



# YETDA INDUSTRY LTD.

## Technical Data Sheet

**MODEL NO : Q183R4**

**0603Package 1.6\*0.8mm Chip LEDs with lens**

**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
AlGaNInP	Red	Water Clear

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

Parameter	Test Condition	Symbol		Value			Unit
				Min	Typ	Max	
Dominant wavelength	I <sub>F</sub> =20mA	λ <sub>D</sub>	B	617	625		nm
Forward voltage	I <sub>F</sub> =20mA	V <sub>F</sub>	B	1.9		2.4	V
Luminous intensity	I <sub>F</sub> =20mA	I <sub>v</sub>	B	200	400		mcd
Viewing angle at 50% I <sub>v</sub>	I <sub>F</sub> =10mA	2θ 1/2	B		35		Deg
Reverse current	V <sub>R</sub> =5V	I <sub>R</sub>	B			10	μA

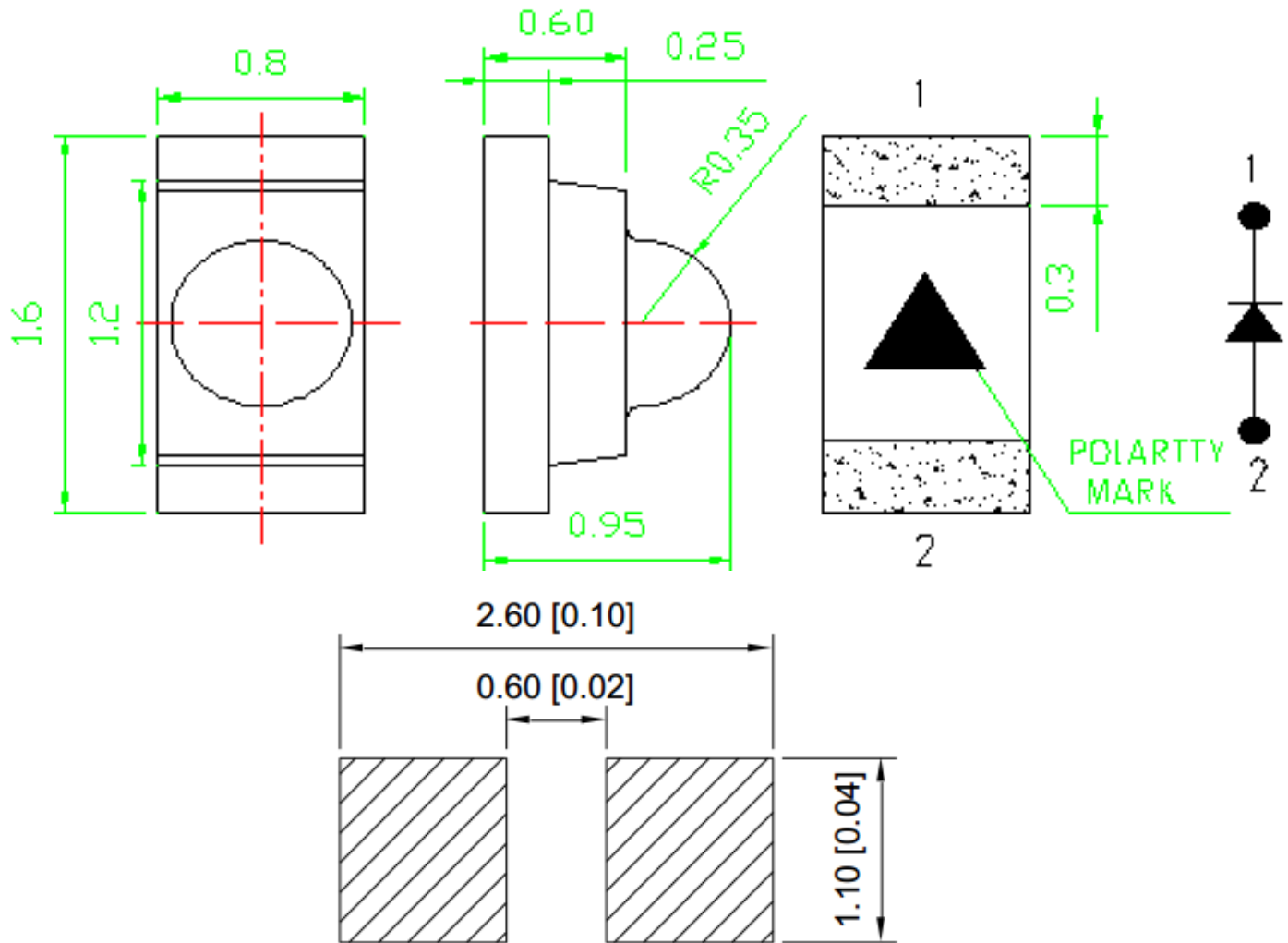
**Absolute Maximum Ratings(Ta=25°C)**

Parameter	Symbol	Value	Unit
Power dissipation	P <sub>d</sub>	75	mW
Forward current	I <sub>F</sub>	20	mA
Reverse voltage	V <sub>R</sub>	5	V
Operating temperature range	Top	-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>	105	mA



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## 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 )

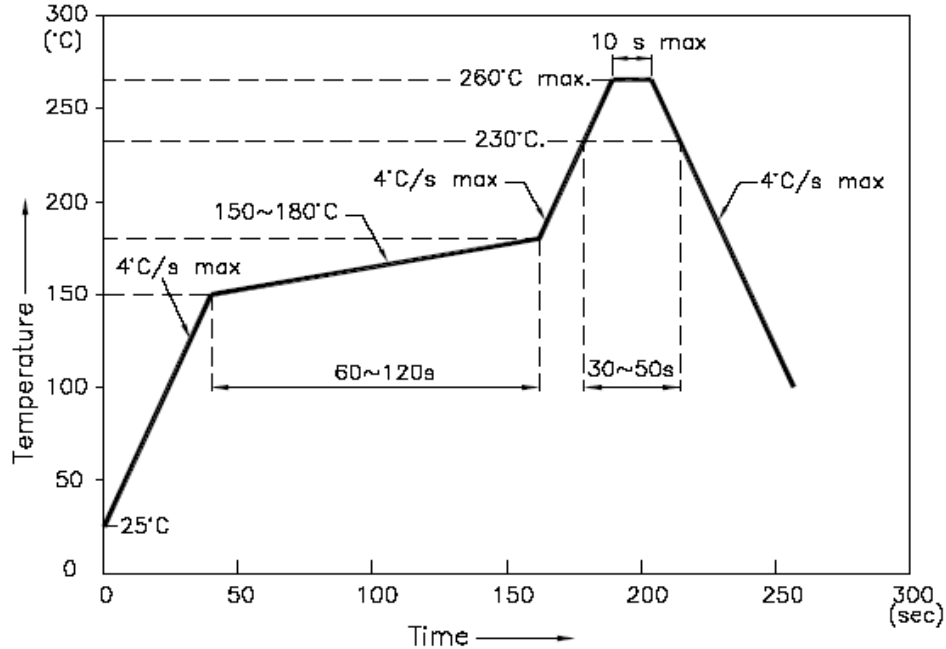
#### Storage

1. The operation of temperature and R.H. are :  $5^{\circ}\text{C} \sim 30^{\circ}\text{C}$  , 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 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 :  $60^{\circ}\text{C} \pm 5^{\circ}\text{C}$  for 15hrs.



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## ■ Reflow Temp/Time



### NOTES:

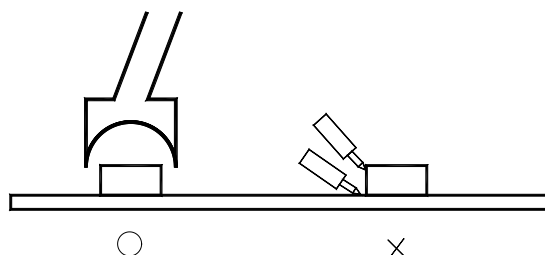
1. We recommend the reflow temperature  $245^{\circ}\text{C}(\pm 5^{\circ}\text{C})$ . the maximum soldering temperature should be limited to  $260^{\circ}\text{C}$ .
2. dont cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

## ■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.



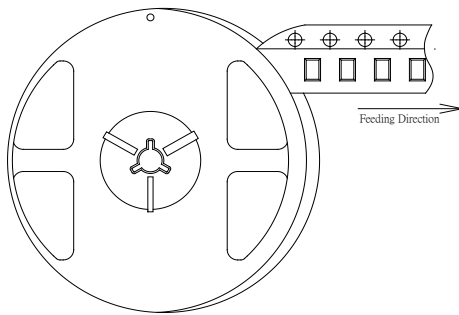
- Avoid rubbing or scraping the resin by any object, during high temperature, for example reflow 、 solder etc.



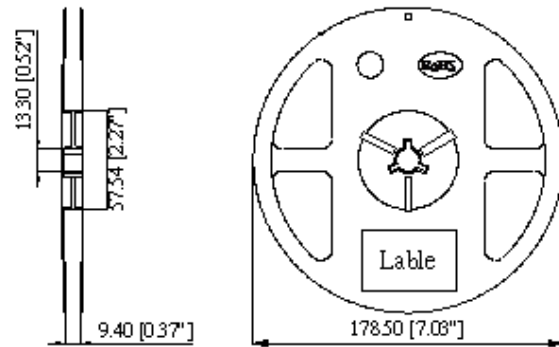
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## Packaging Specifications

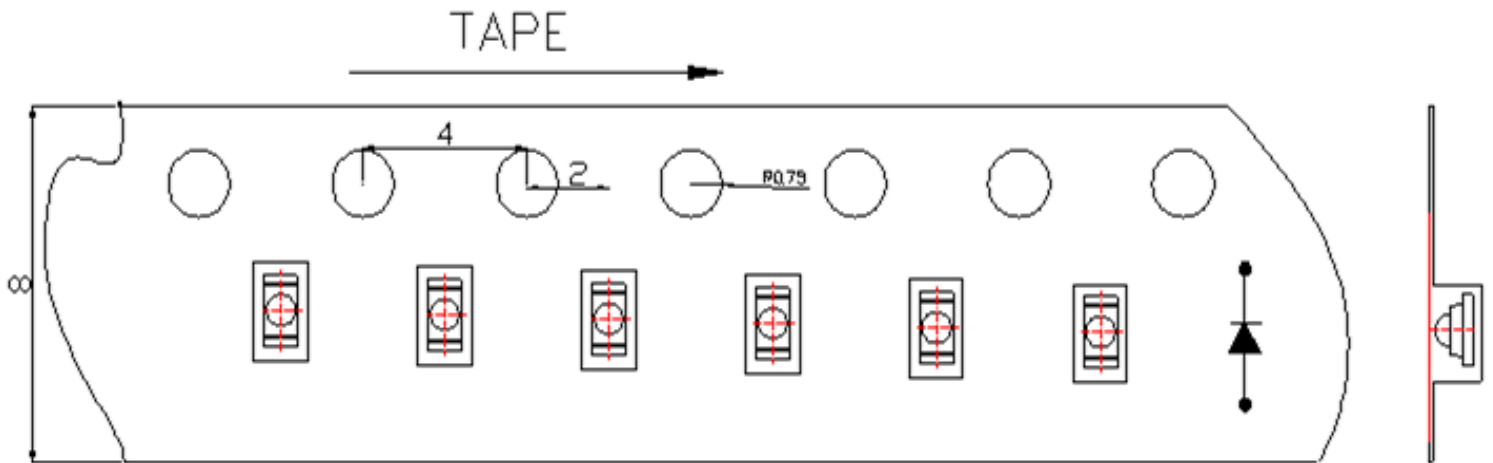
- Feeding Direction



- Dimensions of Reel (Unit: mm)



- Dimensions of Tape (Unit: mm)



**Package: 4000 PCS/reel**