 350°C for 3sec	

Notes: *1: Soldering time $\leq$ 5 second

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Radiant Intensity	I_e	$I_F=20mA$	1.25	2.25	--	mW/sr
Peak Wavelength	λ_p	$I_F=20mA$	--	940	--	nm
Spectral Bandwidth	$\Delta\lambda$	$I_F=20mA$	--	45	--	nm
Forward Voltage	V_F	$I_F=20mA$	--	1.2	1.5	V
Reverse Current	I_R	$V_R=5V$	--	--	10	μA
View Angle	2 θ 1/2	$I_F=20mA$	--	100	--	deg

Typical Electro-Optical Characteristics Curves

Fig.1 Forward Current vs. Ambient Temperature

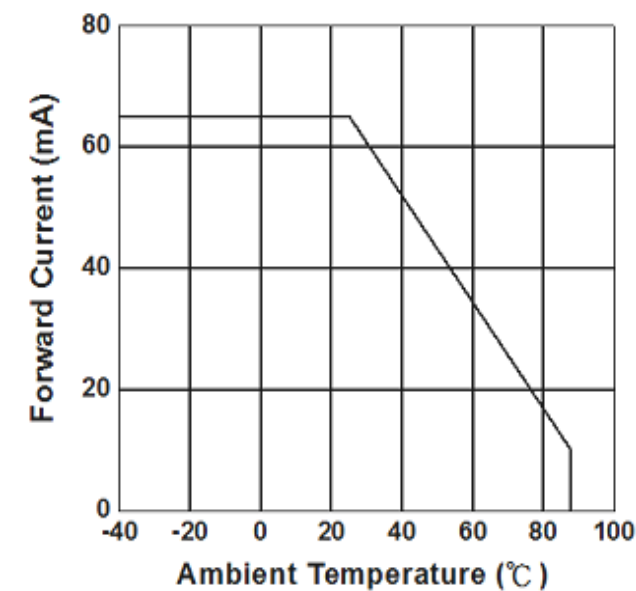


Fig.2 Spectral Distribution

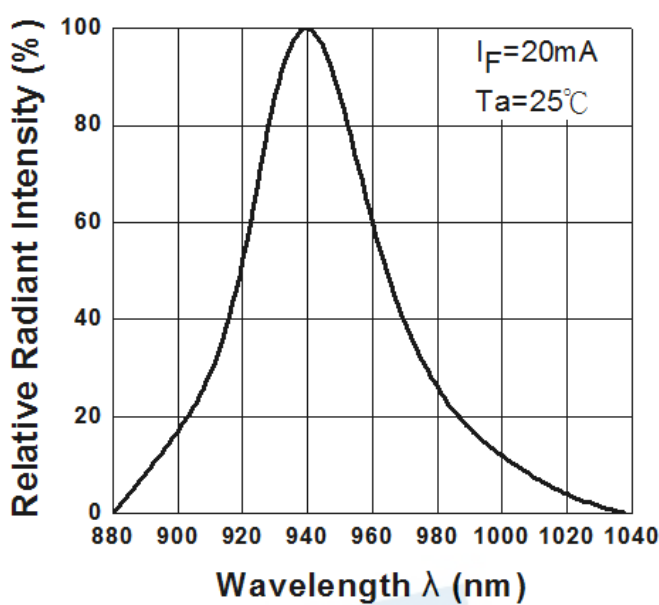


Fig.3 Forward Current vs. Forward Voltage

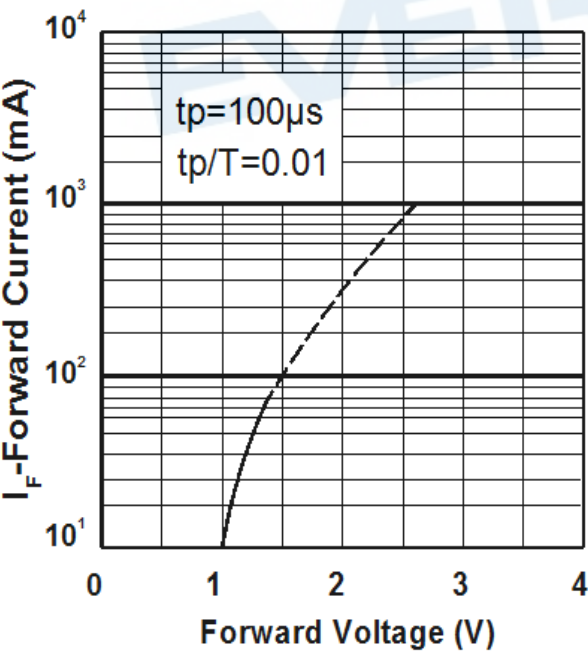
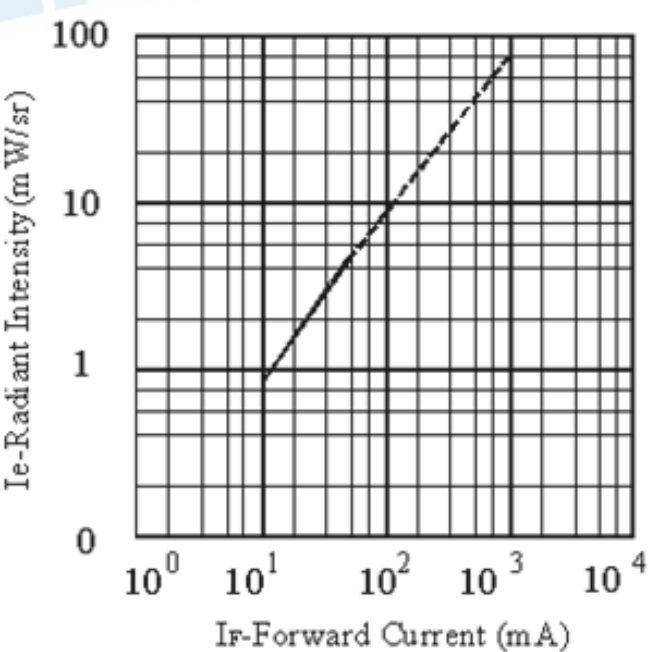
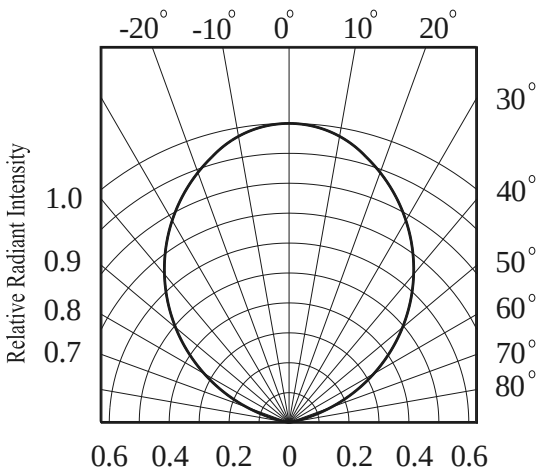


Fig.4 Radiant Intensity vs. Forward Current



Typical Electro-Optical Characteristics Curves

Fig.5 Relative Radiant Intensity vs.
Angular Displacement



EVERLIGHT

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 LEDs should be kept at 30°C or less and 90%RH or less.

2.3 The LEDs should be used within a year

2.4 After opening the package: The LEDs should be kept at 30°C or less and 60%RH or less.

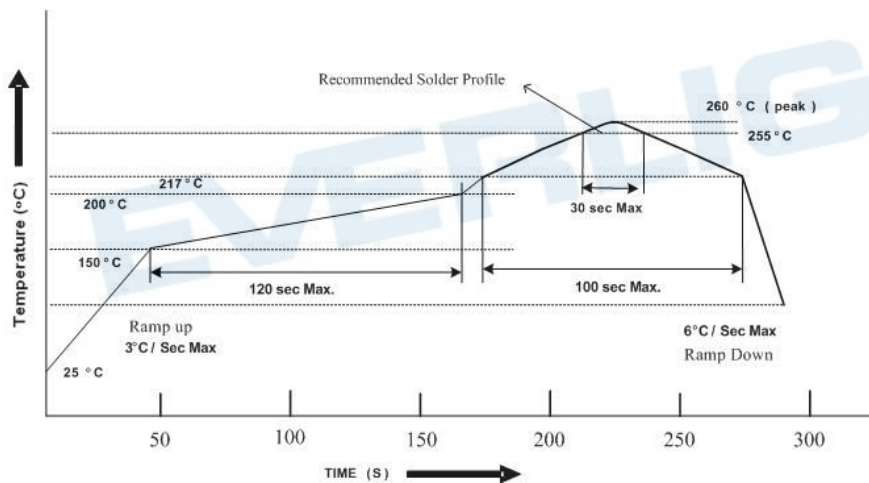
2.5 The LEDs should be used within 168 hours (7days) after opening the package .

2.6 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.

Baking treatment : 60±5°C for 48 hours.

3. Soldering Condition

3.1 Lead 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 LEDs during heating.

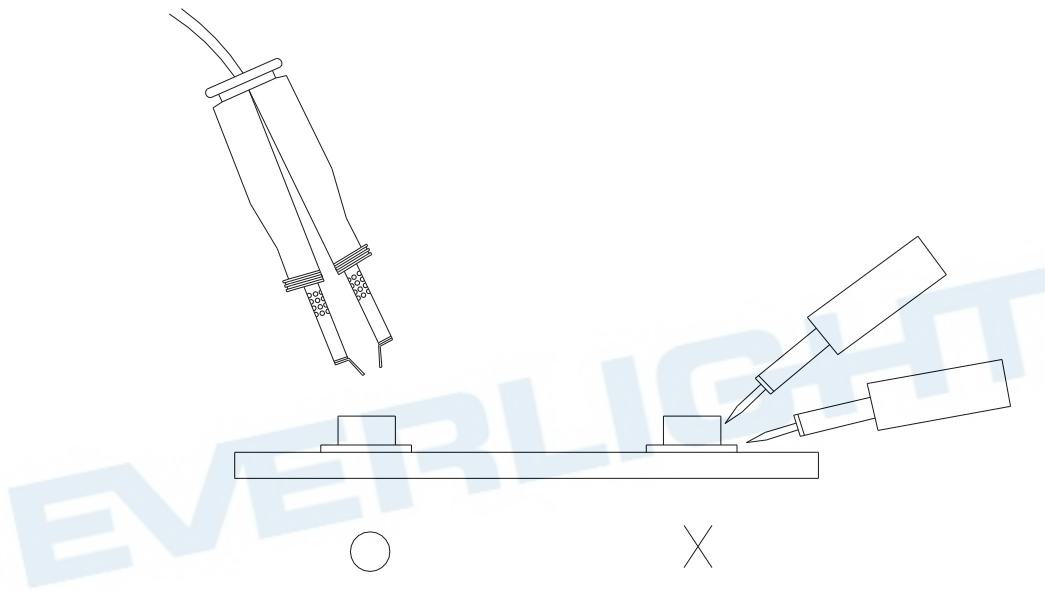
3.4 After soldering, do not warp the circuit board.

4.Soldering Iron

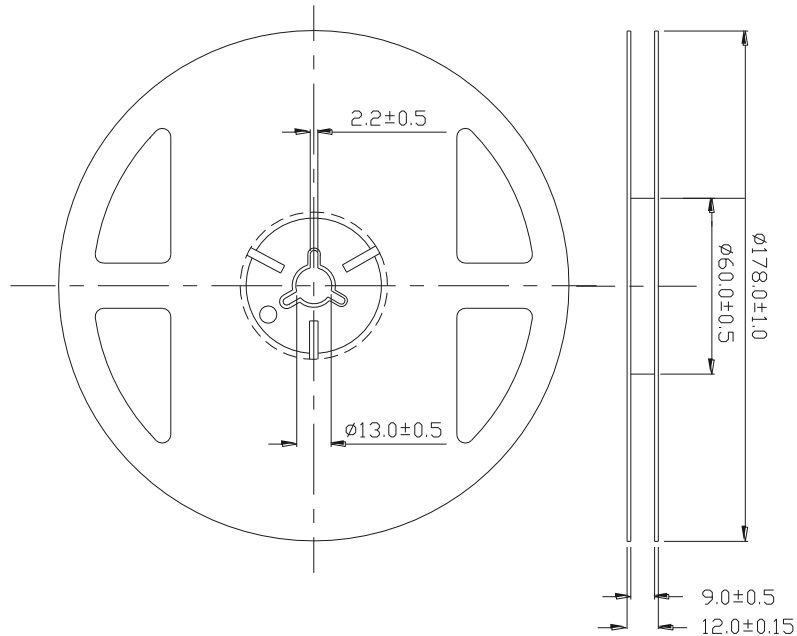
Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of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

5.Repairing

Repair should not be done after the LEDs 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 LEDs will or will not be damaged by repairing.

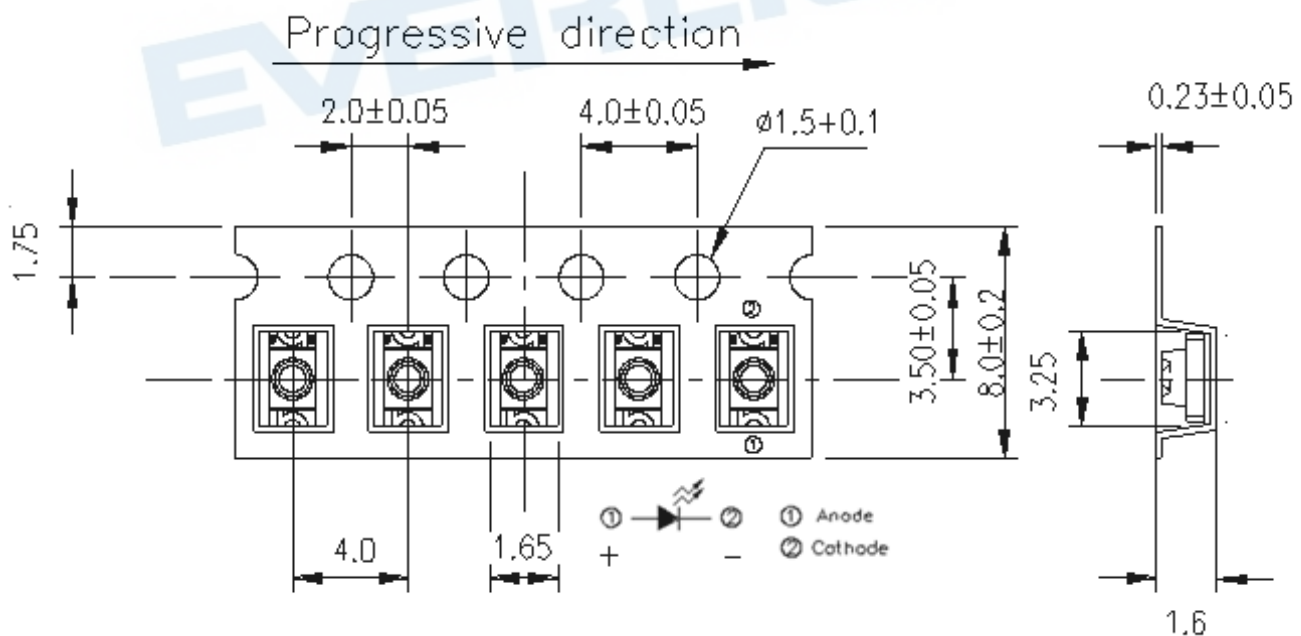


Package Dimensions



Note: The tolerances unless mentioned are $\pm 0.1\text{mm}$, Unit: mm

Carrier Taping Dimensions: Loaded Quantity Per Reel 3000PCS/Reel



Note: The tolerances unless mentioned are $\pm 0.1\text{mm}$, Unit: mm

Label Form Specification

RoHS	EVERLIGHT	5
CPN: XXXXXXXXXXXXXXXXXXXX		
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX		
P/N: XXXXXXXXXXXX		
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX		
LOT NO: Y150716XXX-XXXXXXXXXX-XXXXXXXXXX		
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX		
QTY: 0123456789 HUE: XXXXXXXXXXXX		
CAT: XXXXXXXXXXXX REF: XXXXXXXXXXXX		
REFERENCE: BTPYMMDDXXXXX		
MSL-X MADE IN XXXXXX		

CPN: Customer's Production Number

P/N : Production Number

LOT No: Lot Number

QTY: Packing Quantity

HUE: Peak Wavelength

CAT: Ranks

REF: Reference

MSL-X: MSL Level

Made In: Manufacture place

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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