



MODEL NO: 12-22ASYGUYC/530-A2/TR8 Device Number : DSE-12A-007 REV. 1.0

**Right Angle Lens Chip LEDs with Bi-Color(Multi-Color)**

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■ **Features :**

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

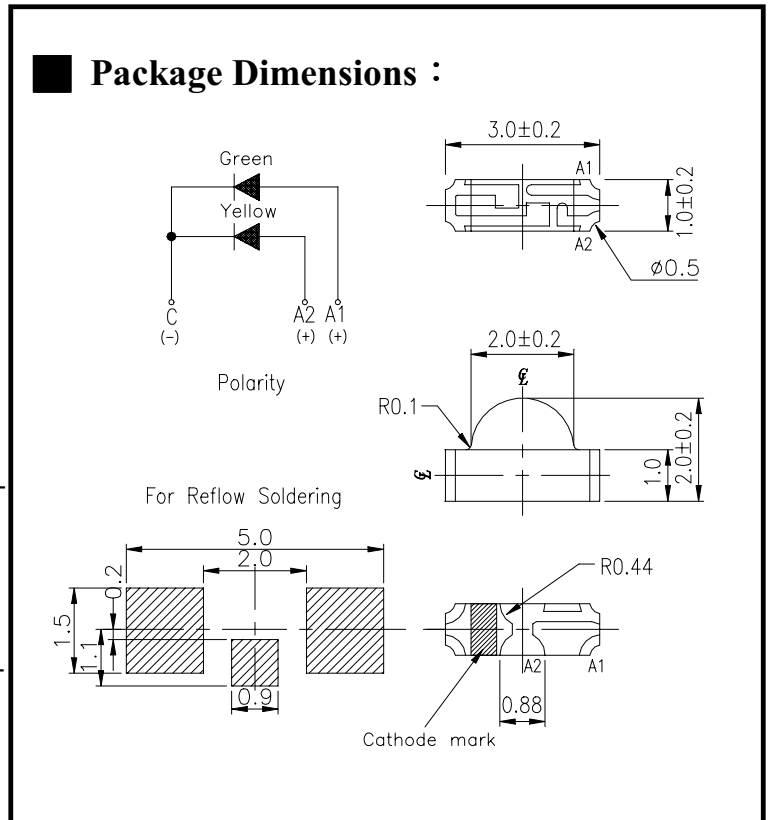
■ **Descriptions :**

- The 12-22A SMD Taping is much smaller than le-aded components, thus enable smaller board size, higher packing density, reduced storage space and finally smaller equipment to be obtained.
- Besides, light Weight makes them ideal for minia-ture application, 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.

■ **Package Dimensions :**



■ **Notes :**

Tolerances Unless Dimension ± 0.1mm

PART NO	CHIP		Lens Color
	Material	Emitted Color	
12-22A SYGUYC/S530-A2/TR8	SYG:	AlGaInP Super Green	Water Clear
	UY:	AlGaInP Super Yellow	

Office: NO. 25, Lane 76, Sec.3, Chung Yang Rd., Tucheng 236, Taipei, Taiwan, R.O.C.

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http://www.everlight.com

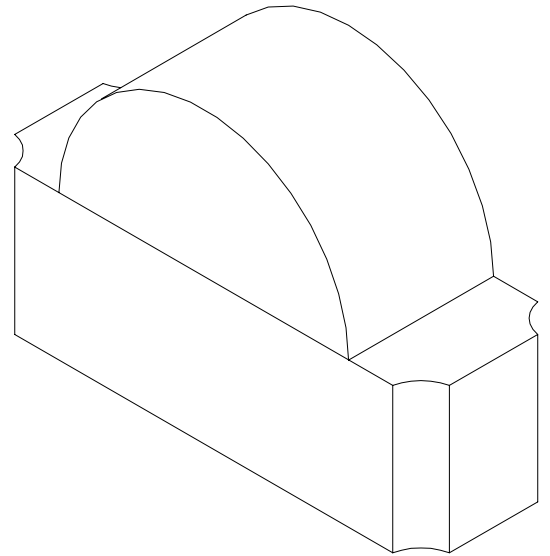
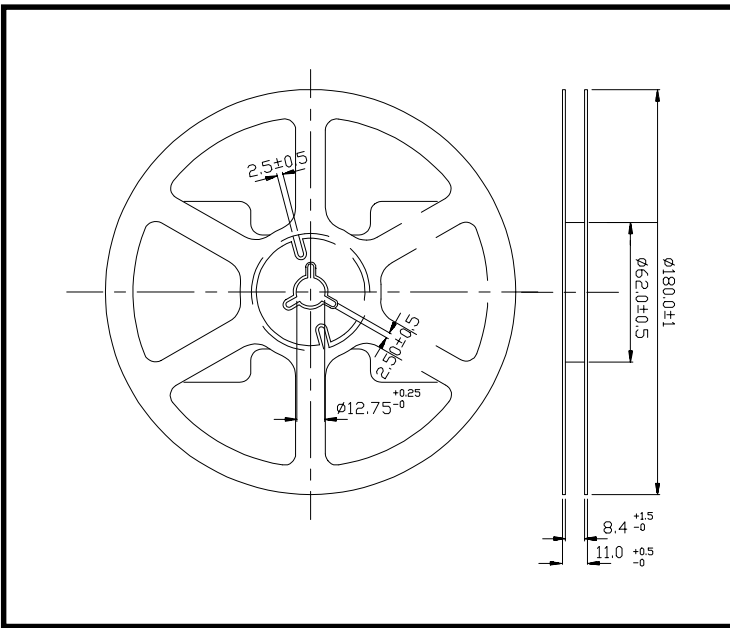


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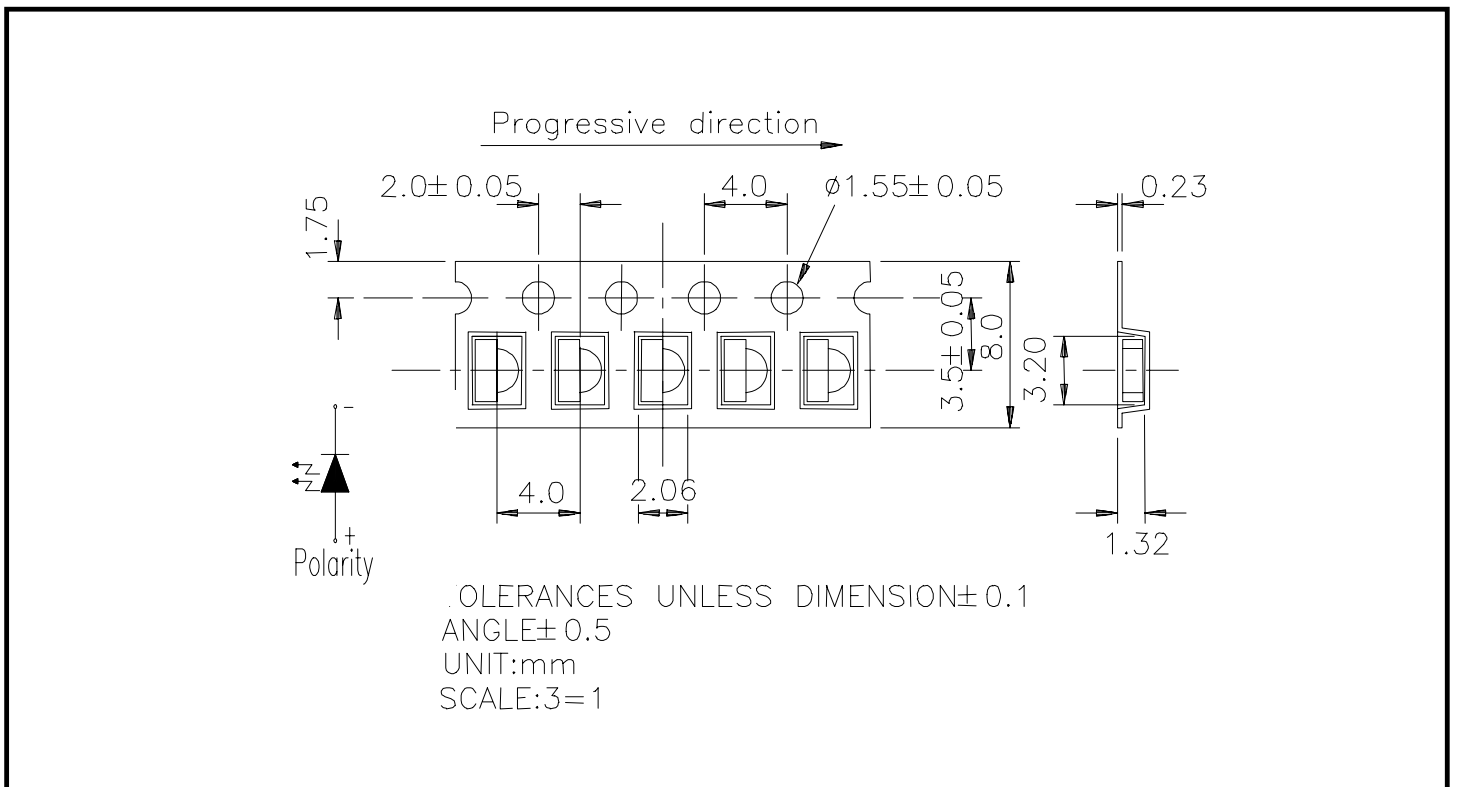
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■ Package Dimensions :



■ Loaded quantity per reel 2000 pcs/reel :





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Absolute Maximum Ratings at Ta = 25°C

Table with 4 columns: Parameter, Symbol, Rating, Unit. Rows include Reverse Voltage, Forward Current, Operating Temperature, Storage Temperature, Soldering Temperature, Power Dissipation, and Peak Forward Current.

Reliability Test Item And Condition

Table with 6 columns: NO, Item, Test Conditions, Test Hours/Cycle, Sample Size, Ac/Re. Rows list various reliability tests like Solder Heat, Temperature Cycle, Thermal Shock, High/Low Temperature Storage, DC Operating Life, and Low Temperature/High Humidity.



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■ **Electronic Optical Characteristics :**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous intensity	Iv SYG:	-----	1	-----	ncd	If=2mA
	UY:	-----	3	-----		
Luminous intensity	Iv SYG:	12	19	-----	mcd	If=20mA
	UY:	30	50	-----		
Viewing Angle	$2\theta 1/2$	-----	130	-----	deg	If=20mA
Peak Wavelength	$\lambda p$ SYG:	-----	575	-----	nm	If=20mA
	UY:	-----	591	-----		
Dominant Wavelength	$\lambda d$ SYG:	-----	573	-----	nm	If=20mA
	UY:	-----	589	-----		
Spectrum Radiation Bandwidth	$\Delta \lambda$ SYG:	-----	20	-----	nm	If=20mA
	UY:	-----	15	-----		
Forward Voltage	Vf SYG:	-----	2.0	2.4	V	If=20mA
	UY:	-----	2.0	2.4		
Reverse Current	Ir	-----	-----	10	Ma	Vr=5V



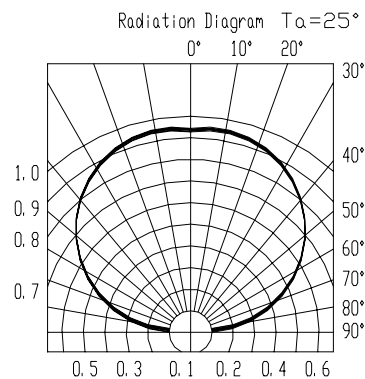
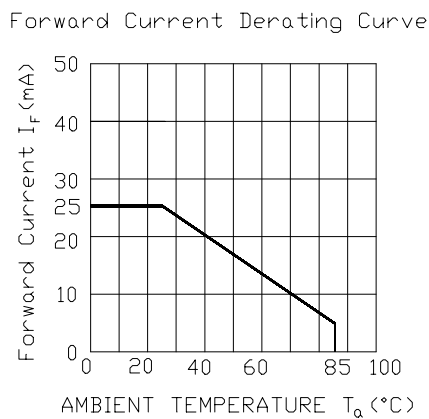
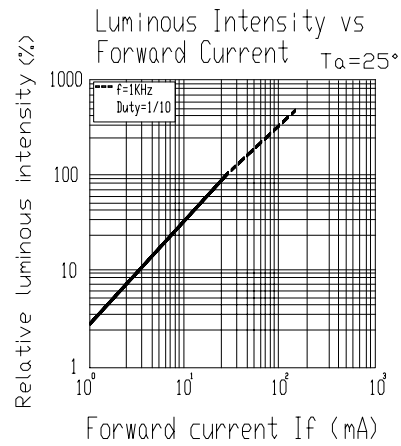
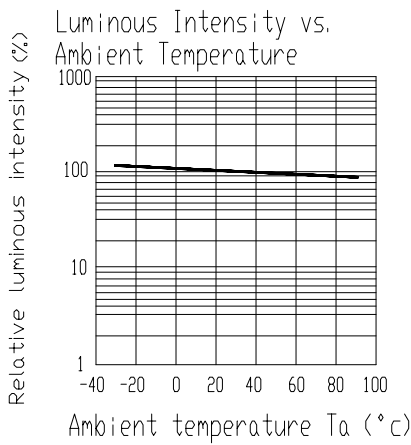
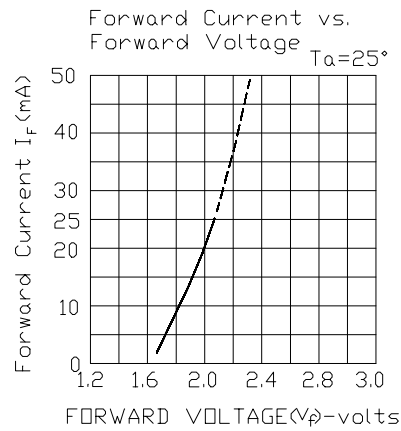
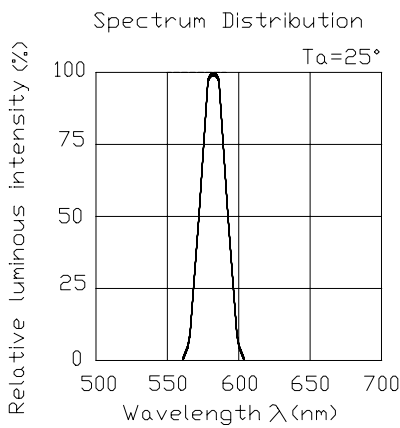
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### Typical Electro-Optical Characteristic Curves

UY

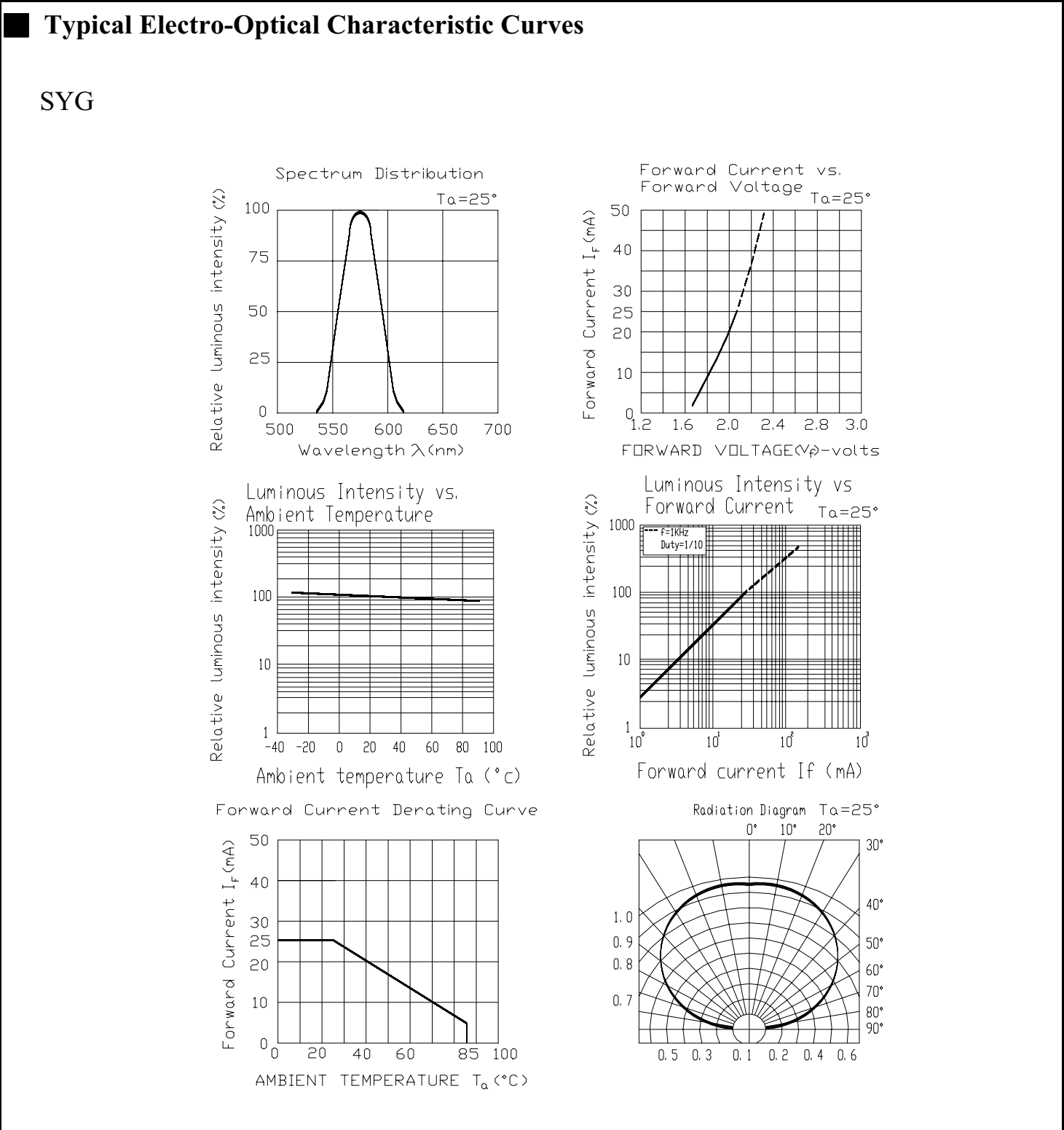




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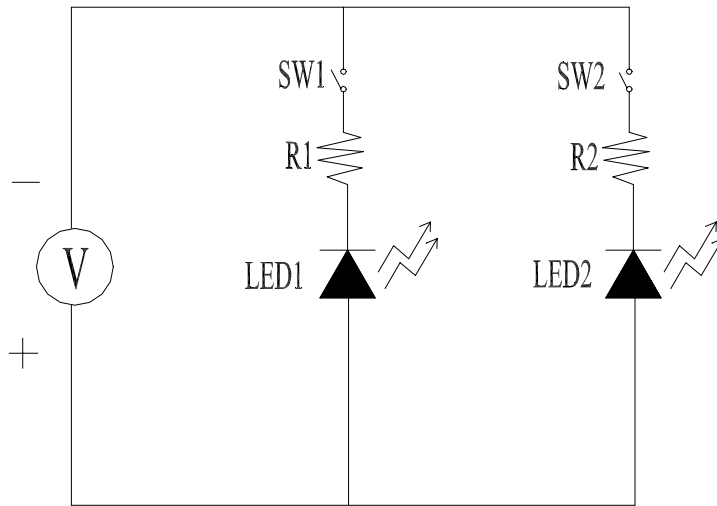


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■ **Test Circuit**



■ **Precautions For Use**

1. Over-current-proof

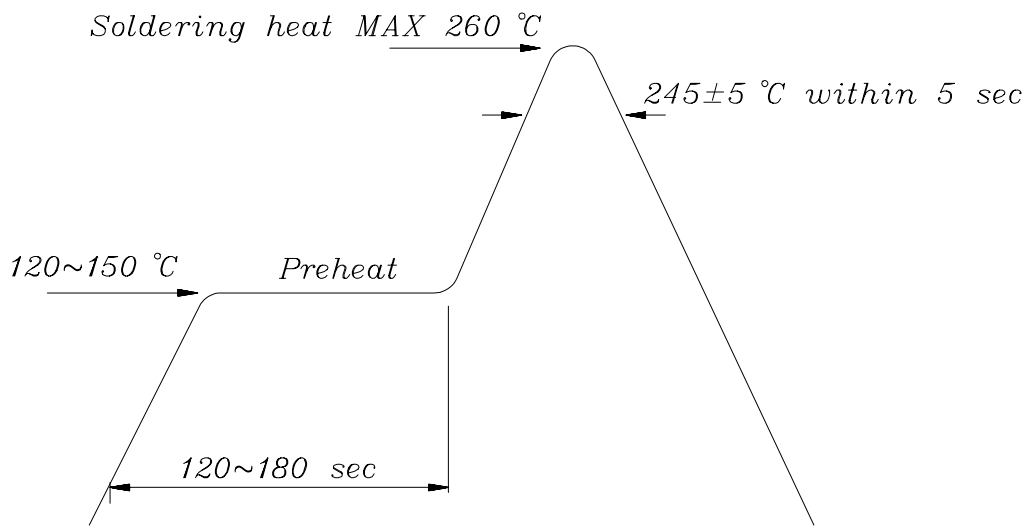
Customer must apply resistors for protection , otherwise slight voltage shift will cause big current change ( Burn out will happen ).

2. Storage time

- 2.1 The operation of temperature and R.H. are :  $5^{\circ}\text{C} \sim 35^{\circ}\text{C}$  , R.H.60%.
- 2.2 Once the package is opened , the products should be used within a week. Otherwise , they should be keep in a dampproof box with desiccants. 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  $5^{\circ}\text{C} \sim 35^{\circ}\text{C}$  , R.H.60% , they should be treated at  $60^{\circ}\text{C} \pm 5^{\circ}\text{C}$  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 reliability ( DIP )**

Please refer to the following figure :

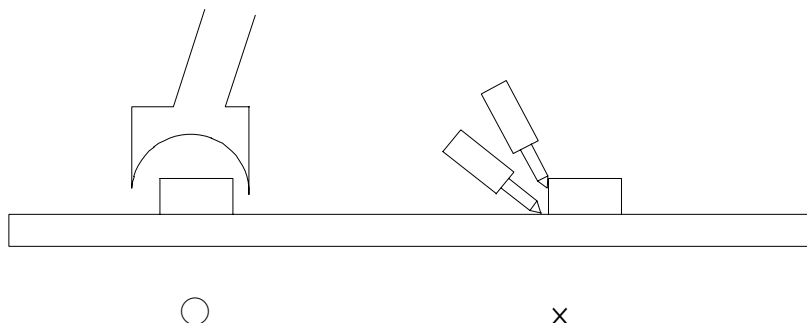


■ **Soldering Iron**

Basic spec is  $\leq 5$  sec when  $260^{\circ}\text{C}$ . If temperature is higher, time should be shorter ( $+10^{\circ}\text{C} \rightarrow -1\text{sec}$ ). Power dissipation of iron should be smaller than 15 W , and temperature should be controllable. Surface temperature of the device should be under  $230^{\circ}\text{C}$ .

■ **Rework**

1. Customer must finish rework within 5 sec under  $260^{\circ}\text{C}$ .
2. Copper foil can not be touched by the head of iron.
3. Twin-head type is preferred.







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■ Reflow Temp / Time :

