



# YETDA INDUSTRY LTD.

## Technical Data Sheet

**MODEL NO : 195UR/ANB4**

**1.60x1.5x0.8mm CHIP LED**

**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
AlGaInP	Red	Water transparent
InGaN	Blue	

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

Parameter	Test Condition	Symbol	Value			Unit	
			Min	Typ	Max		
Spectral half bandwidth	I <sub>F</sub> =5mA	Δλ	R	20		nm	
			B	30			
Dominant wavelength	I <sub>F</sub> =5mA	λ <sub>D</sub>	R	620	620	630	nm
			B	465	470	475	
Forward voltage	I <sub>F</sub> =5mA	V <sub>F</sub>	R		2.0	2.5	V
			B		3.3	3.8	
Luminous intensity	I <sub>F</sub> =5mA	I <sub>v</sub>	R	30			mcd
			B	40			
Viewing angle at 50% I <sub>v</sub>	I <sub>F</sub> =10mA	2θ 1/2	R	140			Deg
			B				
Reverse current	V <sub>R</sub> =5V	I <sub>R</sub>	R	10			μA
			B				

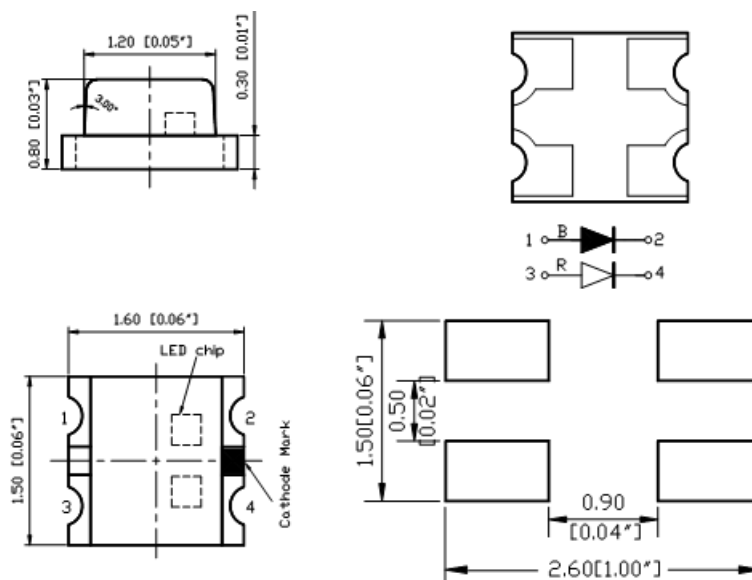


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Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Value		Unit
		R	B	
Power dissipation	Pd	75	114	mW
Forward current	I <sub>F</sub>	30		mA
Reverse voltage	V <sub>R</sub>	5		V
Operating temperature range	T <sub>op</sub>	-40 ~+80		°C
Storage temperature range	T <sub>stg</sub>	-40 ~+85		°C
Peak pulsing current (1/8 duty f=1kHz)	I <sub>FP</sub>	125		mA

## PACKAGING DIMENSIONS (mm):



### 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 )

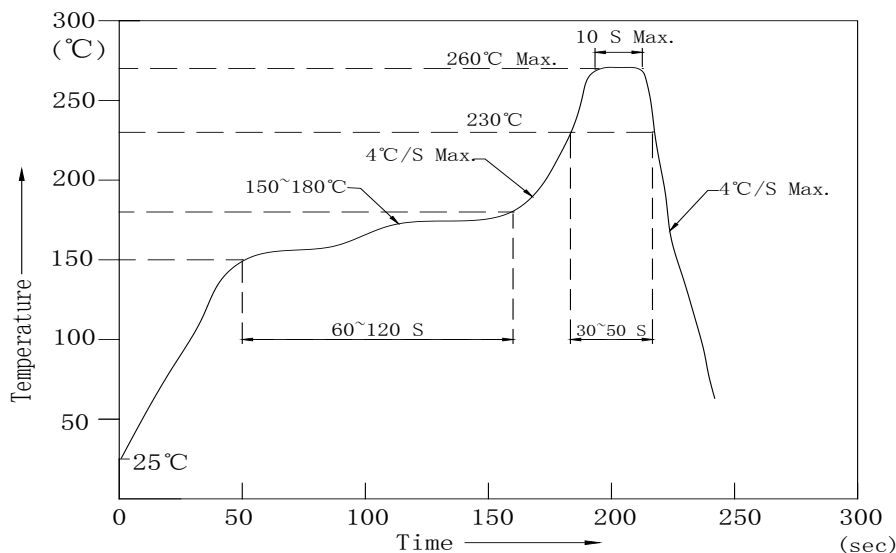
#### Storage

1. The operation of temperature and R.H. are : 5°C ~30°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 regent. 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°C±5°C for 15hrs.



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## ■ Reflow Temp/Time



### NOTES:

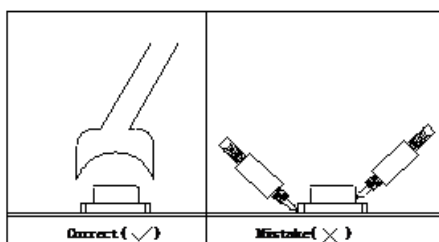
1. We recommend the reflow temperature  $245^{\circ}\text{C} (\pm 5^{\circ}\text{C})$ . the maximum soldering temperature should be limited to  $260^{\circ}\text{C}$ .
2. dont cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

### ■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.



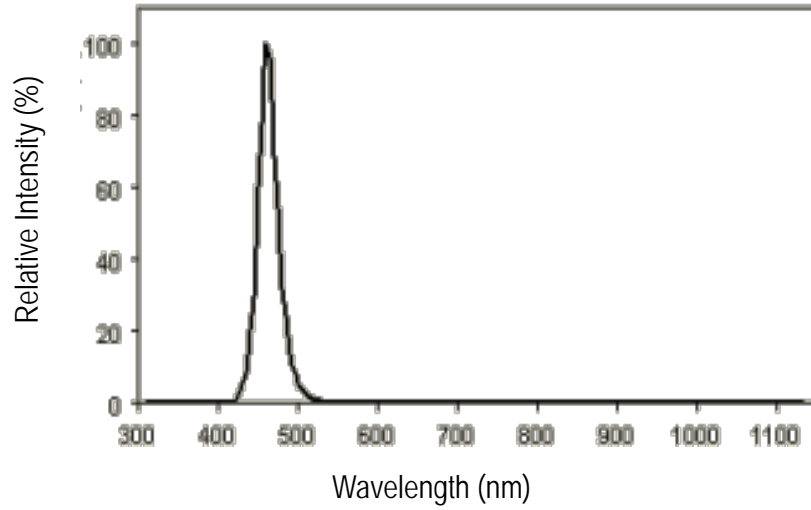
- Avoid rubbing or scraping the resin by any object, during high temperature, for example reflow 、 solder etc.



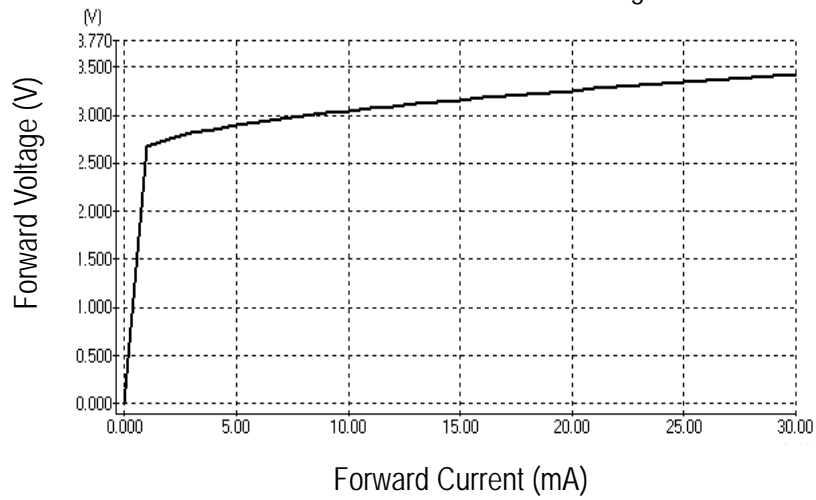
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## ■ OPTICAL CHARACTERISTIC CURVES

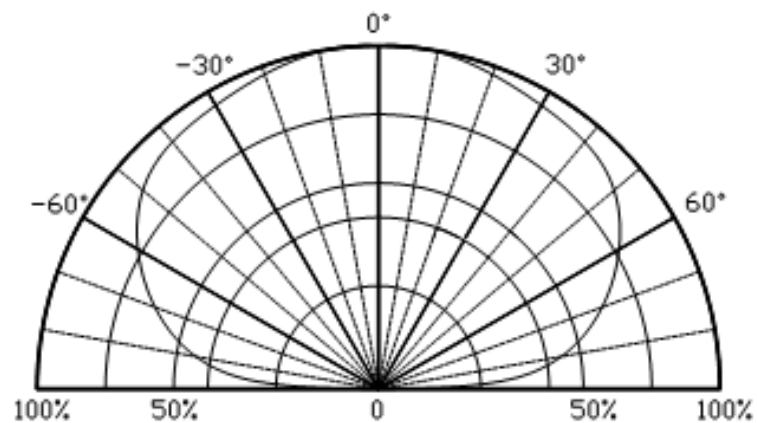
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



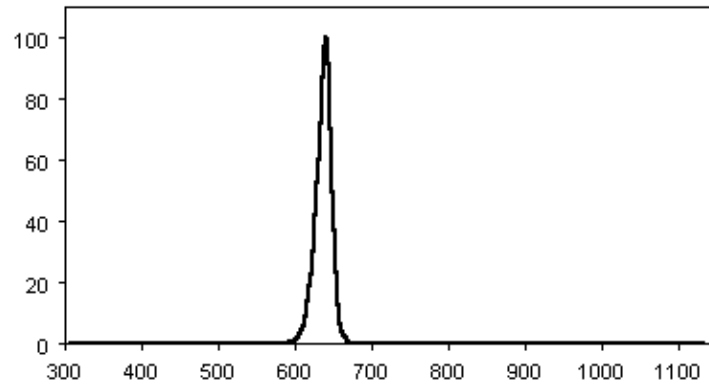
Directive Characteristics



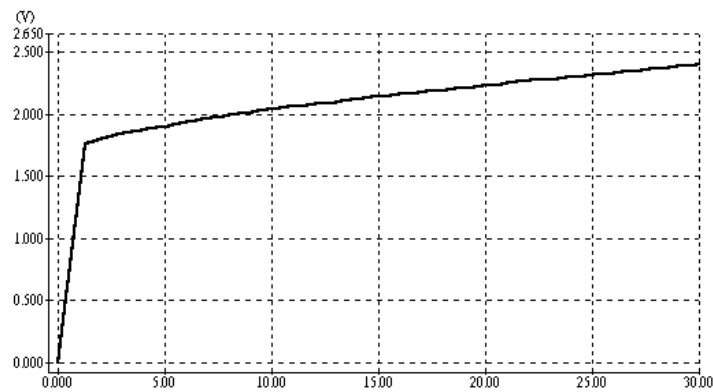


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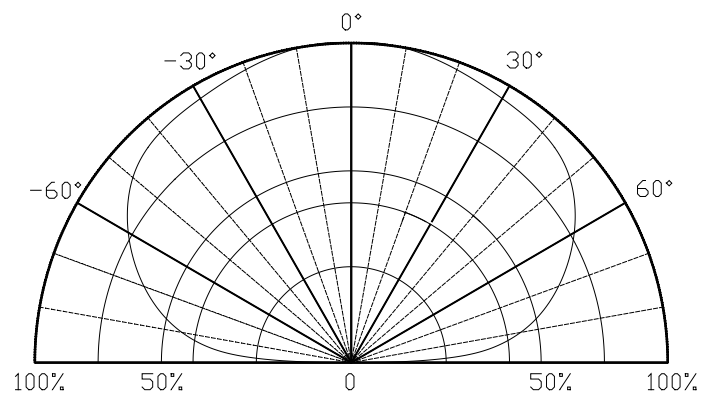
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



Directive Characteristics

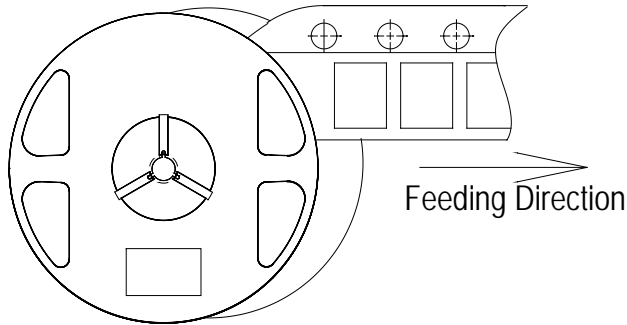




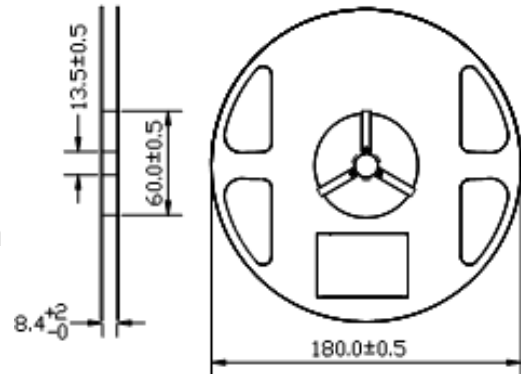
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## ■ Packaging Specifications

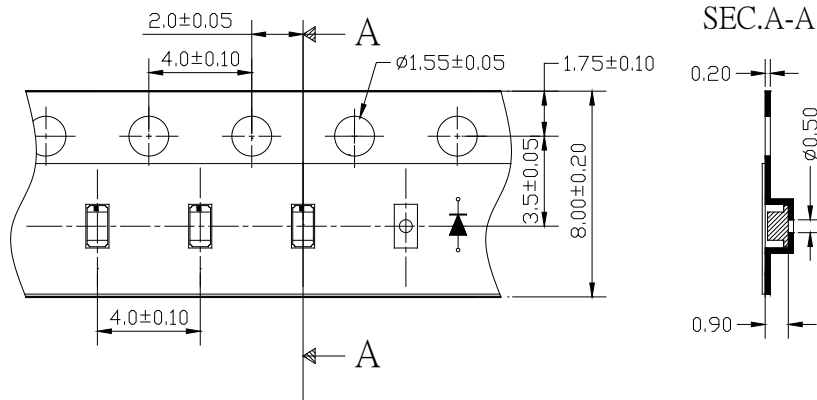
### ● Feeding Direction



### ● Dimensions of Reel (Unit: mm)



### ● Dimensions of Tape (Unit: mm)



### ● Arrangement of Tape

