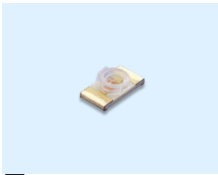


## Reverse Package Infrared LED

### EAIST3216A4



#### Features

- Small double-end package
- Low forward voltage
- Good spectral matching to Si photo detector
- 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

- EAIST3216A4 is an infrared emitting diode in miniature SMD package which is molded in a water clear epoxy with spherical top view lens.
- The device is spectrally matched with silicon photodiode and phototransistor.

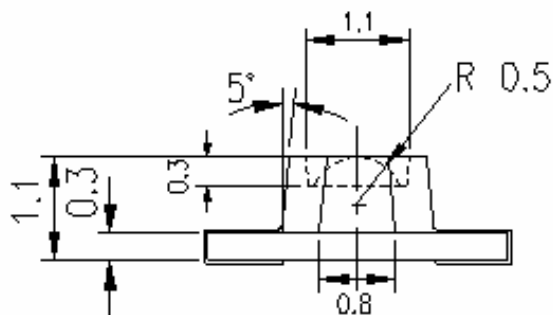
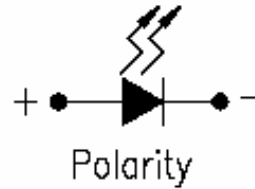
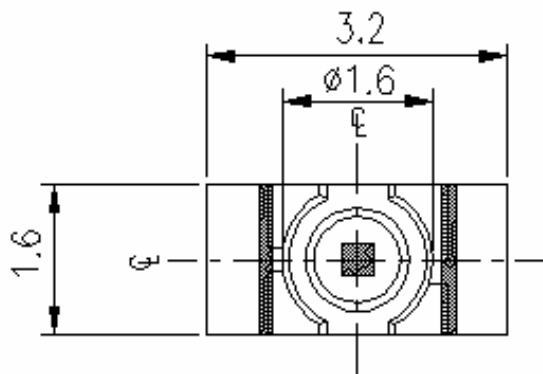
#### Applications

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

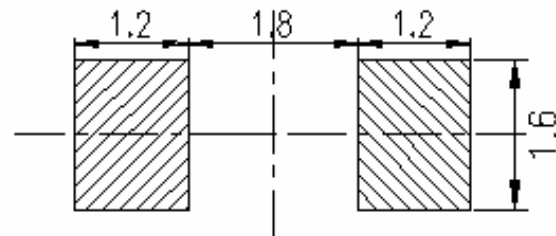
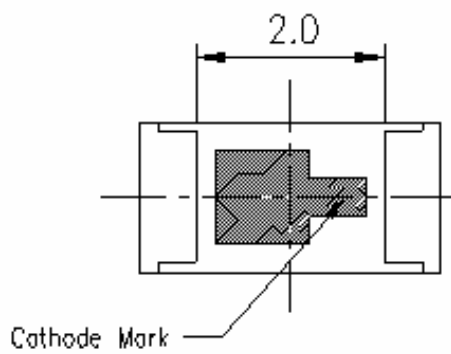
#### Device Selection Guide

LED Part No.	Chip Material	Lens Color
EAIST3216A4	GaAlAs	Water Clear

## Package Dimensions



For Reflow Soldering



- Notes:**
- 1.All dimensions are in millimeters
  - 2.Tolerances unless dimensions  $\pm 0.1$ 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	IF	65	mA
Reverse Voltage	VR	5	V
Operating Temperature	Topr	-25 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +85	°C
Power Dissipation at(or below) 25°C Free Air Temperature	Pd	130	mW
Soldering Temperature	Tsol	Reflow Soldering : 260 °C for 10 sec. Hand Soldering : 350 °C for 3 sec.	

**Notes:** Soldering time  $\leq$  5 seconds.

### Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Radiant Intensity	Ie	IF=20mA	0.5	1.5	--	mW /sr
		IF=100mA Pulse Width $\leq$ 100 $\mu$ s ,Duty $\leq$ 1%	--	7.5	--	
Peak Wavelength	$\lambda_p$	IF=20mA	--	940	--	nm
Spectral Bandwidth	$\Delta\lambda$	IF=20mA	--	45	--	nm
Forward Voltage	VF	IF=20mA	--	1.2	1.5	V
		IF=100mA Pulse Width $\leq$ 100 $\mu$ s ,Duty $\leq$ 1%	--	1.4	1.8	
		IF=1A	--	2.6	4.0	
Reverse Current	IR	VR=5V	--	--	10	$\mu$ A
View Angle	2 $\theta$ 1/2	IF=20mA	--	160	--	deg

## Typical Electro-Optical Characteristics Curves

Fig.1 Forward Current vs. Ambient Temperature

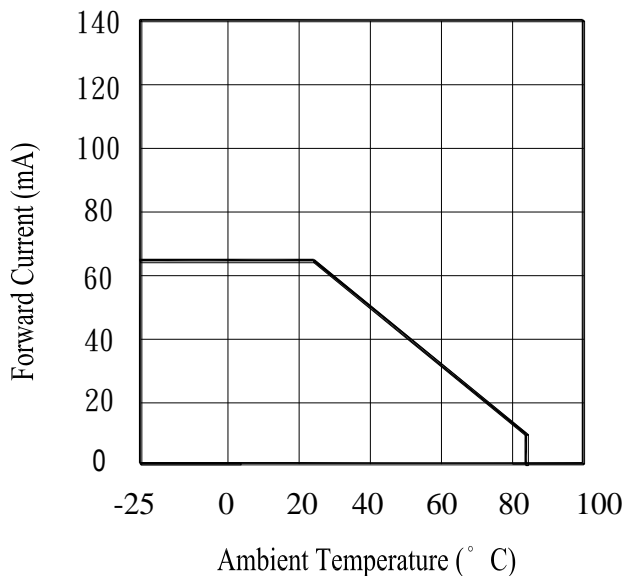


Fig.2 Spectral Distribution

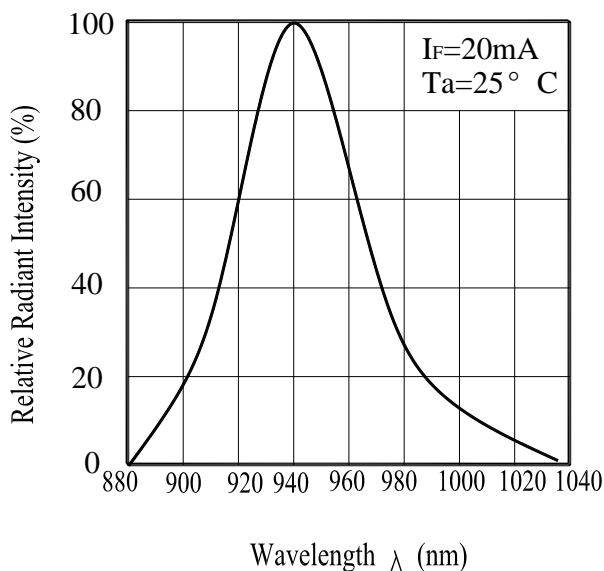


Fig.3 Relative Intensity vs Forward Current

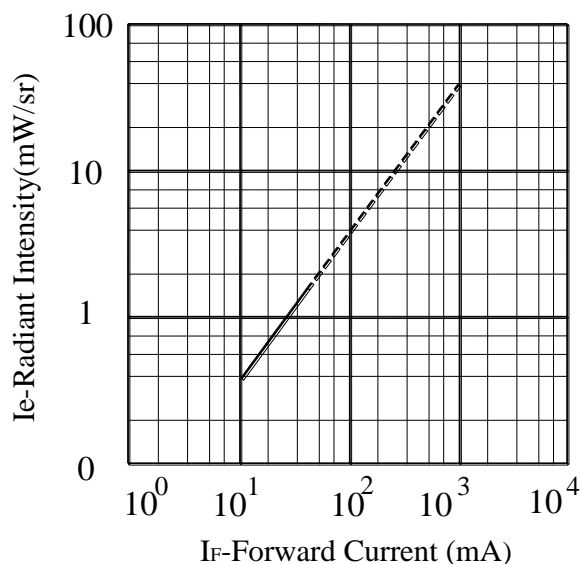
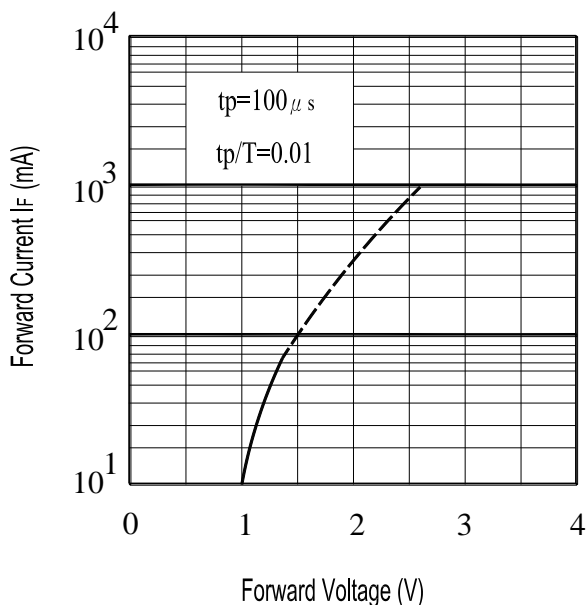
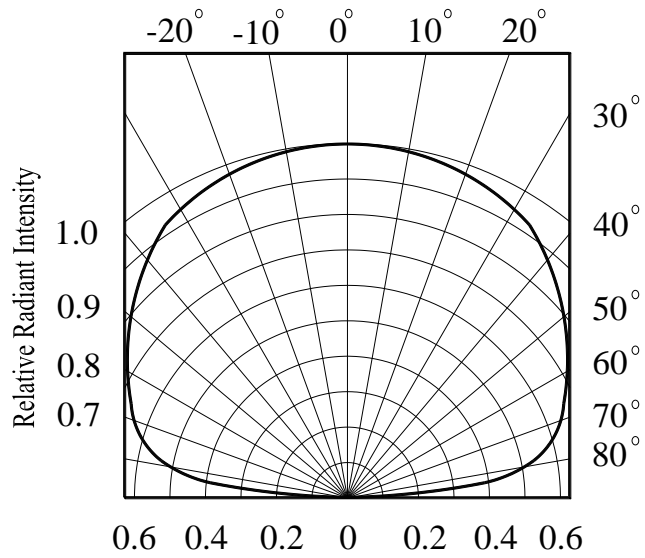


Fig.4 Forward Current vs. Forward Voltage



## Typical Electro-Optical Characteristics Curves

.Fig.5 Relative Radiant Intensity vs.  
Angular Displacement



## 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.

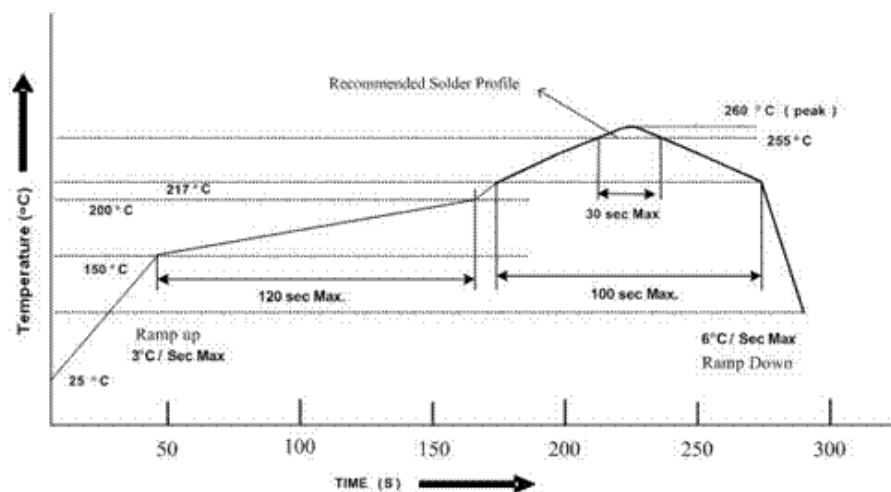
2.5 The LEDs should be used within 168 hours (7 days) after opening the package.

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 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 LEDs during heating.

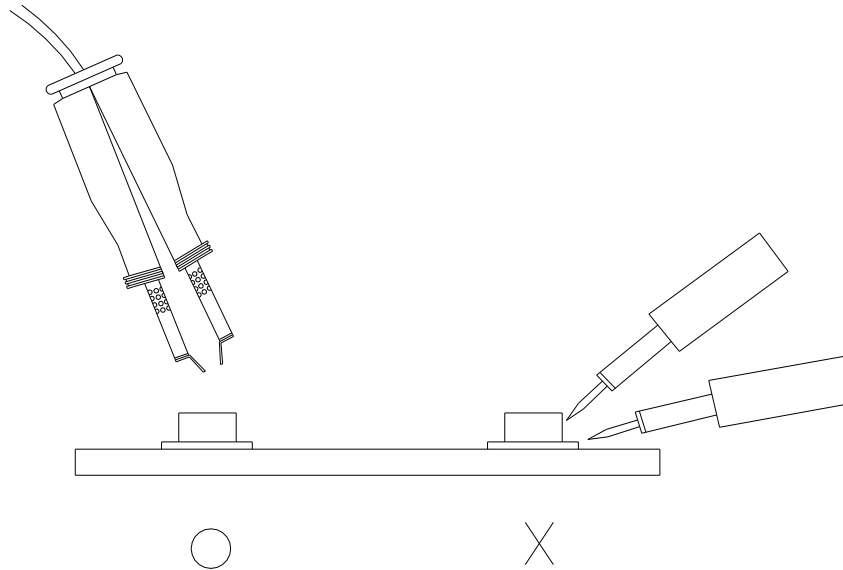
3.4 After soldering, do not warp the circuit board.

#### 4. Soldering Iron

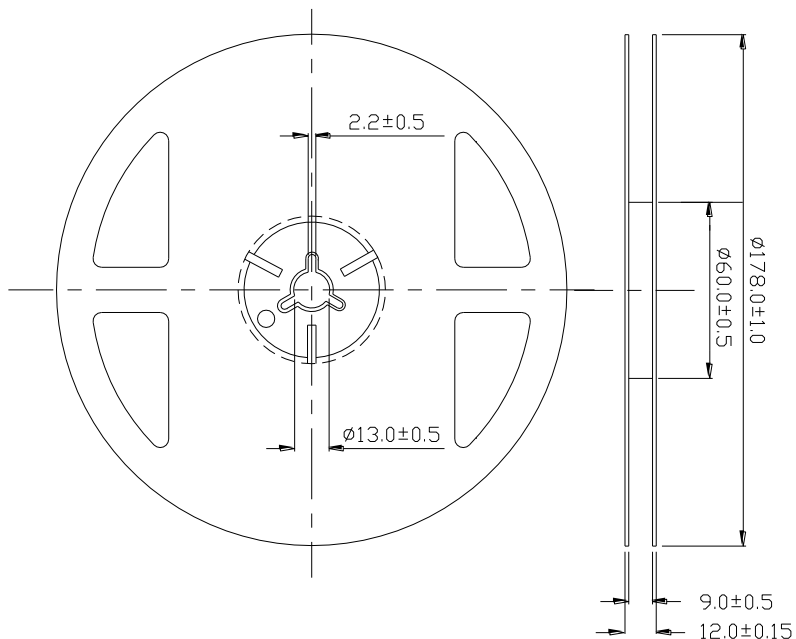
Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of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

#### 5. Repairing

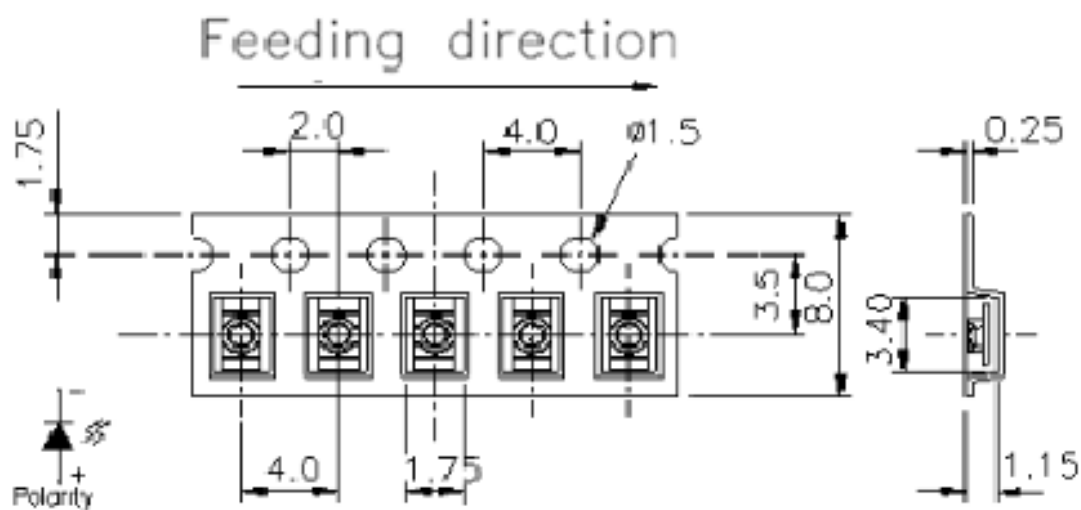
Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.



## Package Dimensions




## Carrier Taping Dimensions: (Quantity: 2000PCS/Reel)




**Note:** The tolerances unless mentioned are  $\pm 0.1$ mm, Unit: mm



## Label Form Specification

RoHS		<b>EVERLIGHT</b>	5
CPN: XXXXXXXXXXXXXXXXXXXX			
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX			
P/N: XXXXXXXXXXXX			
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX			
LOT NO: Y150716XXX-XXXXXXXXXX-XXXXXXXXXX			
QTY: 0123456789 HUE: XXXXXXXXXXX			
CAT: XXXXXXXXXXX REF: XXXXXXXXXXX			
REFERENCE: BTPYYMMDXXXXX			
MSL-X                      MADE IN XXXXXXX			



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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