



EVERLIGHT ELECTRONICS CO.,LTD.

DATA SHEET

PART NO. : 19-217/W1D-ANPHY/3T

DATE :

DEPARTMENT : R.D.1

REVISION : 1.0

RECEIVED			
<input checked="" type="checkbox"/> MASS PRODUCTION			
<input type="checkbox"/> PRELIMINARY			
<input type="checkbox"/> CUSTOMER DESIGN			
DEVICE NUMBER : DSE-197-W01			
PAGE : 11			
CUSTOMER	DESIGNER	CHECKER	APPROVER
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REV	DESCRIPTION	RELEASE DATE

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<http://www.everlight.com>



Technical Data Sheet

0.4mm Height Flat Top LED

19-217/W1D-ANPHY/3T

Features

- Package in 8mm tape on 7" diameter reel.
- Compatible with automatic placement equipment.
- Compatible with infrared and vapor phase reflow solder process.
- Mono-color type.

Descriptions

- The 19-217 SMD Taping is much smaller than lead frame type components, thus enable smaller board size, higher packing density, reduced storage space and finally smaller equipment to be obtained.
- Besides, lightweight makes them ideal for miniature applications. etc.

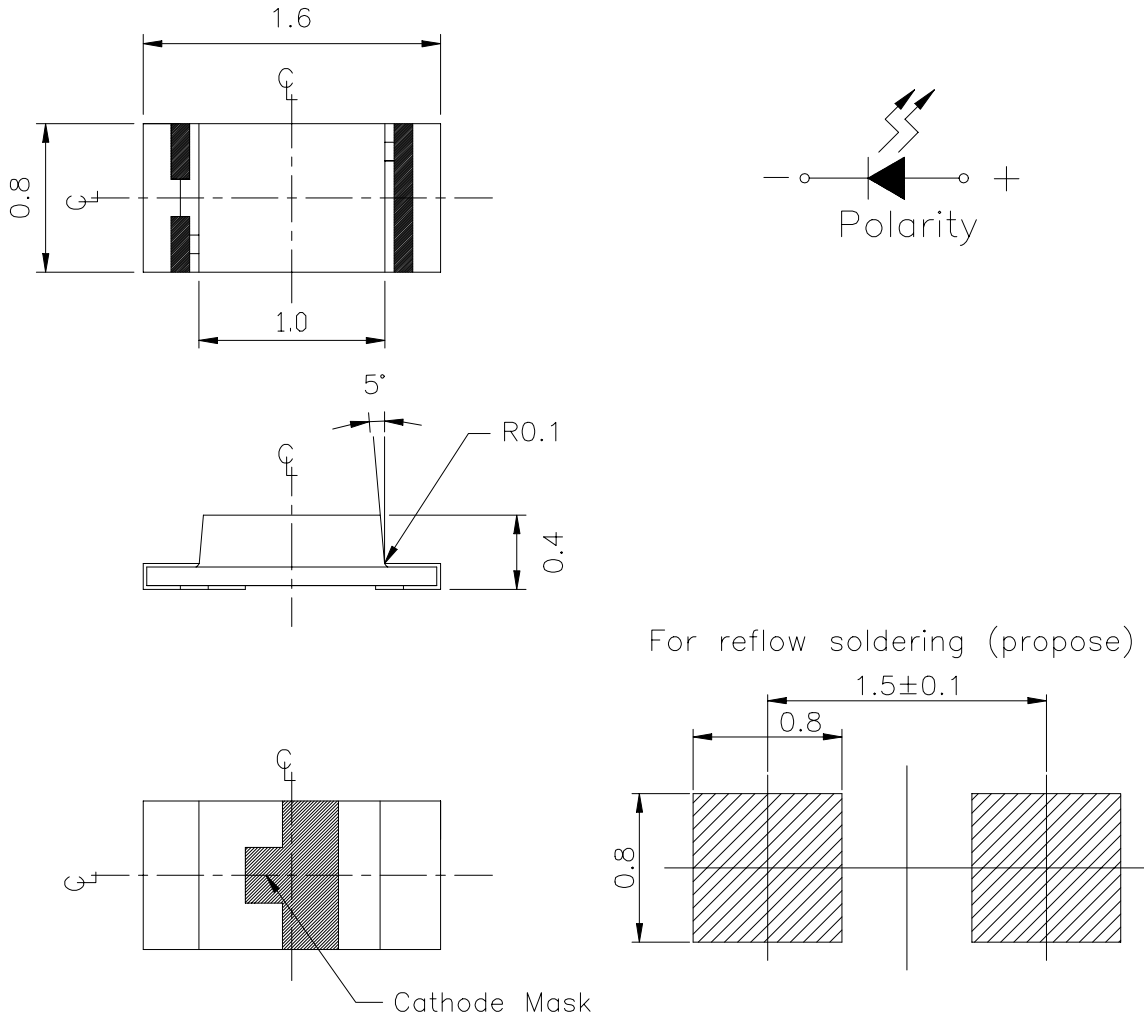
Applications

- Automotive: backlighting in dashboard and switch.
- Telecommunication: indicator and backlighting in telephone and fax.
- Flat backlight for LCD, switch and symbol.
- General use.

Device Selection Guide

Part No.	Chip		Lens Color
	Material	Emitted Color	
19-217/W1D-ANPHY/3T	InGaN	Pure White	Yellow Diffused

Package Outline Dimensions



Note: The tolerances unless mentioned is $\pm 0.1\text{mm}$, Angle $\pm 0.5^\circ$,Unit = mm

19-217/W1D-ANPHY/3T
Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V _R	5	V
Forward Current	I _F	25	mA
Operating Temperature	T _{opr}	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +90	°C
Soldering Temperature	T _{sol}	260 (for 5 seconds)	°C
Power Dissipation	P _d	110	mW
Electrostatic Discharge	ESD	150	V
Peak Forward Current (Duty 1/10 @1KHz)	I _F	100	mA

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I _v	28.5	-----	72.0	mcd	I _F =5mA
Viewing Angle	2θ 1/2	-----	130	-----	deg	I _F =5mA
Forward Voltage	V _F	2.70	-----	3.15	V	I _F =5mA
Reverse Current	I _R	-----	-----	50	μA	V _R =5V

Bin Range Of Luminous Intensity & Forward Voltage

Symbol	Bin Code	Min.	Max.	Unit	Condition
I _v	N	28.5	45.0	mcd	I _F =5mA
	P	45.0	72.0		
V _F	15	2.70	2.85	V	I _F =5mA
	16	2.85	3.00		
	17	3.00	3.15		

Notes:
1.Tolerance of Luminous Intensity ± 15%
2.Tolerance of Forward Voltage ± 0.1V

19-217/W1D-ANPHY/3T

Chromaticity Coordinates Specifications for Bin Grading

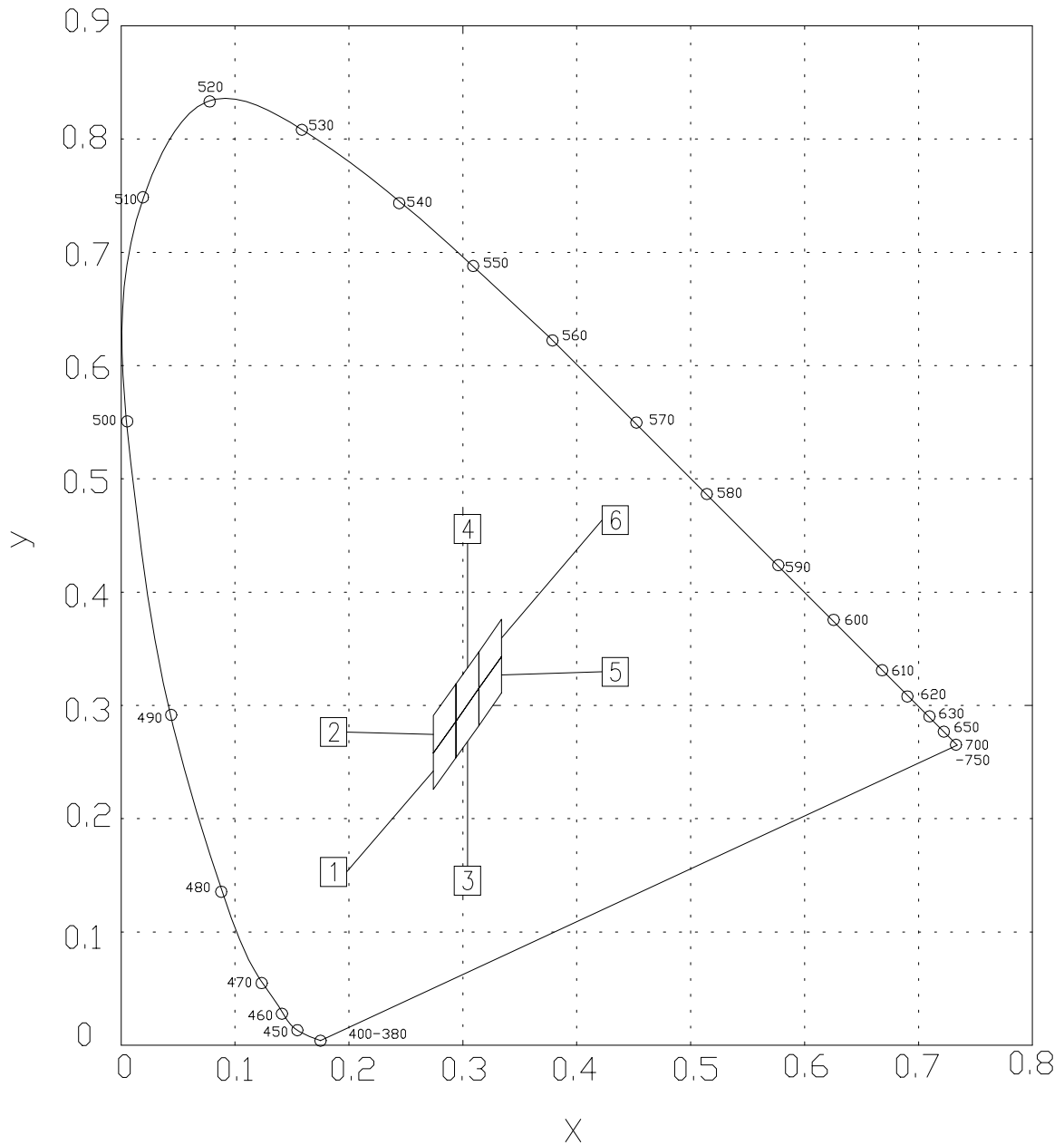
IF= 5mA

Groups	Bin Code	CIE_x	CIE_y
A	1	0.274	0.226
		0.274	0.258
		0.294	0.286
		0.294	0.254
	2	0.274	0.258
		0.274	0.291
		0.294	0.319
		0.294	0.286
	3	0.294	0.254
		0.294	0.286
		0.314	0.315
		0.314	0.282
	4	0.294	0.286
		0.294	0.319
		0.314	0.347
		0.314	0.315
	5	0.314	0.282
		0.314	0.315
		0.334	0.343
		0.334	0.311
6	0.314	0.315	
	0.314	0.347	
	0.334	0.376	
	0.334	0.343	

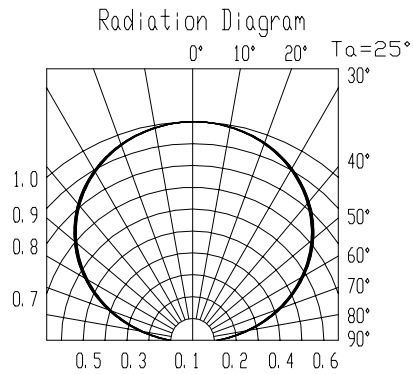
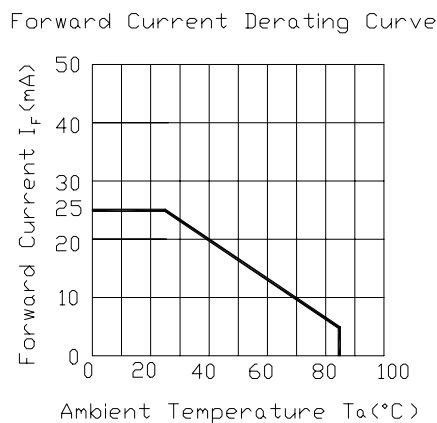
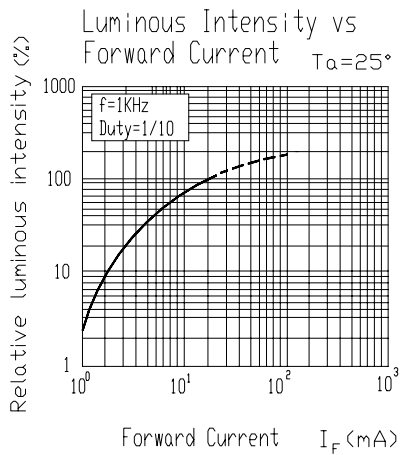
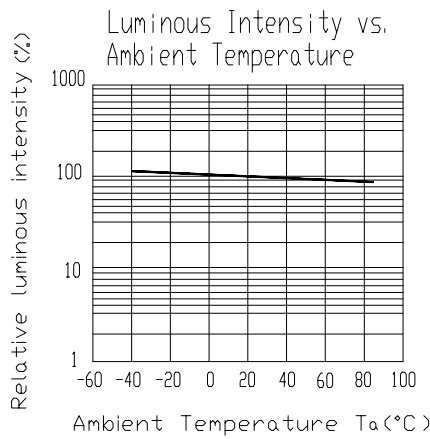
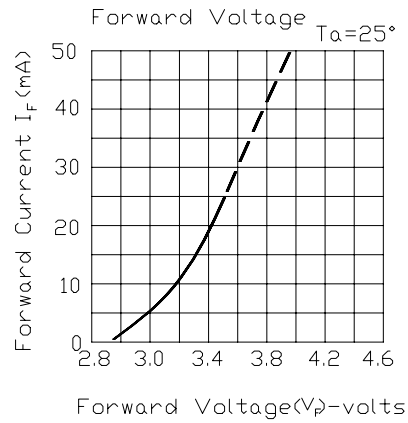
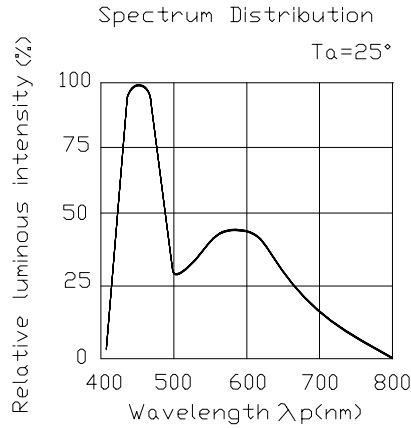
Notes:

- 1.The C.I.E. 1931 chromaticity diagram (Tolerance ± 0.01).
- 2.The products are sensitive to static electricity and care must be fully taken when handling products.

■ CIE Chromaticity Diagram

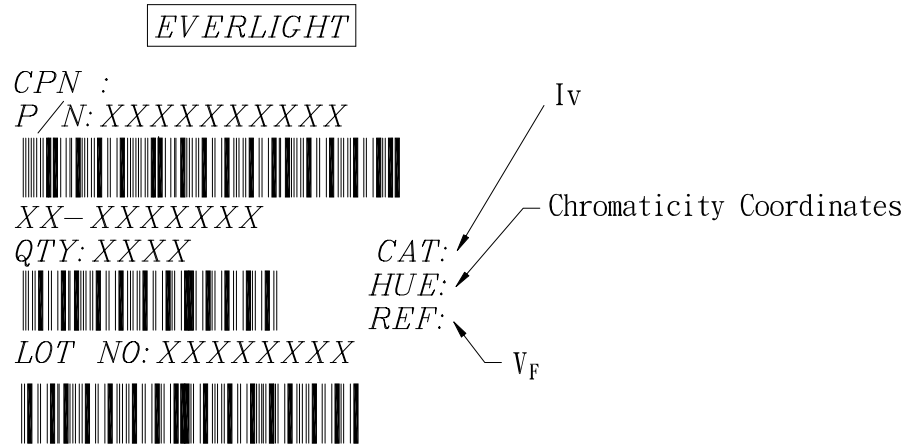


Typical Electro-Optical Characteristics Curves



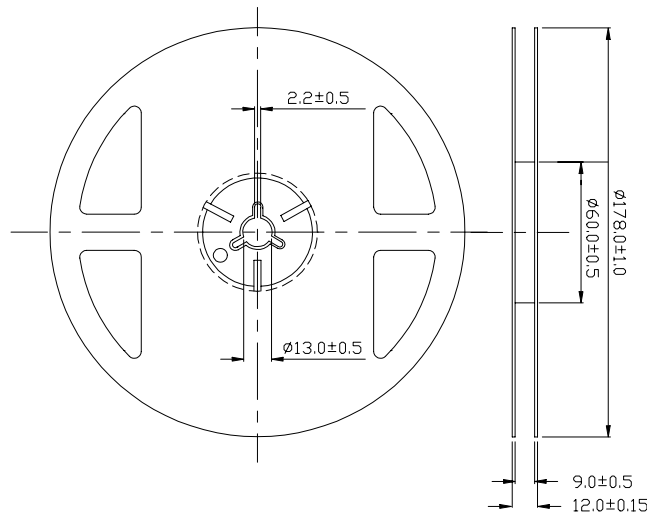
Label explanation

CAT: Luminous Intensity (mcd) HUE: Chromaticity Coordinates REF: Forward Voltage (V)



MADE IN TAIWAN

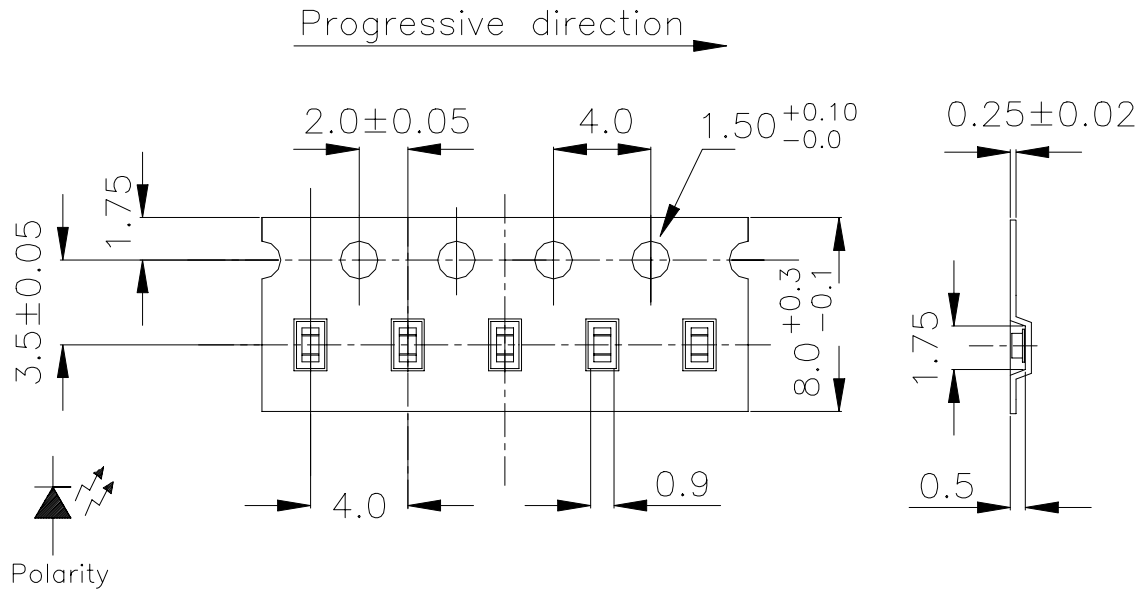
Reel Dimensions



Taping Quantity: 3000pcs

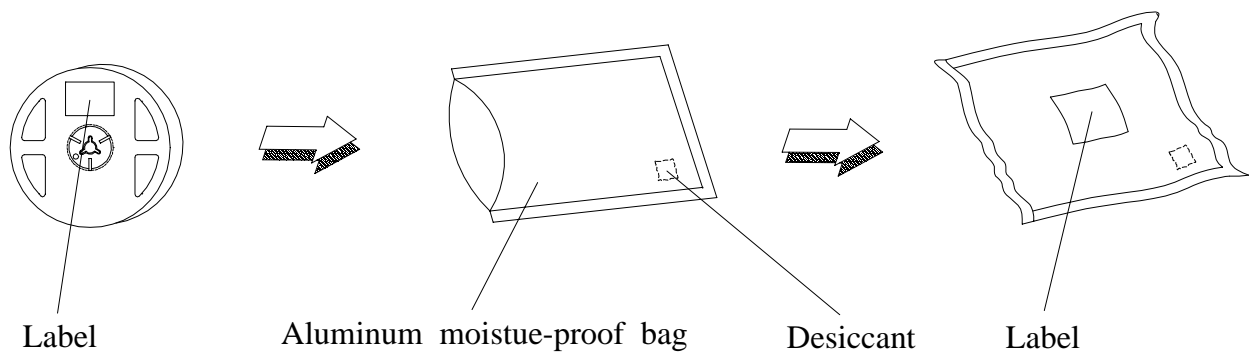
Note: The tolerances unless mentioned is ± 0.1mm , Angle± 0.5° ,Unit = mm

Carrier Tape Dimensions



Note: The tolerances unless mentioned is $\pm 0.1\text{mm}$, Angle $\pm 0.5^\circ$,Unit = mm

Moisture Resistant Packaging



Reliability Test Items And Conditions

The reliability of products shall be satisfied with items listed below.

Confidence level : 90 %

LTPD : 10 %

No.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Rc
1	Reflow	Temp. : 240°C ± 5°C Min. 5 sec.	6 Min.	22 Pcs.	0/1
2	Temperature Cycle	H : +100°C 15min. ∫ 5 min. L : -40°C 15min.	300 Cycles	22 Pcs.	0/1
3	Thermal Shock	H : +100°C 5min. ∫ 10 sec. L : -10°C 5min.	300 Cycles	22 Pcs.	0/1
4	High Temperature Storage	Temp. : 100°C	1000 Hrs.	22 Pcs.	0/1
5	Low Temperature Storage	Temp. : -55°C	1000 Hrs.	22 Pcs.	0/1
6	DC Operating Life	IF = 20 mA	1000 Hrs.	22 Pcs.	0/1
7	High Temperature / High Humidity	85°C/R.H85%	1000 Hrs.	22 Pcs.	0/1

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 time

2.1 The operation of Temperature and RH are : 5°C ~35°C , RH60%.

2.2 Once the package is opened, the products should be used within a week.

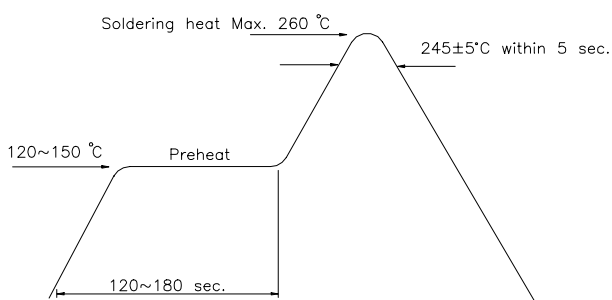
Otherwise, they should be kept in a damp proof box with desiccating agent.

Considering the tape life , we suggest our customers to use our products within a year(from production date).

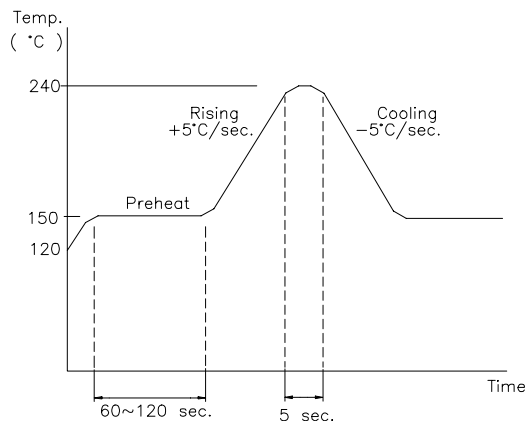
2.3 If opened more than one week in an atmosphere 5°C ~35°C , RH 60%, they should be treated at 60°C± 5°C for 15hrs.

2.4 When you discover that the desiccant in the package has a pink color (Normal = blue) , you should treat them in the same conditions as 2.3.

Soldering heat



Reflow Temp / Time

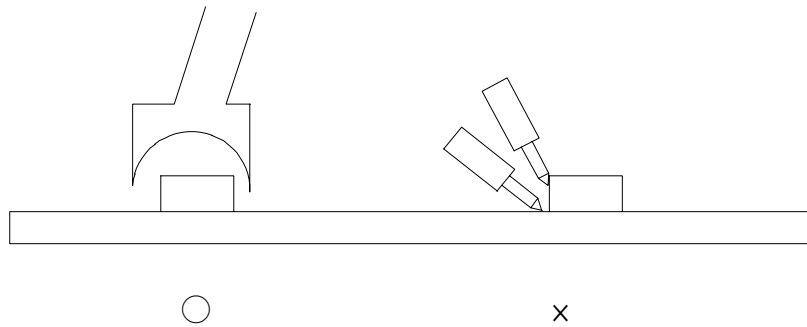


Soldering Iron

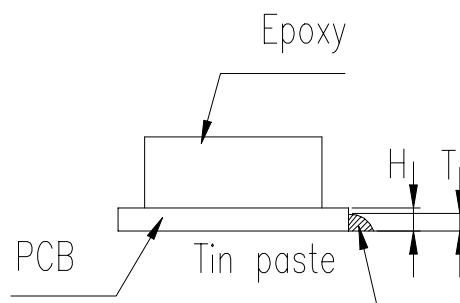
Basic spec is ≤ 5 sec when 260°C. If temperature is higher, time should be shorter (+10°C → -1sec). Power dissipation of Iron should be smaller than 15 W , and temperature should be controllable. Surface temperature of the device should be under 230 °C .

Rework

1. Customer must finish rework within 5 sec under 245°C.
2. The head of iron can not touch copper foil.
3. Twin-head type is preferred.



Thickness of tin paste



Thickness:
 $1/2H < T < H$

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单击下面可查看定价，库存，交付和生命周期等信息

[>>Everlight \(亿光\)](#)