



# YETDA INDUSTRY LTD.

## Technical Data Sheet

MODEL NO : Q776R4P-60mA-M

2.8 x 3.5 x 0.8mm Yellow SMD

### Features :

- 3.5 X 3.5mm
- 2000 pcs Per Reel
- Compatible with automatic placement equipment
- Compatible with reflow solder process

### Applications :

- Indicators
- Automotive : backlighting in dashboard and switch

Dice material	Emitted color	Lens Color
AlGaInP	Red	Water Clear

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

Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Dominant wavelength	I <sub>F</sub> =60mA	$\lambda_D$	617		629	nm
Forward voltage	I <sub>F</sub> =60mA	V <sub>F</sub>	2.0		2.8	V
Luminous Flux	I <sub>F</sub> =60mA	$\phi$	8	10		lm
Viewing angle at 50% I <sub>v</sub>	I <sub>F</sub> =60mA	2 $\theta$ 1/2		120		Deg
Reverse current	V <sub>R</sub> =5V	I <sub>R</sub>			10	$\mu$ A

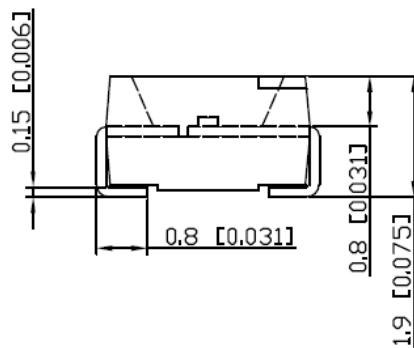
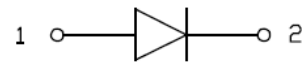
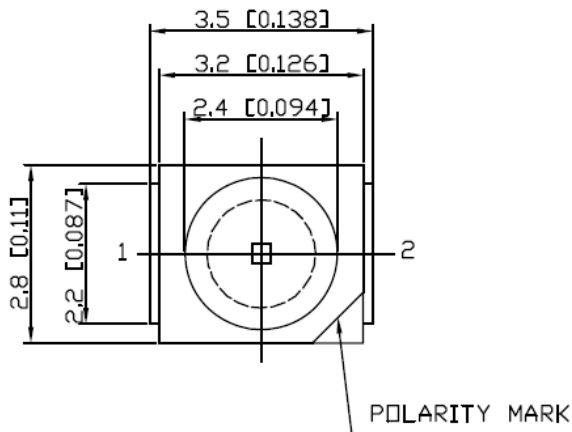
### Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Value	Unit
Power dissipation	P <sub>d</sub>	120	mW
Forward current	I <sub>F</sub>	60	mA
Reverse voltage	V <sub>R</sub>	5	V
Operating temperature range	T <sub>op</sub>	-40 ~+85	°C
Storage temperature range	T <sub>stg</sub>	-40 ~+85	°C
Peak pulsing current (Duty 1/10@1KHZ ) [1]	I <sub>FP</sub>	100	mA



YETDA INDUSTRY LTD.

PACKAGING DIMENSIONS (mm):

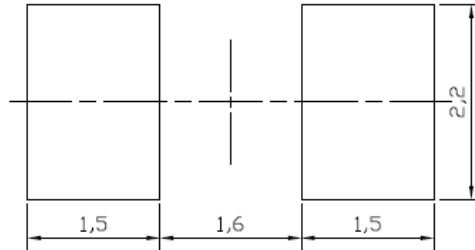


1. All dimension units are millimeters.
2. All dimension tolerance is  $\pm 0.2$ mm unless otherwise noted.

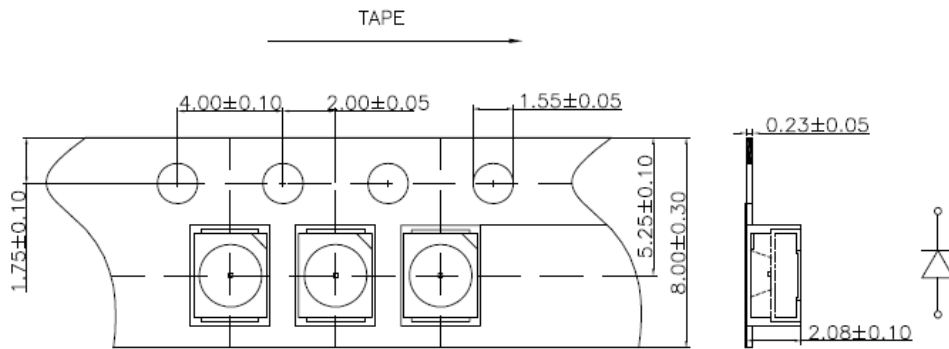


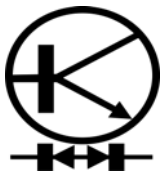
# YETDA INDUSTRY LTD.

◆ Recommended soldering pattern  
(Units:mm)



◆ Tape specifications  
(Units:mm)

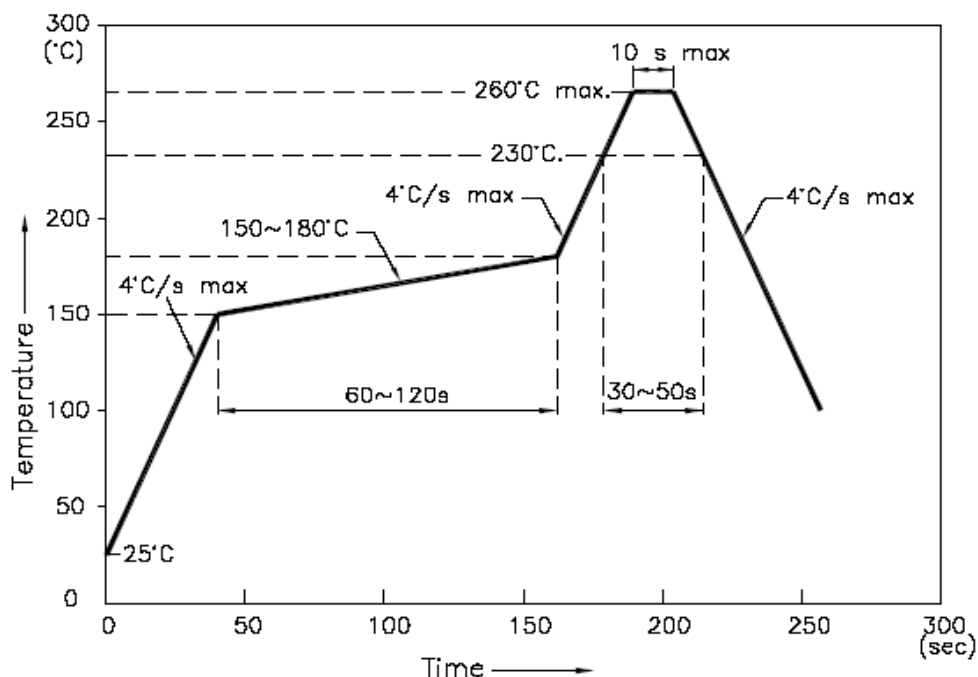




# YETDA INDUSTRY LTD.

<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 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.

## ■ 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.



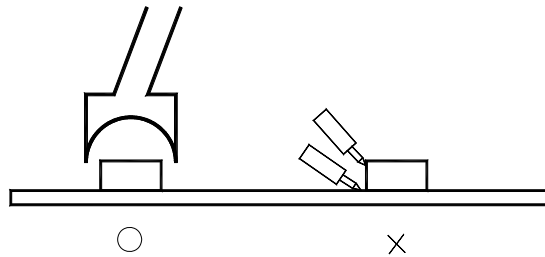
# YETDA INDUSTRY LTD.

## ■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.