

### Technical Data Sheet Silicon PIN Photodiode EAPDST3227A1

#### Features

- Fast response time
- High photo sensitivity
- Small junction capacitance
- 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)

#### Description

• EAPDST3227A1 is a high speed and high sensitive. PIN photodiode in miniature flat top view lens SMD package and it is molded in a black plastic. The device is Spectrally matched to visible and infrared emitting diode.

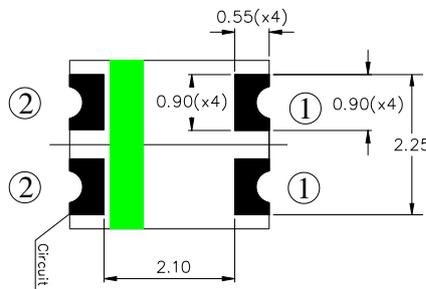
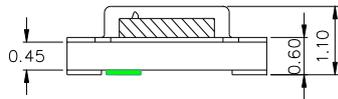
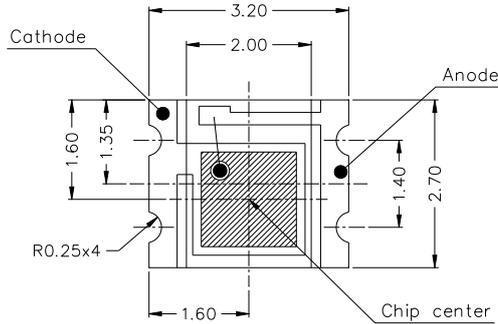
#### Applications

- High speed photo detector
- Copier
- Game machine

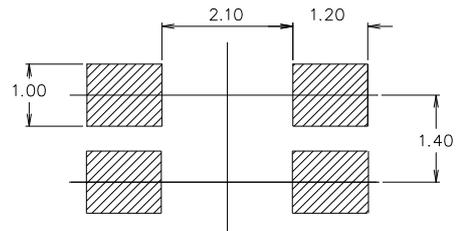
#### Device Selection Guide

Device No.	Chip Material	Lens Color
EAPDST3227A1	Silicon	Water clear

**Package Dimensions**



For reflow soldering (propose)



- Notes:** 1.All dimensions are in millimeters  
2.Tolerances unless dimensions  $\pm 0.1\text{mm}$

**Absolute Maximum Ratings ( $T_a=25^\circ\text{C}$ )**

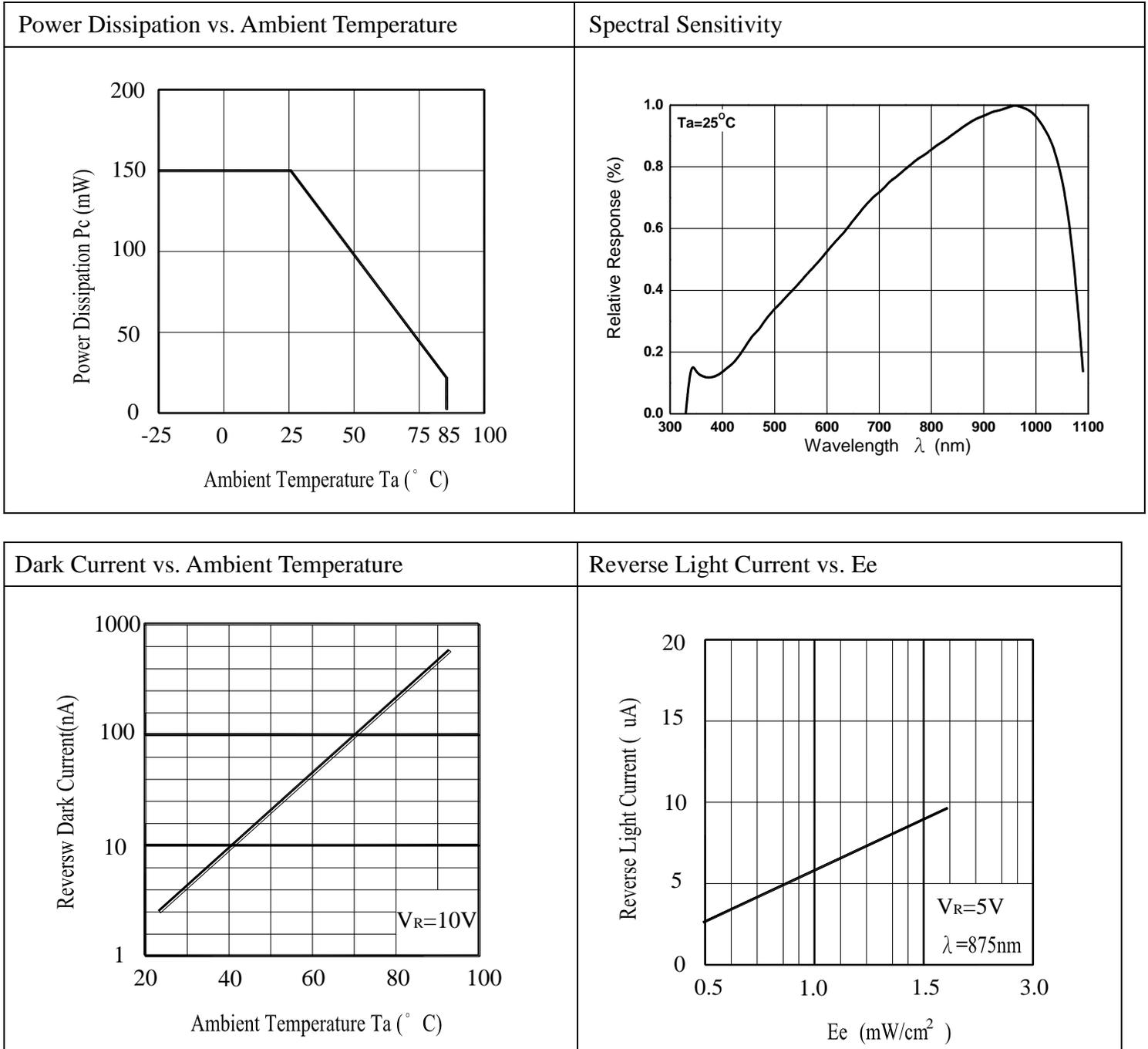
Parameter	Symbol	Rating	Unit
Reverse Voltage	$V_R$	32	V
Operating Temperature	$T_{opr}$	-40 ~ +85	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-40 ~ +100	$^\circ\text{C}$
Soldering Temperature *1	$T_{sol}$	260	$^\circ\text{C}$
Power Dissipation at(or below) 25 $^\circ\text{C}$ Free Air Temperature	$P_d$	150	mW

**Notes:** \*1: Soldering time  $\leq 5$  seconds.

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Rang Of Spectral Bandwidth	$\lambda$	400	---	1100	nm	10% of $\lambda_p$
Wavelength Of Peak Sensitivity	$\lambda_p$	---	940	---	nm	---
Open-Circuit Voltage	$V_{OC}$	---	0.41	---	V	$E_e=5mW/cm^2$ $\lambda_p=940nm$
Short-Circuit Current	$I_{SC}$	4.0	6.5	---	$\mu A$	$E_e=1mW/cm^2$ $\lambda_p=875nm$
Reverse Light Current	$I_L$	4.2	6.5	---	$\mu A$	$E_e=1mW/cm^2$ $\lambda_p=875nm$ $V_R=5V$
Dark Reverse Current	$I_D$	---	---	10	nA	$E_e=0mW/cm^2$ $V_R=10V$
Reverse Breakdown Voltage	$B_{VR}$	32	170	---	V	$E_e=0mW/cm^2$ $I_R=100\mu A$

**Typical Electrical/Optical/Characteristics Curves**



## 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 70%RH or less.

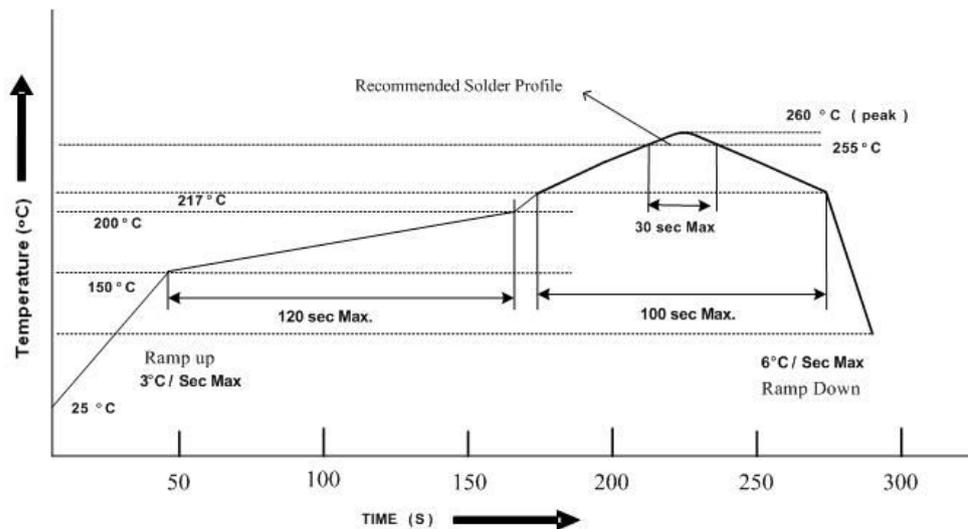
2.5 The LEDs should be used within 168 hours (7 days) after opening the package

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 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.

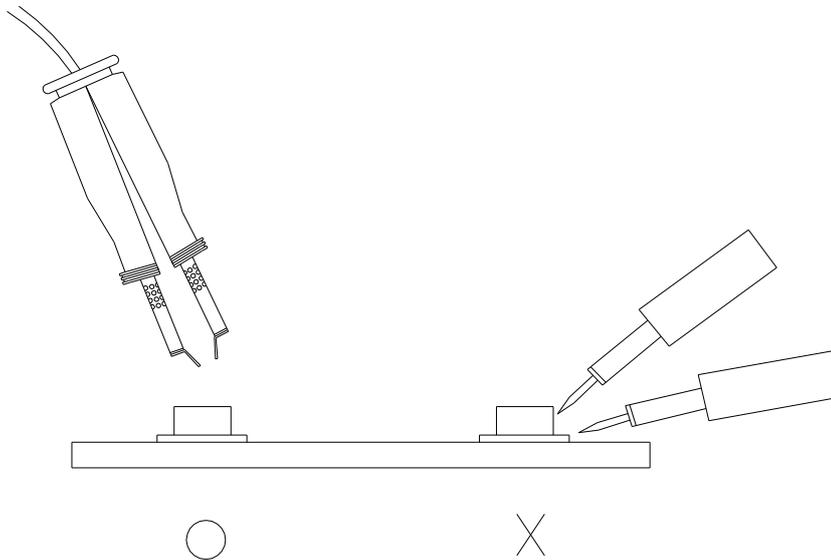
3.4 After soldering, do not warp the circuit board.

#### 4. Soldering Iron

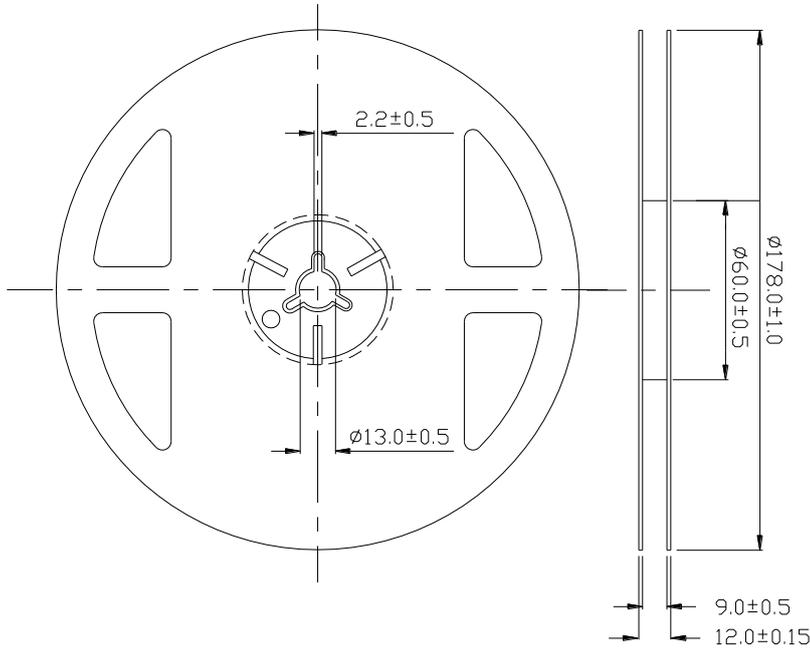
Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of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

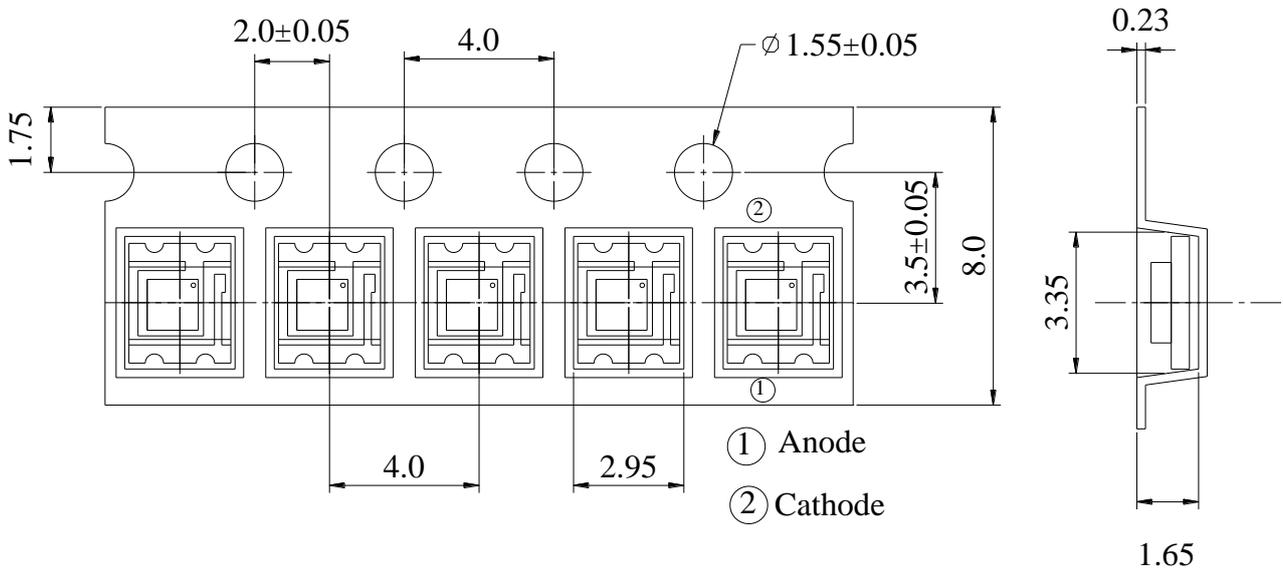


**Package Dimensions**



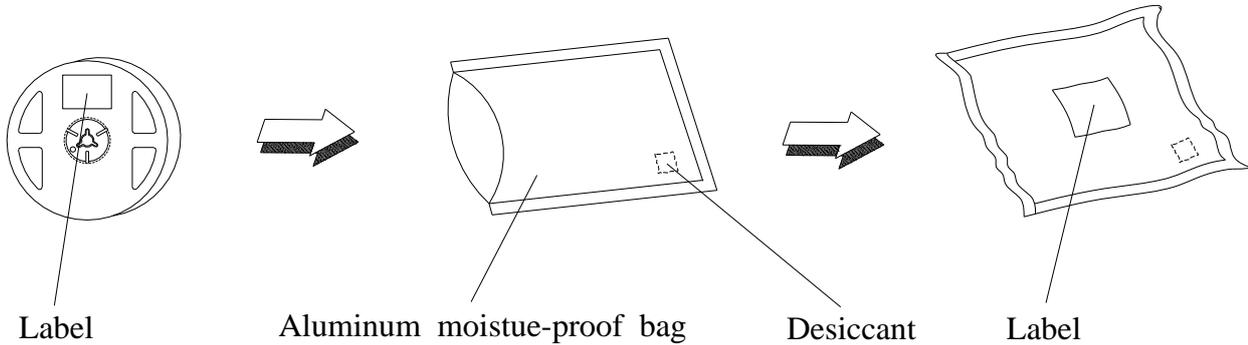
**Note:** The tolerances unless mentioned is  $\pm 0.1$ mm ,Unit = mm

**Carrier Tape Dimensions:(Quantity: 3000pcs/reel)**

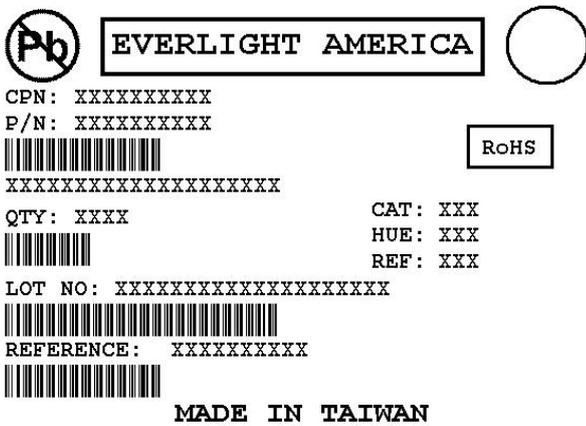


**Note:** The tolerances unless mentioned is  $\pm 0.1$ mm ,Unit = mm

## 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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