

# YETDA INDUSTRY LTD.

## Technical Data Sheet

MODEL NO : Q196YG4

0603 Yellow Green SMD LEDs

### Features :

- Package in 8mm tape on 7" diameter reel
- Compatible with automatic placement equipment
- Compatible with reflow solder process

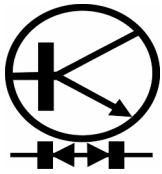
### Applications :

- Indicators
- Automotive : backlighting in dashboard and switch
- Backlight for LCD

Dice material	Emitted color	Lens Color
AlGaInP/GaAs	Yellow Green	Water Clear

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

Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Spectral half bandwidth	I <sub>F</sub> =20mA	$\Delta \lambda$		16		nm
Dominant wavelength	I <sub>F</sub> =20mA	$\lambda_D$	565	570	576	nm
Forward voltage	I <sub>F</sub> =20mA	V <sub>F</sub>	1.7	2.0	2.5	V
Luminous intensity	I <sub>F</sub> =20mA	I <sub>v</sub>	25	35	63	mcd
Viewing angle at 50% I <sub>v</sub>	I <sub>F</sub> =10mA	2θ 1/2		140		Deg
Reverse current	V <sub>R</sub> =5V	I <sub>R</sub>			10	μA

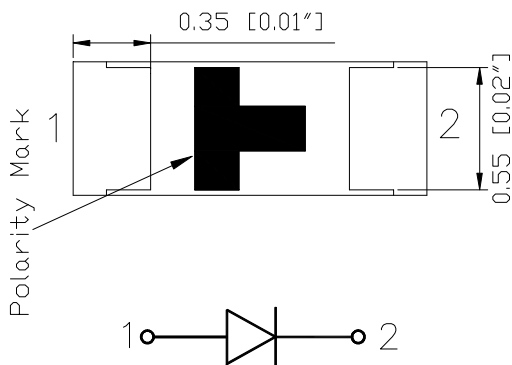
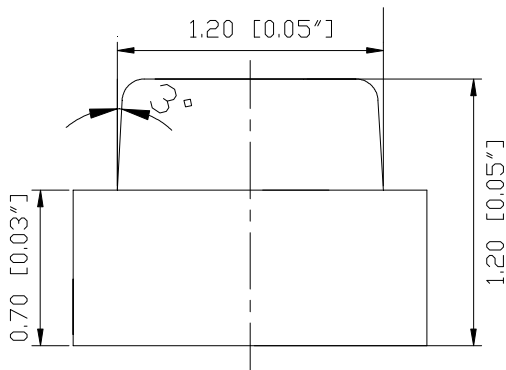
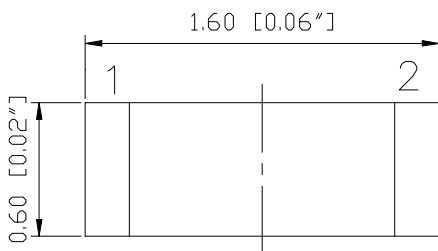


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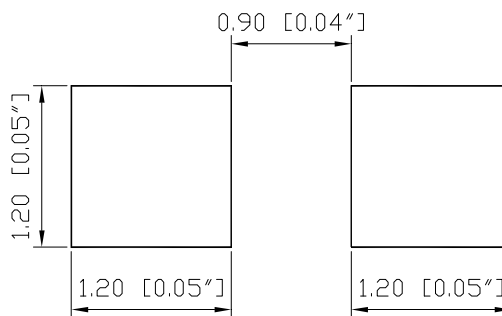
Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Value	Unit
Power dissipation	Pd	75	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):

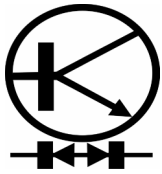


## RECOMMEND PAD LAYOUT



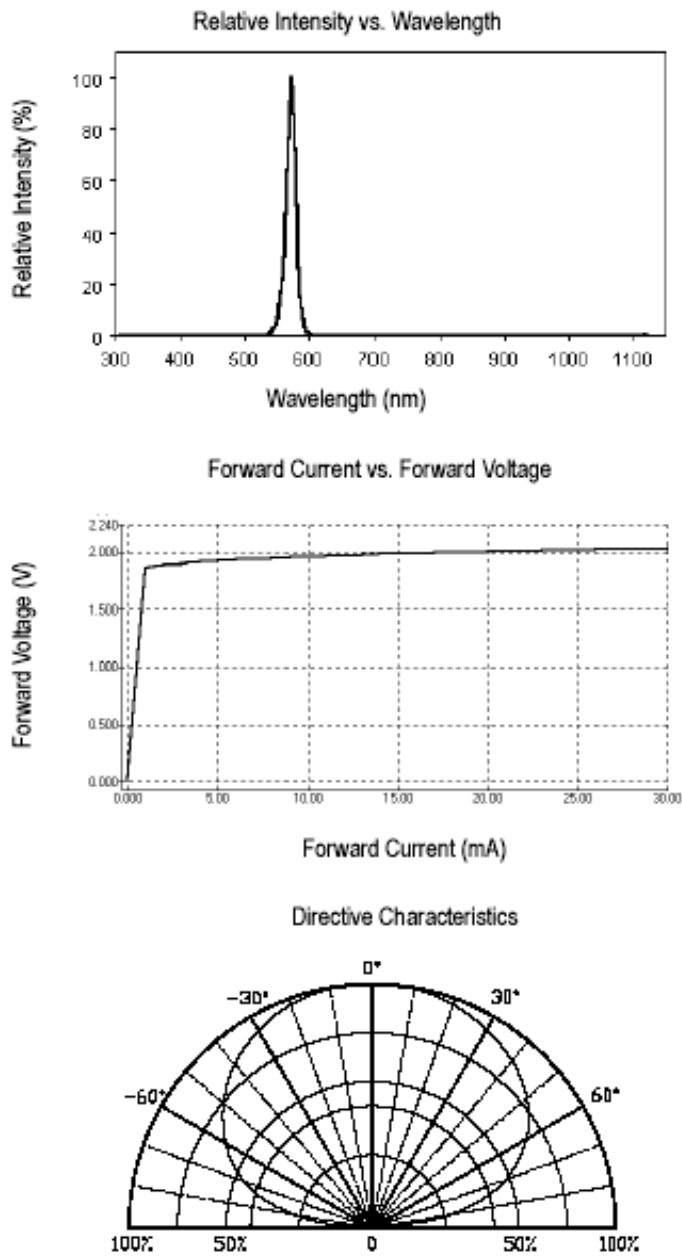
## NOTES:

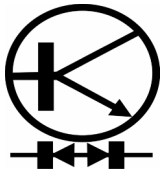
1. All dimensions are in millimeters (inches);
2. Tolerances are  $\pm 0.1$ mm (0.004inch) unless otherwise noted.



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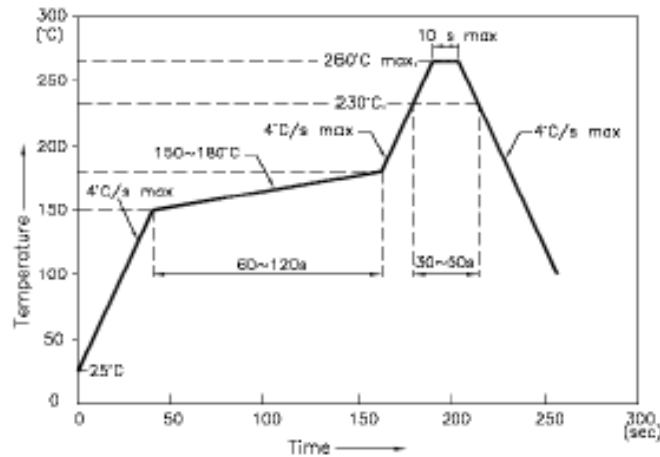
## Typical Electro-Optical Characteristics Curve:





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## ■ Reflow Temp/Time



### NOTES:

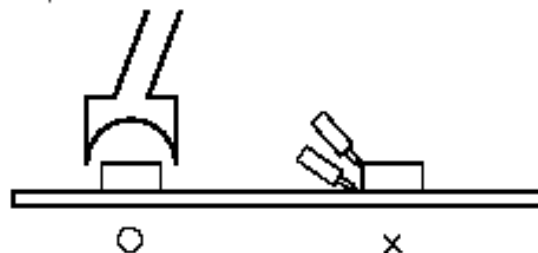
1. We recommend the reflow temperature  $245^{\circ}\text{C} (\pm 5^{\circ}\text{C})$ . the maximum soldering temperature should be limited to  $260^{\circ}\text{C}$ .
2. dont cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

### ■ Soldering iron

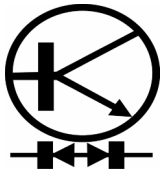
Basic spec is  $\leq 5\text{sec}$  when  $260^{\circ}\text{C}$ . If temperature is higher, time should be shorter ( $+10^{\circ}\text{C} \rightarrow -1\text{sec}$ ). Power dissipation of iron should be smaller than 20W, and temperatures should be controllable. Surface temperature of the device should 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.

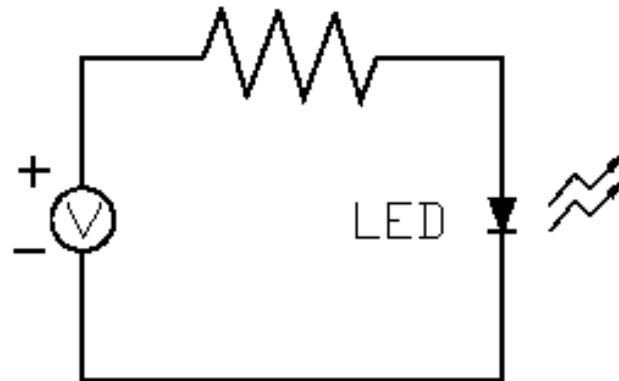


- Avoid rubbing or scraping the resin by any object, during high temperature, for example reflow, solder etc.



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## ■ Test circuit



## ■ Handling precautions

### 1. Over-current-proof

Customer must apply resistors for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).

### 2.Storage

2.1 It is recommended to store the products in the following conditions:

Humidity: 60% R.H. Max.

Temperature : 5°C~30°C (41°F~86°F)

2.2 Shelf life in sealed bag: 12 month at < 5°C~30°C and < 30% R.H. after the package is Opened, the products should be used within a week or they should be keeping to stored at  $\leq 20$  R.H. with zip-lock sealed.

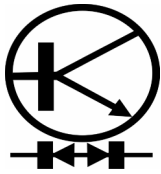
### 3.Baking

It is recommended to baking before soldering when the pack is unsealed after 72hrs. The Conditions are as followings:

3.1 60±3°C x(12~24hrs) and < 5%RH, taped reel type

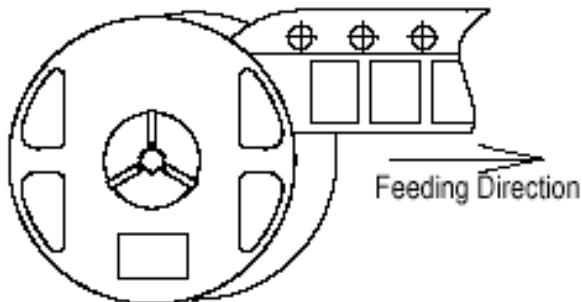
3.2 100±3°C x(45min~1hr), bulk type

3.3 130±3°C x(15~30min), bulk type

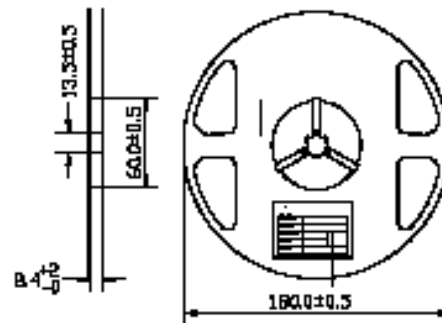


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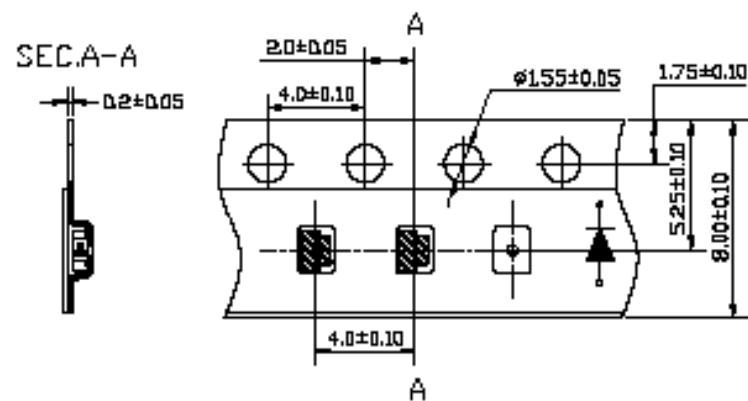
## ● Feeding Direction



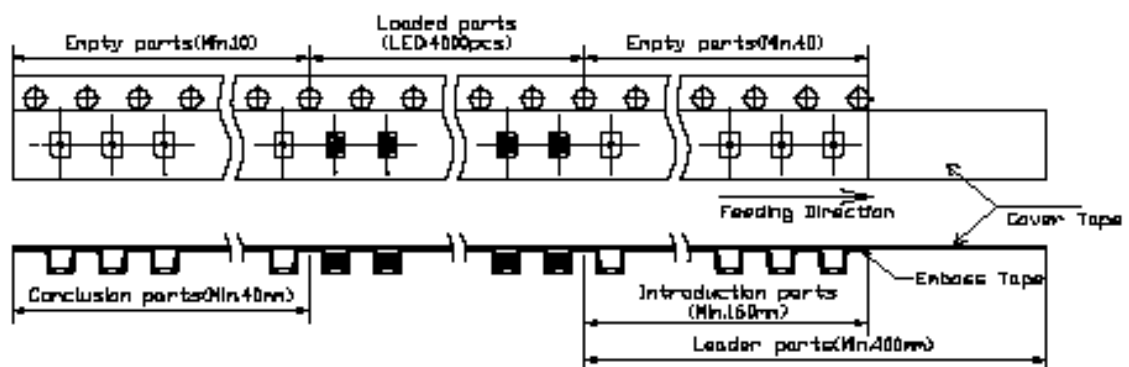
## ● Dimensions of Reel (Unit: mm)



## ● Dimensions of Tape (Unit: mm)



## ● Arrangement of Tape



## NOTES

1. Empty component pockets are sealed with top cover tape;
2. The maximum number of missing lamps is two;
3. The cathode is oriented towards the tape sprocket hole.
4. 4,000 pcs/Reel