DATASHEET

Technical Data Sheet
1.6mm round Subminiature Side Looking Infrared LED
EAIST3024A0

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.

Description

- EAIST3024A0 is an infrared emitting diode in miniature SMD package which is molded in a water clear plastic with spherical top view lens. The device is spectrally matched with silicon photodiode and phototransistor.

Applications

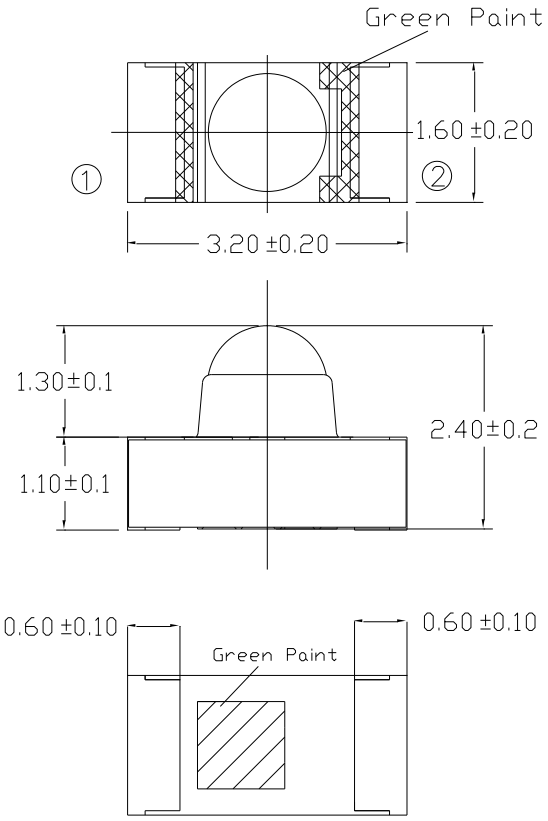
- Infrared applied system

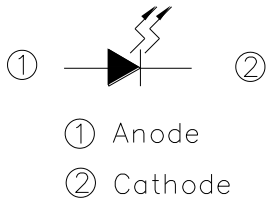
Device Selection Guide

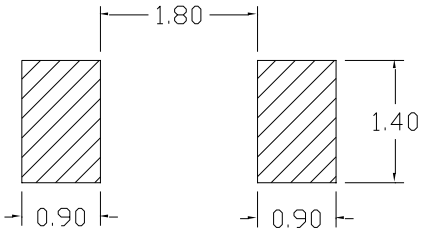
Device No.	Chip Material	Lens Color
EAIST3024A0	GaAlAs	Water clear

Issue No: DIR-0001238 Rev. 1

Package Dimensions







Recommended Soldering Pattern
for Side Looker

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

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Continuous Forward Current	I_F	65	mA
Reverse Voltage	V_R	5	V
Operating Temperature	T_{opr}	-40 ~ +85	℃
Storage Temperature	T_{stg}	-40 ~ +100	℃
Soldering Temperature*1	T_{sol}	260	℃
Power Dissipation at(or below) 25℃ Free Air Temperature	P_d	100	mW

Notes: *1:Soldering time≦5 seconds.

Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Radiant Intensity	Ie	2.0	4.5	--	mW/sr	I_F=20mA
		--	22	--		I_F=100mA Pulse Width≦100μ s ,Duty≦1%
Peak Wavelength	λ p	920	940	960	nm	I_F=20mA
Spectral Bandwidth	Δ λ	--	30	--	nm	I_F=20mA
Reverse Current	I_R	--	--	10	μ A	V_R=5V
View Angle	2θ 1/2	--	45	--	deg	I_F=20mA

Ie Rank

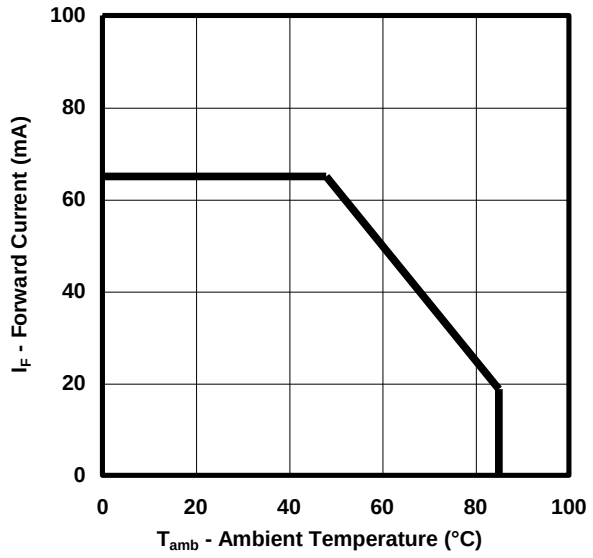
Condition：I_F=20mA

Unit：mW/sr

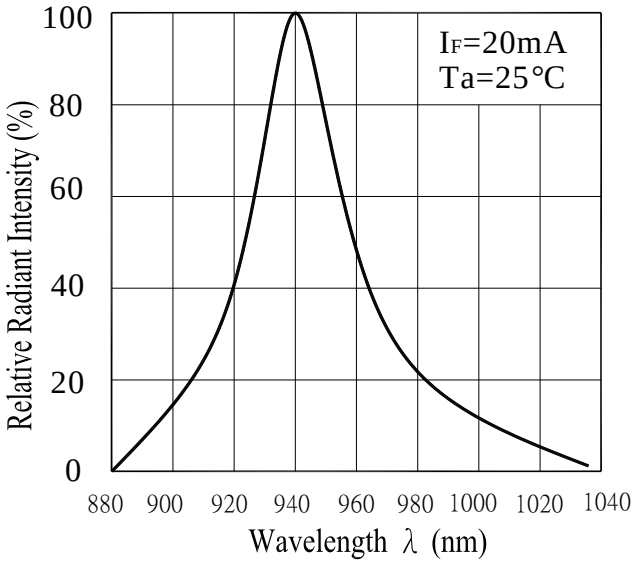
Bin Number	H	J	K	L
Min	2.0	3.0	4.0	5.0
Max	3.5	4.5	6.0	--

Typical Electrical/Optical/Characteristics Curves

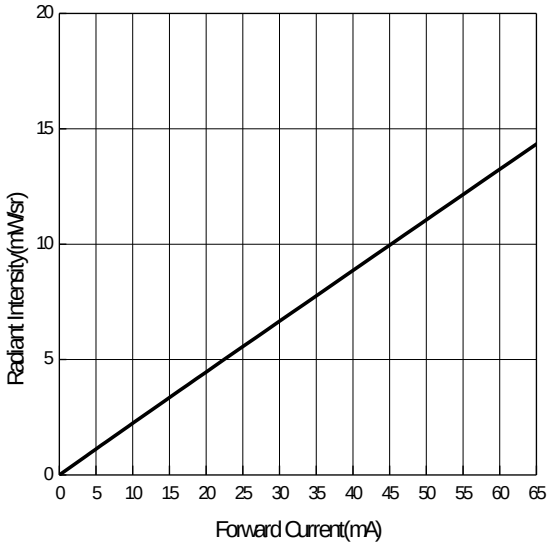
Forward Current vs. Ambient Temperature



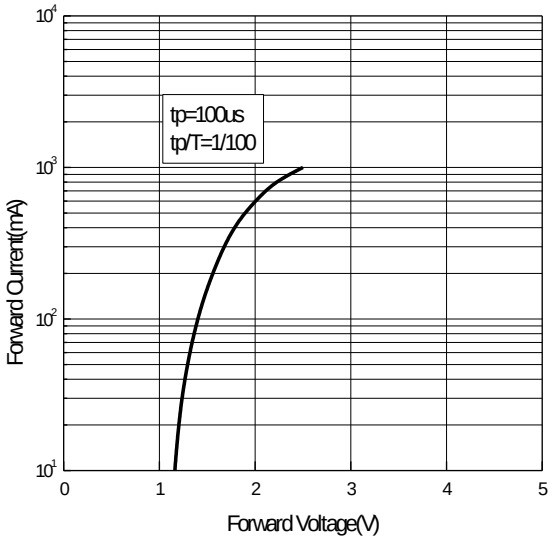
Spectral Sensitivity



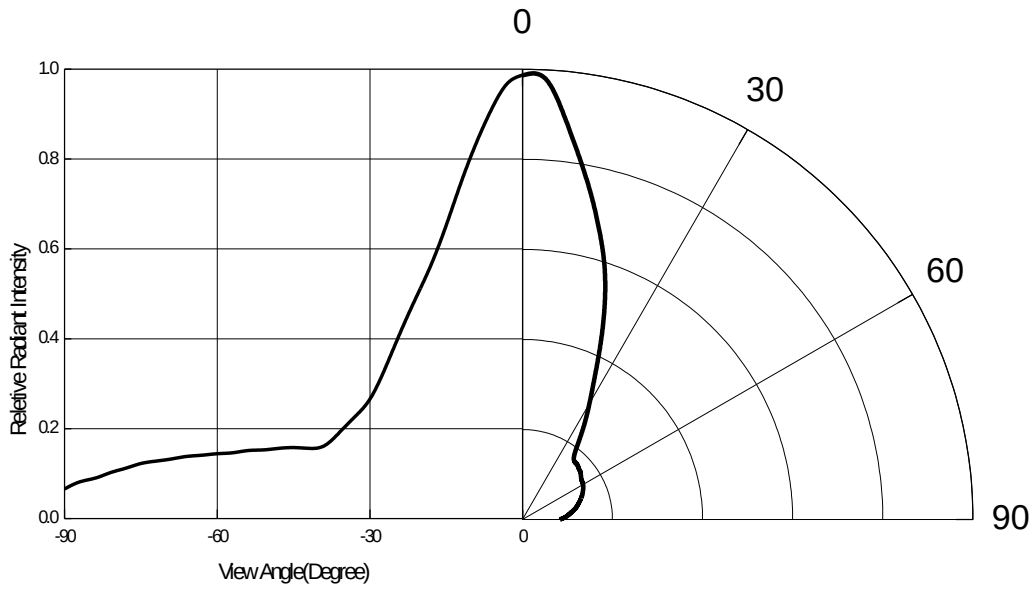
Relative Intensity vs. Forward Current



Forward Current vs. Forward Voltage



Relative Radiant Intensity vs. Angular Displacement



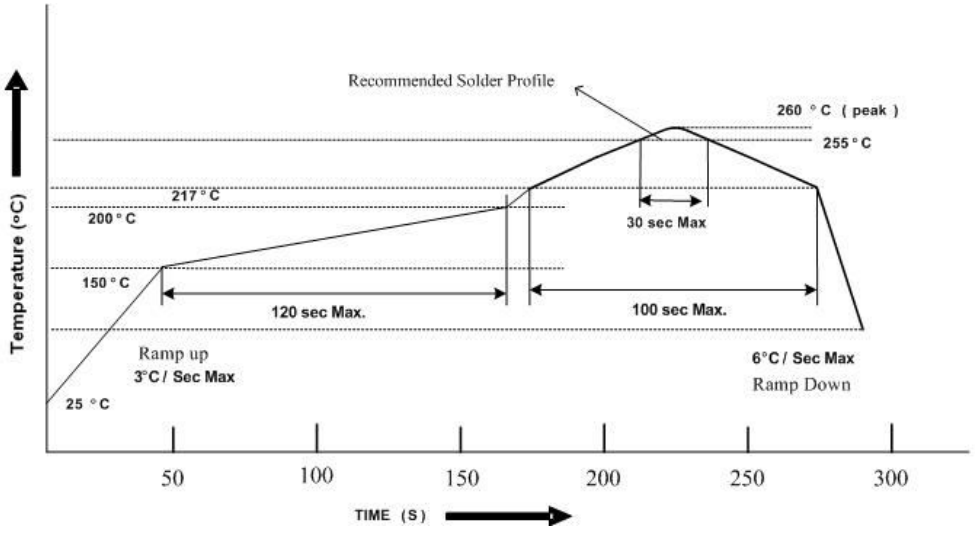
● Precautions For Use

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 Shelf life in sealed bag from the bag seal date: 12 months at < 40℃ and < 90% RH.
   2.3 After opening the package, the LEDs must be kept at ≤ 30°C and ≤ 60%RH or less.
   2.4 The LEDs should be used within 168 hours (7 days) after opening the package.
   2.5 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℃ for Min. 24 hours.

3. Soldering Condition
   3.1 Pb-free solder temperature profile



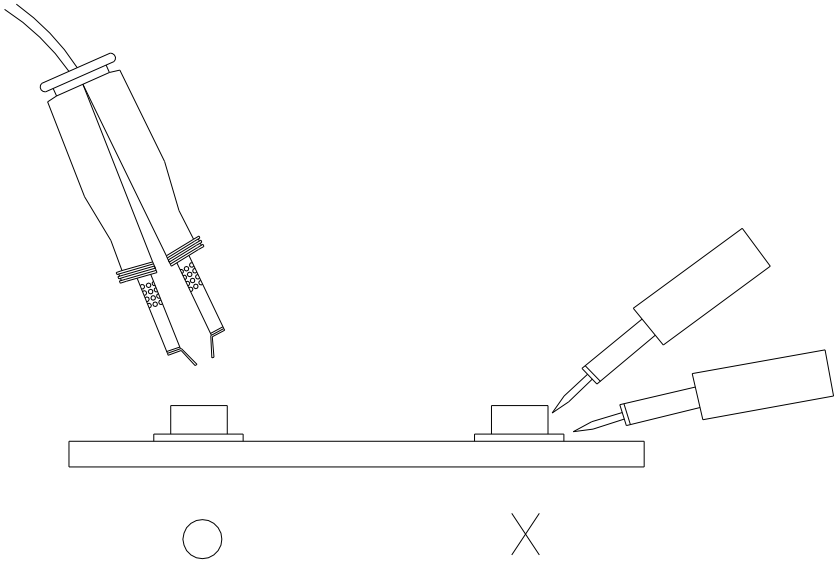
   3.2 Reflow soldering should not be done more than two times.
   3.3 When soldering, do not put stress on the LEDs during heating.
   3.4 After soldering, do not warp the circuit board.

4. Soldering Iron

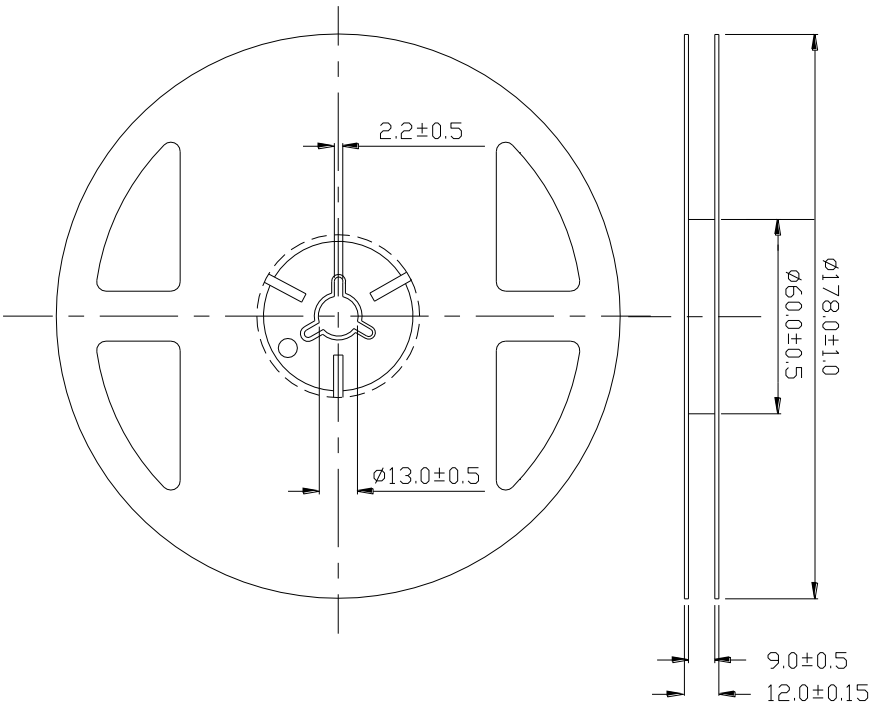
Each terminal is to go to the tip of soldering iron temperature less than 350℃ for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of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

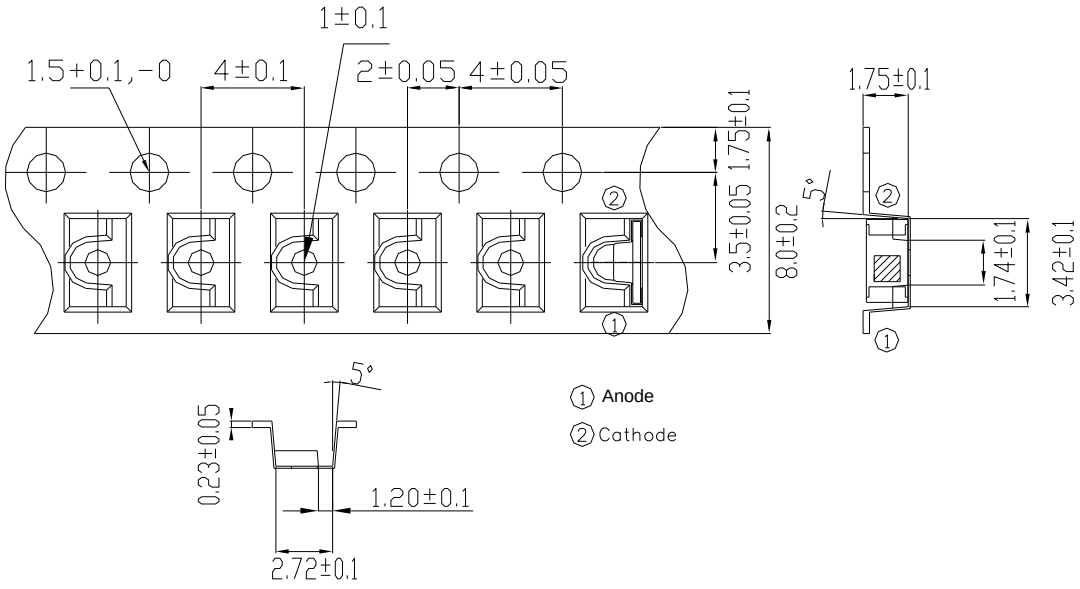


Package Dimensions



Note: The tolerances unless mentioned is ±0.1mm ,Unit = mm

Carrier Tape Dimensions:(Quantity: 1500pcs/reel)



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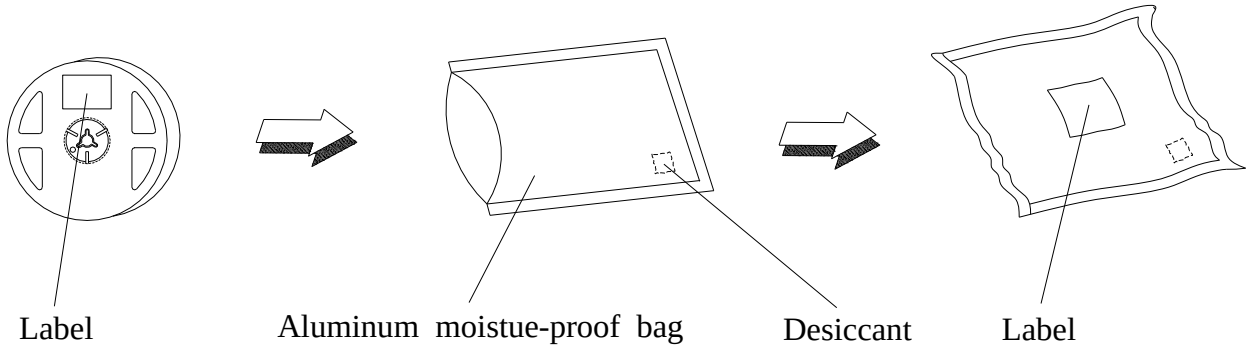
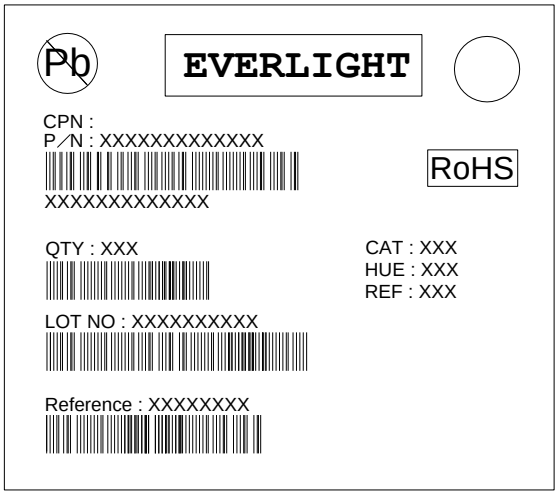
Packing Procedure



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
MADE IN TAIWAN: Production Place

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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