



YETDA INDUSTRY LTD.

Technical Data Sheet

MODEL NO : 193UR/ANB4

1.60x0.80x0.55mm 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 _F =5mA	Δλ	R		18	nm	
			B		25		
Dominant wavelength	I _F =5mA	λ _D	R	615	620	630	nm
			B	460	465	470	
Forward voltage	I _F =5mA	V _F	R	1.7	2.0	2.5	V
			B	2.8	3.1	3.7	
Luminous intensity	I _F =5mA	I _v	R	80	130	250	mcd
			B	40	70	125	
Viewing angle at 50% I _v	I _F =10mA	2θ _{1/2}	R	140			Deg
			B				
Reverse current	V _R =5V	I _R	R	10			μA
			B				

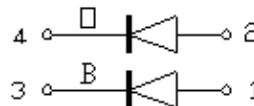
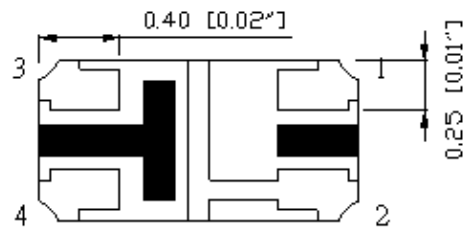
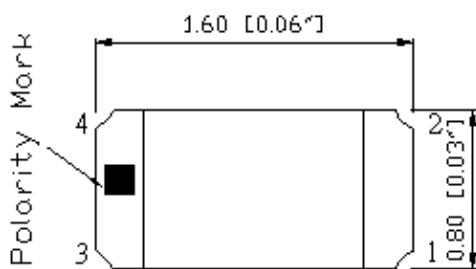


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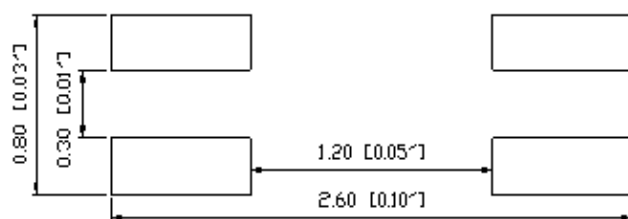
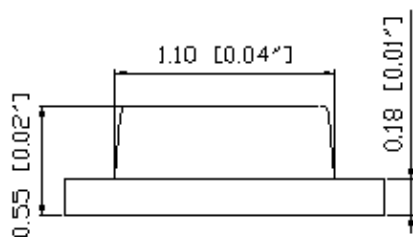
Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Value		Unit
		R	B	
Power dissipation	Pd	75	111	mW
Forward current	I _F	30		mA
Reverse voltage	V _R	5		V
Operating temperature range	T _{op}	-40 ~+80		°C
Storage temperature range	T _{stg}	-40 ~+85		°C
Peak pulsing current (1/8 duty f=1kHz)	I _{FP}	125		mA

PACKAGING DIMENSIONS (mm):



RECOMMEND PAD LAYOUT



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)

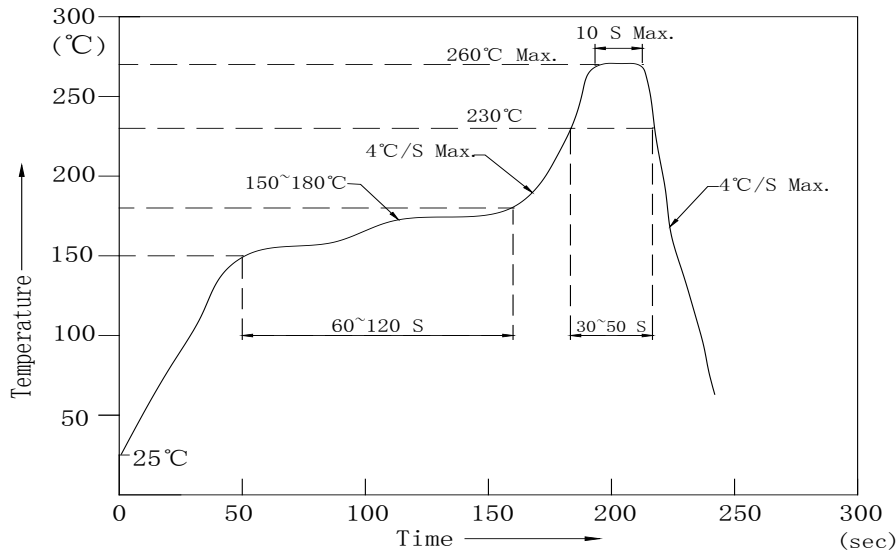
Storage

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:

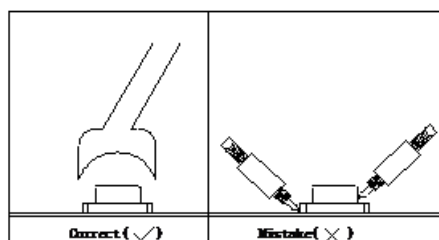
1. We recommend the reflow temperature $245^{\circ}\text{C}(\pm 5^{\circ}\text{C})$. the maximum soldering temperature should be limited to 260°C .
2. dont cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

■Soldering iron

Basic spec is $\leq 5\text{sec}$ when 260°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°C .

■Rework

1. Customer must finish rework within 5 sec under 260°C .
2. The head of iron can not touch copper foil
3. Twin-head type is preferred.



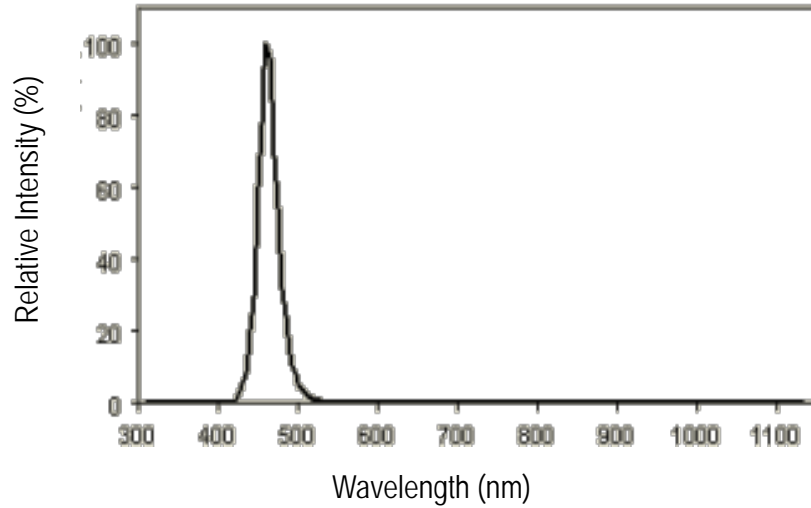
- Avoid rubbing or scraping the resin by any object, during high temperature, for example reflow 、 solder etc.



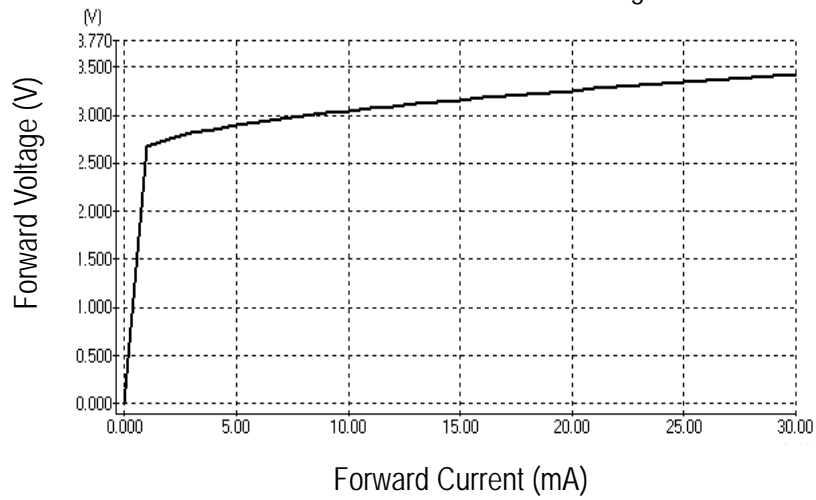
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■ OPTICAL CHARACTERISTIC CURVES

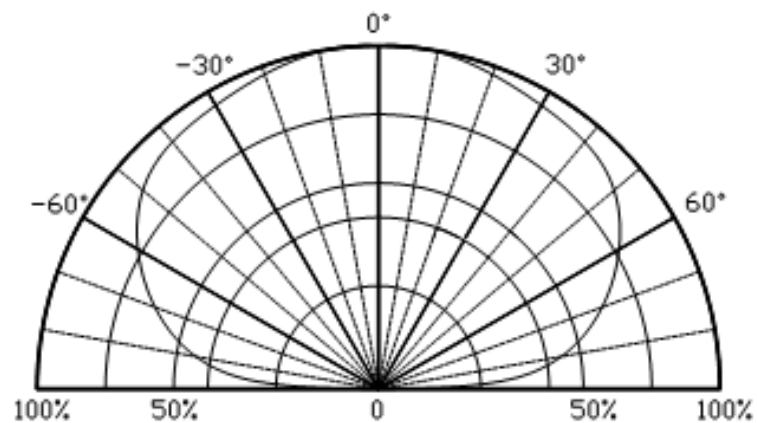
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



Directive Characteristics

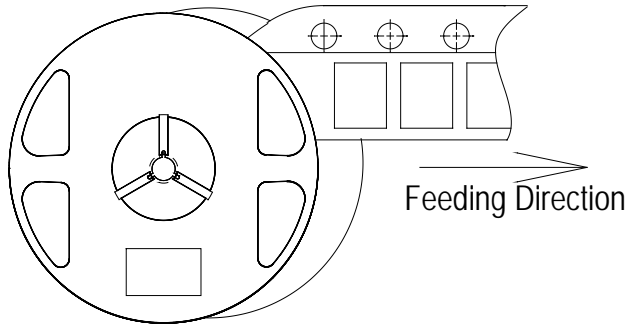




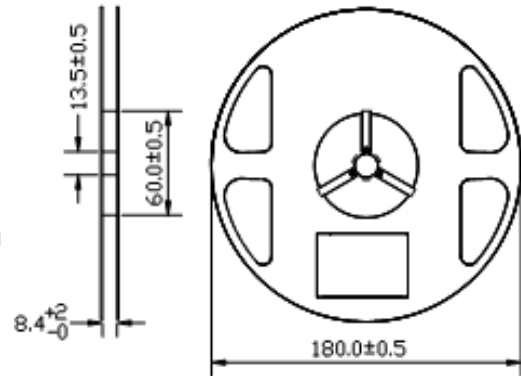
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■ Packaging Specifications

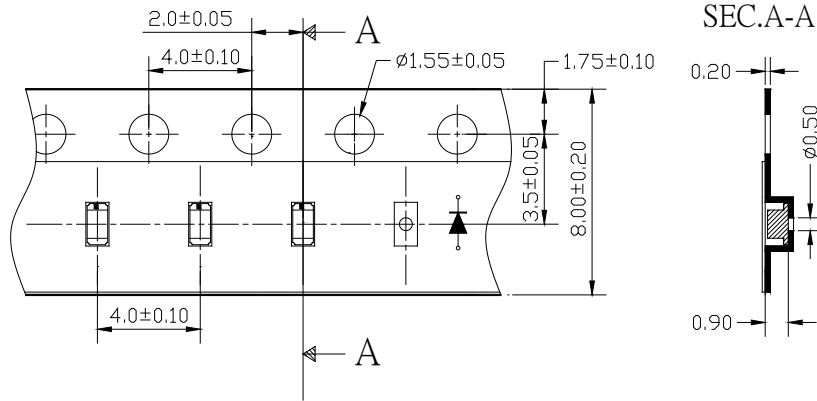
● Feeding Direction



● Dimensions of Reel (Unit: mm)



● Dimensions of Tape (Unit: mm)



● Arrangement of Tape

