



# YETDA INDUSTRY LTD.

## Technical Data Sheet

**MODEL NO : S194ANB4-M**

**1.6 x 0.8 x 0.4mm Blue SMD**

### Features

- Package: 5000pcs per 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	Blue	Water Clear

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

Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Luminous intensity	I <sub>F</sub> =5mA	I <sub>v</sub>	28		80	mcd
Dominate Wavelength	I <sub>F</sub> =5mA	λ <sub>D</sub>	461		476	-
Forward voltage	I <sub>F</sub> =5mA	V <sub>F</sub>	2.6		3.4	V
Viewing angle	I <sub>F</sub> =5mA	2θ 1/2		120		Deg
Reverse current	V <sub>R</sub> =5V	I <sub>R</sub>			10	μA

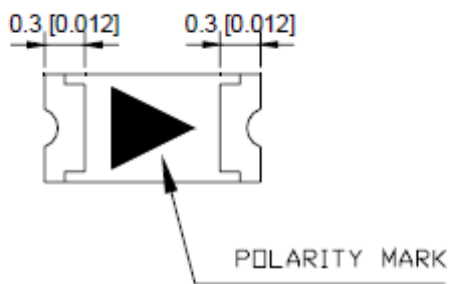
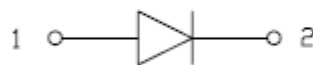
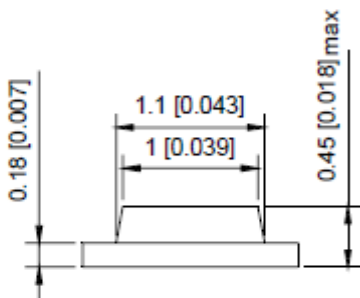
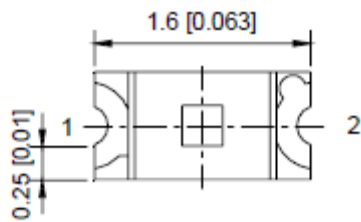
### Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Value	Unit
Power dissipation	P <sub>d</sub>	30	mW
Forward current	I <sub>F</sub>	10	mA
Reverse voltage	V <sub>R</sub>	5	V
Operating temperature range	Top	-40 ~+85	°C
Storage temperature range	Tstg	-40 ~+85	°C
Peak pulsing current (1/10 duty f=1kHz)	I <sub>FP</sub>	20	mA



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PACKAGING DIMENSIONS (mm):



13JUL07B



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## VF Rank

Rank	VF(V)		Condition
	Min	Max	
F1	2.6	2.7	IF=5mA
F2	2.7	2.8	
G1	2.8	2.9	
G2	2.9	3.0	
H1	3.0	3.1	
H2	3.1	3.2	
J1	3.2	3.3	
J2	3.3	3.4	

**Tolerance:**±0.05V

## IV Rank

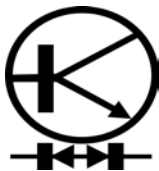
Rank	IV(mcd)		Condition
	Min	Max	
H	28	37	IF=5mA
J	37	48	
K	48	62	
L	62	80	

**Tolerance:**±15%

## λ D Rank

Rank	λD(nm)		Condition
	Min	Max	
3	461	464	IF=5mA
4	464	467	
5	467	470	
6	470	473	
7	473	476	

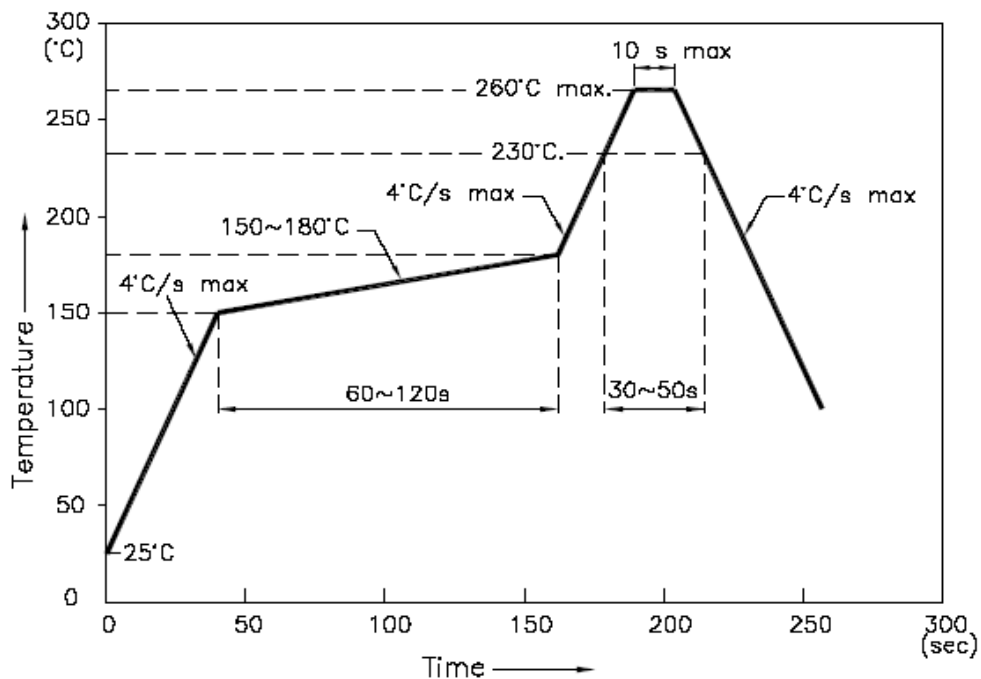
**Tolerance:**±1nm



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<b>Precautions For Use :</b>
<b>Over - current - proof</b>
Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change ( Burn out will happen )
<b>Storage</b>
1. The operation of temperature and R.H. are : $5^{\circ}\text{C} \sim 30^{\circ}\text{C}$ , 60%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.

## ■ Reflow Temp/Time





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## NOTES:

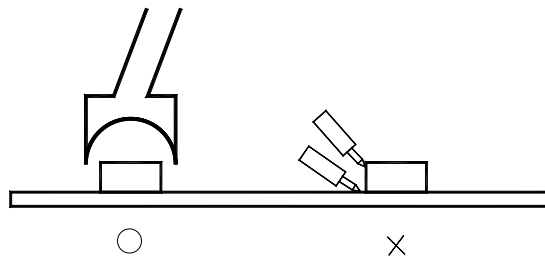
1. We recommend the reflow temperature  $245^{\circ}\text{C}(\pm 5^{\circ}\text{C})$ . the maximum soldering temperature should be limited to  $260^{\circ}\text{C}$ .
2. dont cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

### ■Soldering iron

Basic spec is  $\leq 5\text{sec}$  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 20W, and temperatures 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. The head of iron can not touch copper foil
3. Twin-head type is preferred.



- Avoid rubbing or scraping the resin by any object, during high temperature, for example reflow 、 solder etc.