



# YETDA INDUSTRY LTD.

## Technical Data Sheet

**MODEL NO : S190ANW4-INH**

**0603 Package 1.6\*0.8mm White SMD**

### Features :

- Package in 8mm tape on 7" diameter reel
- Compatible with automatic placement equipment
- Compatible with reflow solder process

### Applications :

- Indicators
- Automotive : backlighting in dashboard and switch
- Backlight for LCD

Dice material	Emitted color	Lens Color
InGaN	White	Water Clear

### Electrical/Optical Characteristics(Ta=25°C)

Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Luminous intensity	I <sub>F</sub> =20mA	I <sub>v</sub>	630	870		mcd
Chromaticity Coordinates	I <sub>F</sub> =20mA	X	0.2438		0.2948	-
		Y	0.2123		0.3057	-
Forward voltage	I <sub>F</sub> =20mA	V <sub>F</sub>	2.8		3.6	V
Viewing angle	I <sub>F</sub> =20mA	2θ 1/2		140		Deg
Reverse current	V <sub>R</sub> =5V	I <sub>R</sub>			10	μA

### Absolute Maximum Ratings(Ta=25°C)

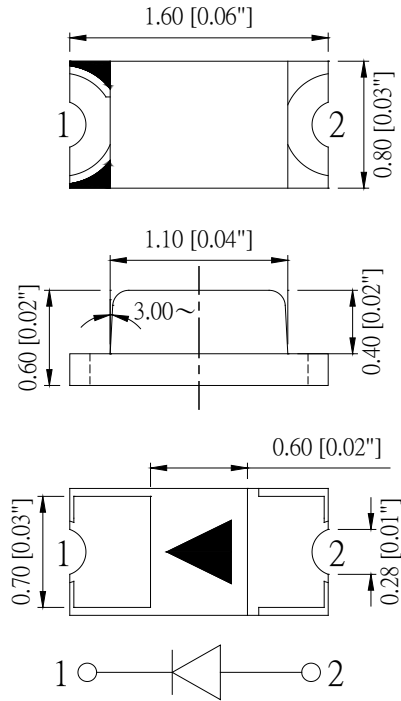
Parameter	Symbol	Maximum	Unit
Power Dissipation	P <sub>d</sub>	78	mW
Peak Forward Current(1/10 Duty Cycle 0.1ms Pulse Width)	I <sub>F</sub> (Peak)	100	mA
Continuous Forward Current	I <sub>F</sub>	30	mA
Reverse Voltage	V <sub>R</sub>	5	V
Derating Linear From 25°C		0.3	mA/°C
Operating Temperature Range	T <sub>opr</sub>	-30 to +80	°C
Storage Temperature Range	T <sub>stg</sub>	-40 to +85	°C

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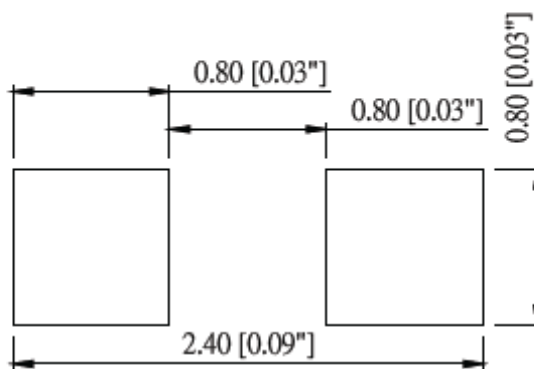


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## PACKAGE DIMENSION



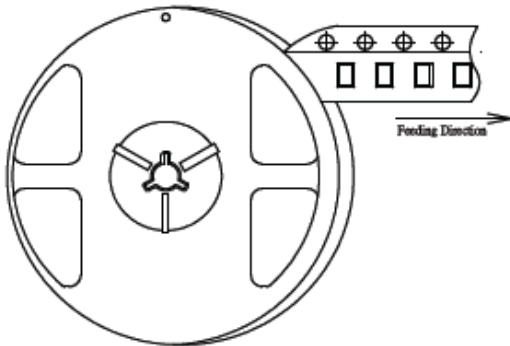
## Recommend Pad Layout



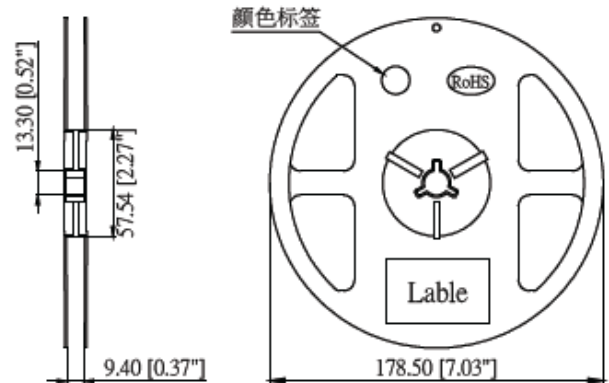


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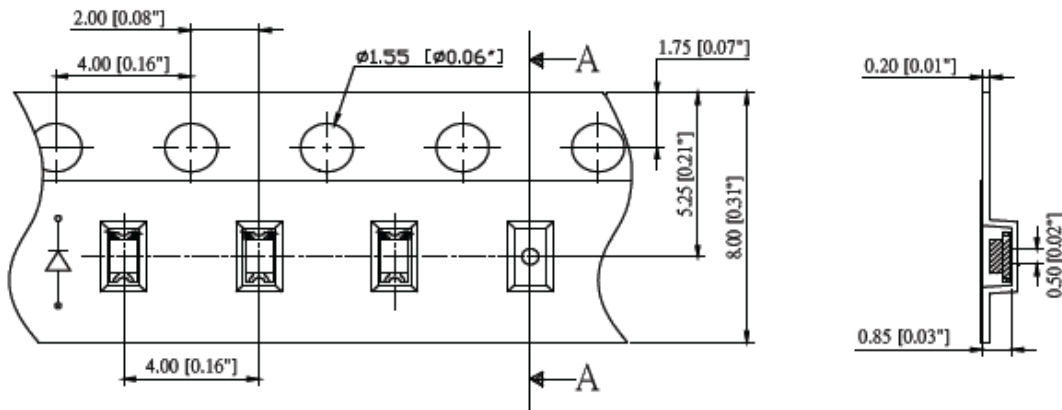
- Feeding Direction



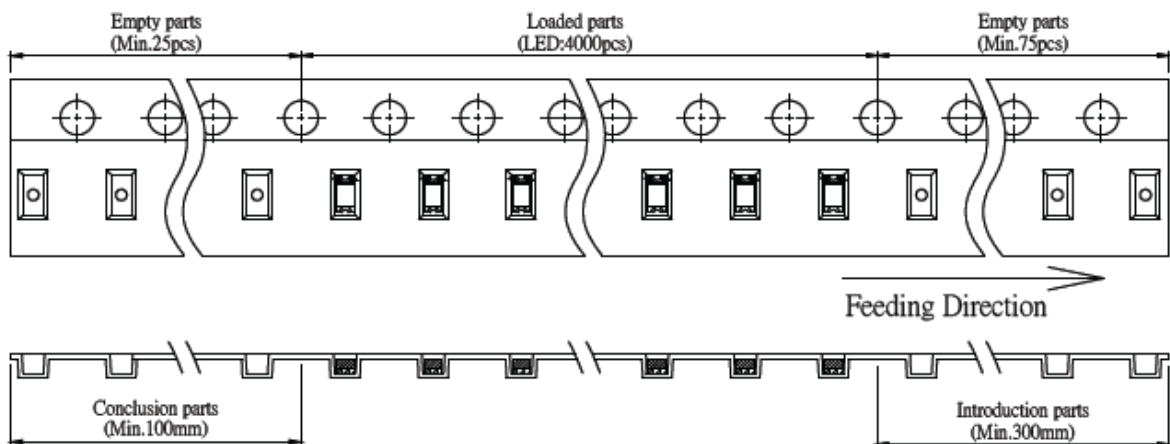
- Dimensions of Reel (Unit: mm)



- Dimensions of Tape (Unit: mm)



- Arrangement of Tape



## Notes:

1. Empty component pockets are sealed with top cover tape;
2. The maximum number of missing lamps is two;
3. The cathode is oriented towards the tape sprocket hole in accordance with ANSI/EIA RS-481 specifications.
4. 4,000 pcs/Reel.



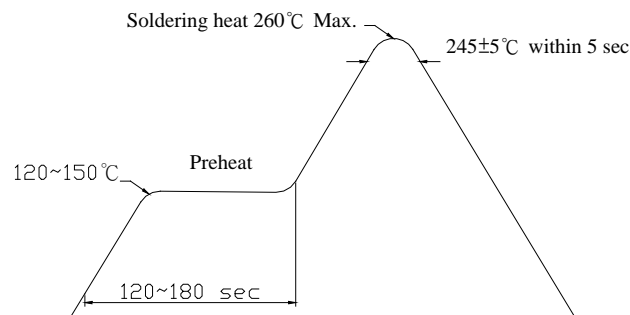
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## ● Descriptions :

- The Chip-LED 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 application, etc.

## ● Soldering heat reliability (DIP) :

Please refer to the following figure :



## ● Precautions For Use :

- Over - current - proof

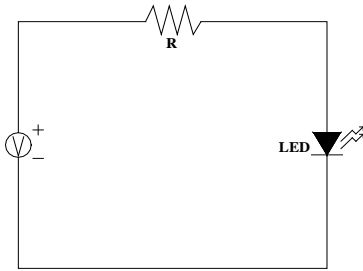
Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change ( Burn out will happen )

- Storage

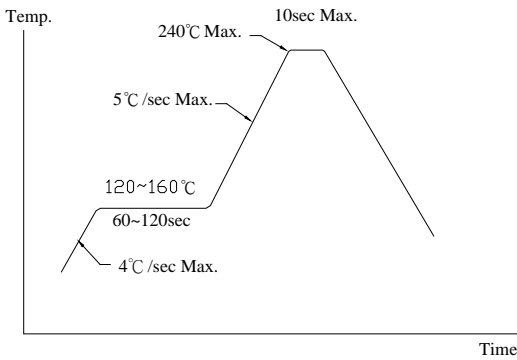
1. The operation of temperature and R.H. are :  $5^{\circ}\text{C} \sim 30^{\circ}\text{C}$  ,  $60\% \text{R.H. Max.}$ .
2. Once the package is opened, the products should be used within a week. Otherwise, they should be kept in a dampproof box with desiccating reagent. Considering the tape life, we suggest our customers to use our products within 1.5 year ( from production date ) .
3. It's recommended to bake before soldering when the package is unsealed after 72 hrs. The condition is :  $60^{\circ}\text{C} \pm 5^{\circ}\text{C}$  for 15hrs.



● Test Circuit



● Reflow Temp. / Time :



● Reliability Test Items And Conditions

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

No.	Items	Test Condition	Test Hours/Cycles	Sample Size
1	Solder Heat	TEMP : 260°C±5°C	5 sec	48 pcs
2	Temperature Cycle	90°C ~ 25°C ~ -30°C ~ 25°C 30m 5m 30m 5m	300Cycles	48 Pcs
3	Thermal Shick	100°C ~ -55°C 10m 10m	100Cycles	48 Pcs
4	Operation Life	If=20mA	1000 Hrs	48 Pcs
5	High Temperature Storage	Temp:90°C	1000Hrs	48 Pcs
6	Low Temperature Storage	Temp:-30°C	1000Hrs	48 Pcs
7	High Temperature/High Humidity	80°C / R.H80%	1000Hrs	48 Pcs