

YETDA INDUSTRY LTD.

Technical Data Sheet

MODEL NO : Q3014R4-PL

3014Package 3.0*1.4mm Chip LEDs

Features :

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

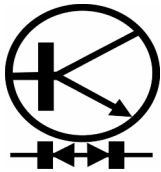
Applications :

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

Dice material	Emitted color	Lens Color
AlGaInP/GaAs	RED	Water Clear

Electrical/Optical Characteristics(Ta=25°C)

Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Spectral half bandwidth	I _F =20mA	$\Delta \lambda$		22		nm
Dominant wavelength	I _F =20mA	λ_D	620		625	nm
Forward voltage	I _F =20mA	V _F	1.8		2.4	V
Luminous intensity	I _F =20mA	I _v	900		1100	mcd
Viewing angle at 50% I _v	I _F =20mA	2 θ 1/2		120		Deg
Reverse current	V _R =5V	I _R			10	μA

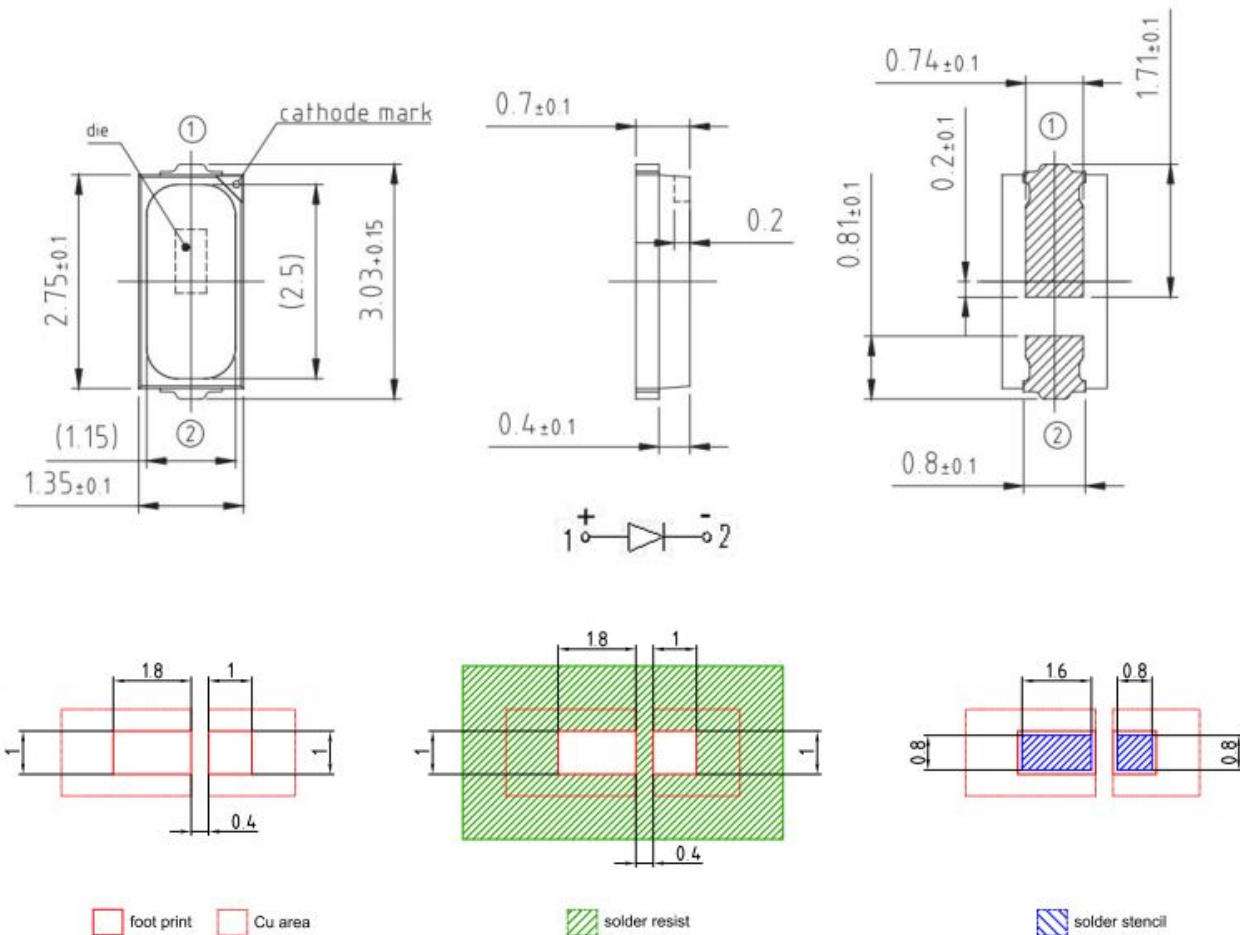


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Absolute Maximum Ratings($T_a=25^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Power dissipation	P_d	96	mW
Forward current	I_F	20	mA
Reverse voltage	V_R	5	V
Operating temperature range	T_{op}	$-20 \sim +80$	$^{\circ}\text{C}$
Storage temperature range	T_{stg}	$-40 \sim +80$	$^{\circ}\text{C}$
Peak pulsing current (1/8 duty $f=1\text{kHz}$)	I_{FP}	60	mA

PACKAGING DIMENSIONS (mm):

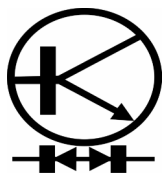


1. All dimension units are millimeters.

2. All dimension tolerance is $\pm 0.15\text{mm}$ unless otherwise noted.

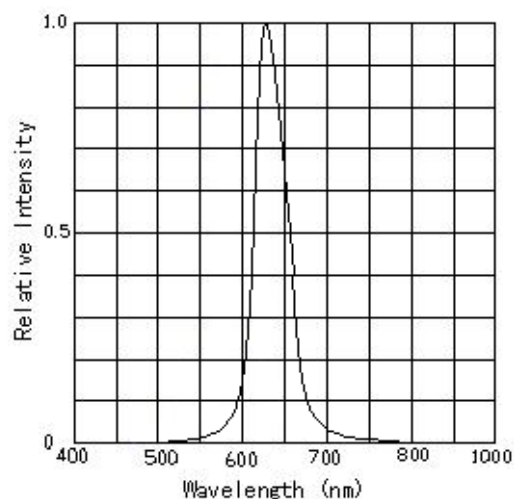


注意：操作時應注意靜電

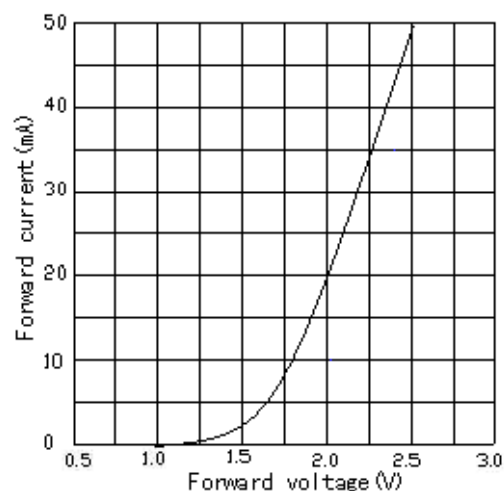


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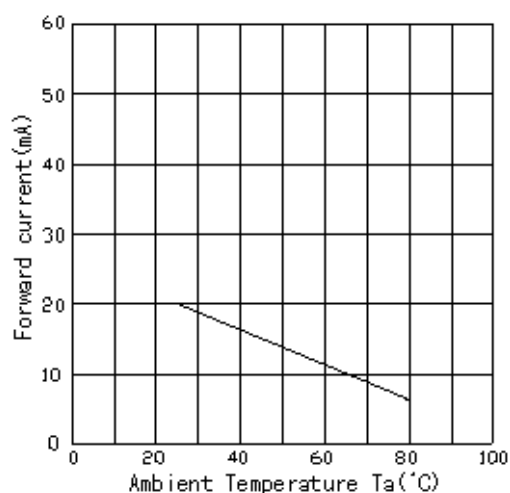
Typical optical characteristics curves



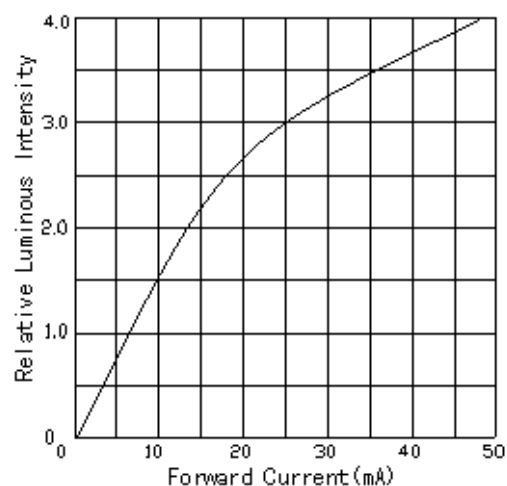
Relative Intensity vs. Wavelength



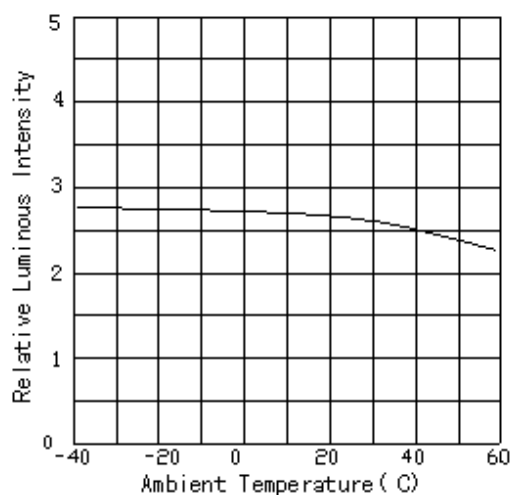
Forward current vs. Forward voltage



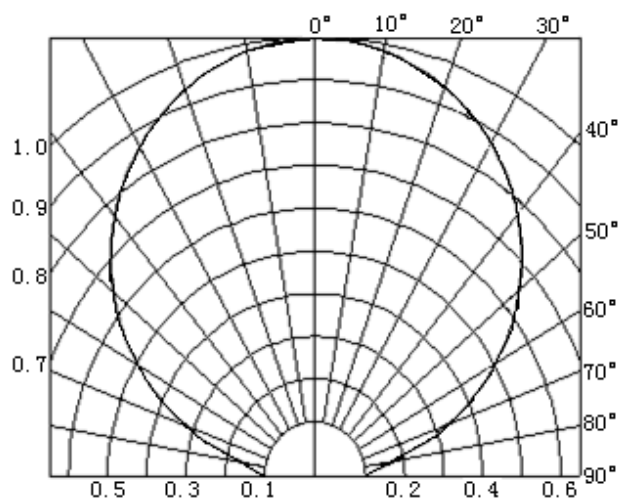
Forward current Derating Curve



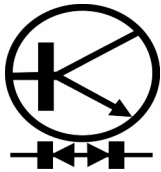
Relative Luminous Intensity vs. Forward Current



Luminous Intensity vs. Ambient Temperature



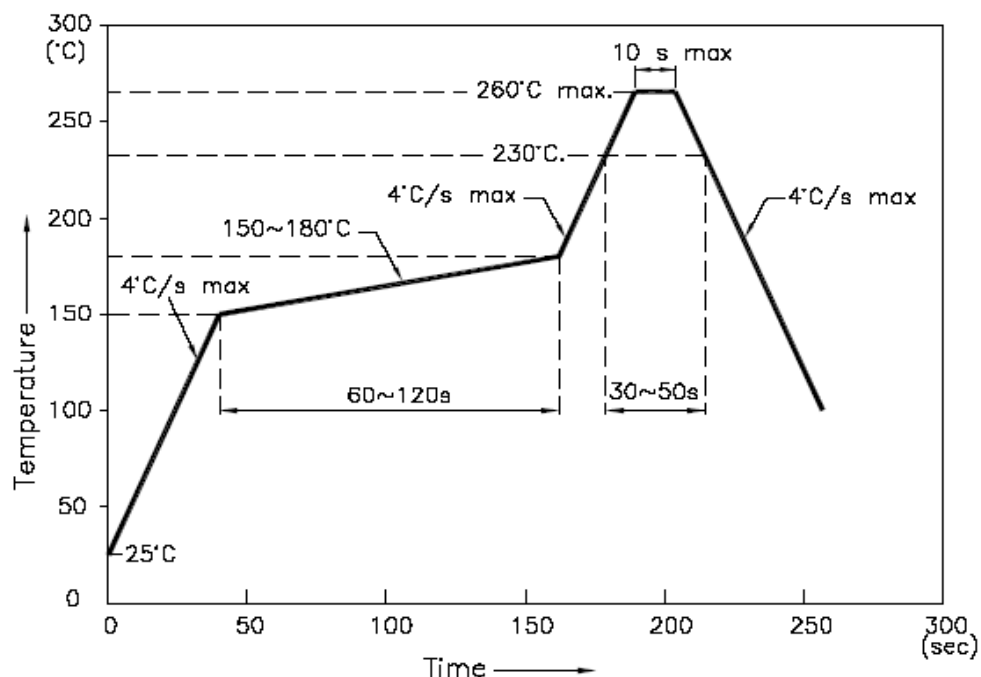
Radiation Diagram



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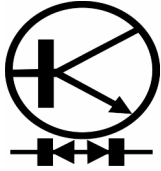
Precautions For Use :
Over - current - proof
Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen)
Storage
1. The operation of temperature and R.H. are : $5^{\circ}\text{C} \sim 30^{\circ}\text{C}$, 60%R.H. Max.
2. Once the package 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.

■ 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.



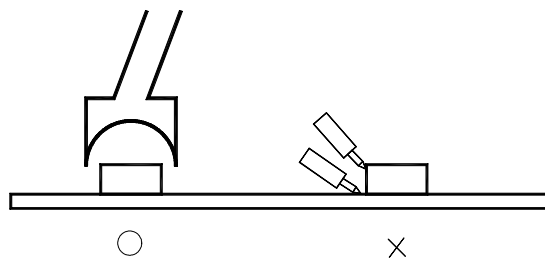
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■Soldering iron

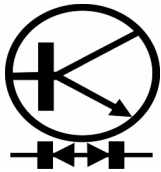
Basic spec is $\leq 5\text{sec}$ when 260°C . If temperature is higher, time should be shorter ($+10^{\circ}\text{C} \rightarrow -1\text{sec}$). Power dissipation of iron should be smaller than 20W, and temperatures should be controllable. Surface temperature of the device should be under 230°C .

■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.



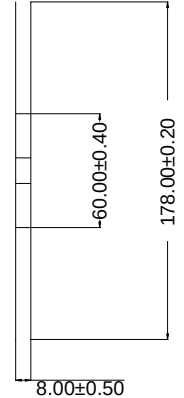
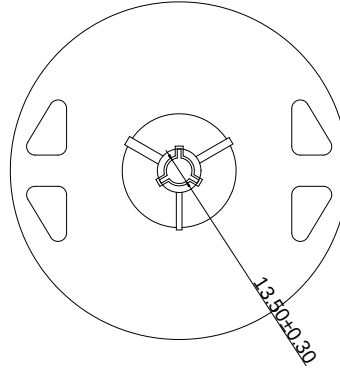
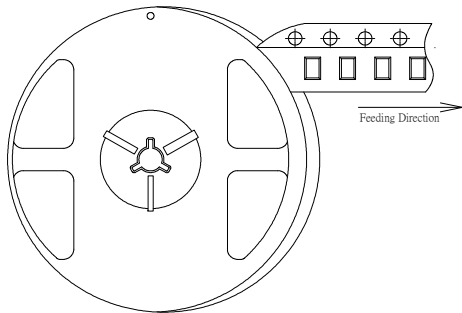
- Avoid rubbing or scraping the resin by any object, during high temperature, for example reflow 、solder etc.



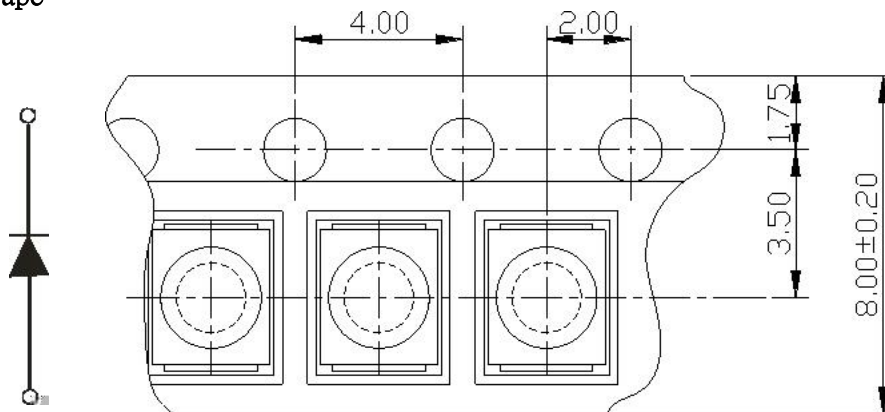
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■Feeding Direction

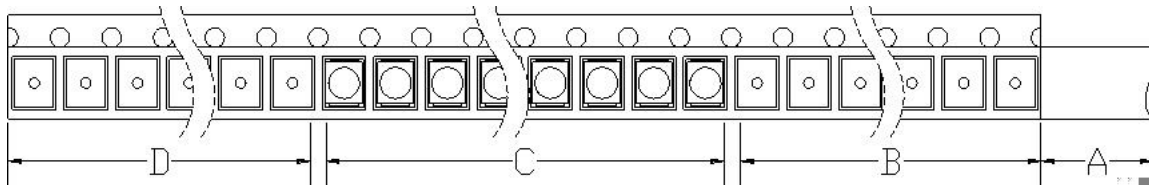
● Dimensions of Reel (Unit: mm)



Carrier Tape



■Dimensions of Tape (Unit: mm)



A : 蓋帶，300 mm；B : 引導，空帶，200mm；C : 編載產品 4000只；D : 尾部，空帶，200mm
A: Top Cover Tape, 300mm; B: Leader, Empty, 200mm; C: 4000 Lamps Loaded; D: Trailer, Empty, 200mm.

■Note

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