



YETDA INDUSTRY LTD.

Technical Data Sheet

MODEL NO : Q282R4-JH

0402Package 1.0*0.5mm 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	Red	Water Clear

Electrical/Optical Characteristics(Ta=25°C)

Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Spectral half bandwidth	I _F =2mA	$\Delta \lambda$		18		nm
Dominant wavelength	I _F =20mA	λ_D	630		640	nm
Forward voltage	I _F =20mA	V _F	1.8		2.4	V
Luminous intensity	I _F =20mA	I _v	50	80	160	mcd
Viewing angle at 50% I _v	I _F =20mA	2 θ 1/2		120		Deg
Reverse current	V _R =5V	I _R			10	μ A



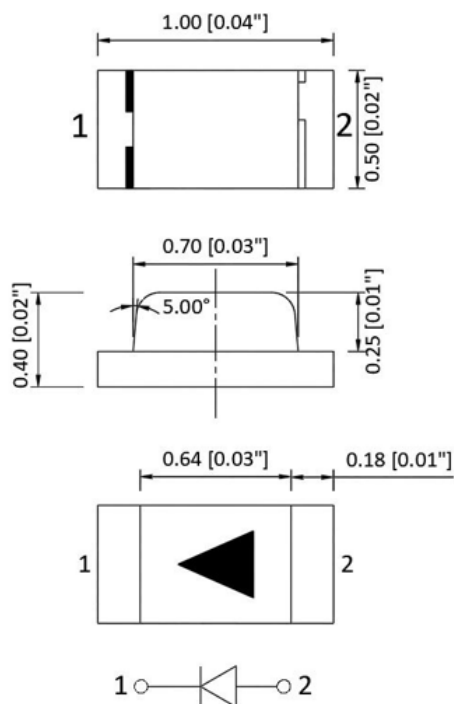
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Absolute Maximum Ratings(Ta=25°C)

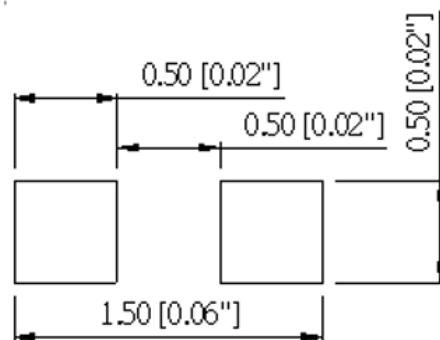
Parameter	Symbol	Value	Unit
Power dissipation	Pd	60	mW
Forward current	I _F	25	mA
Reverse voltage	V _R	5	V
Operating temperature range	T _{op}	-40 ~+80	°C
Storage temperature range	T _{stg}	-40 ~+85	°C
Peak pulsing current (1/8 duty f=1kHz)	I _{FP}	125	mA

PACKAGING DIMENSIONS (mm):

Package outlines



Recommend Pad Layout



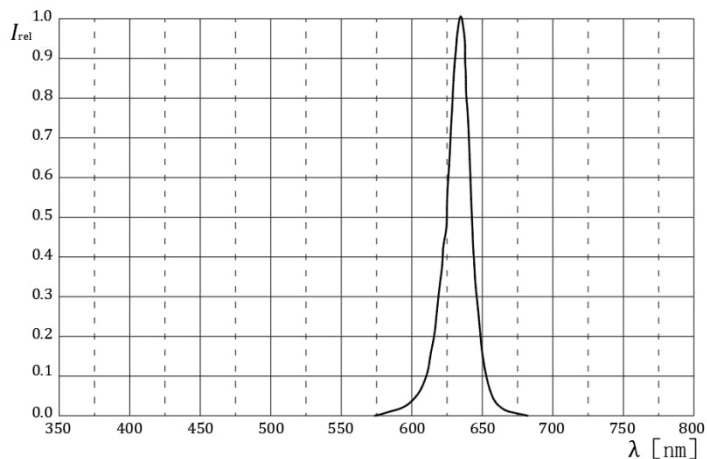


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Typical Electro-Optical Characteristics Curve:

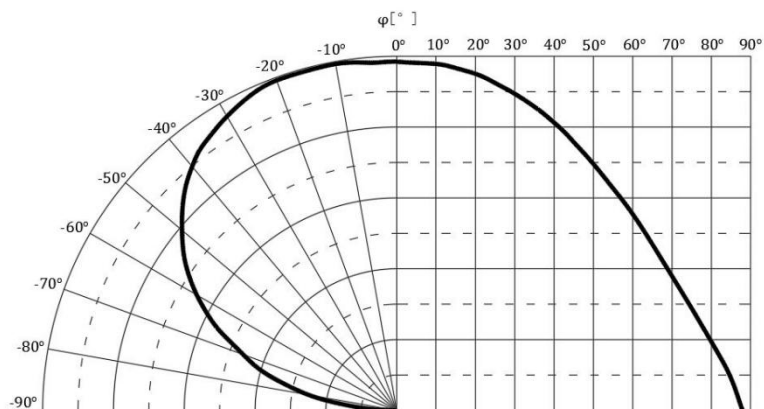
Relative Spectral Emission

IF=5mA, Ta=25°C



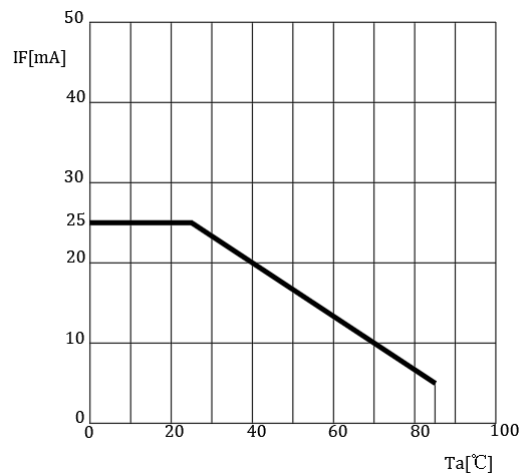
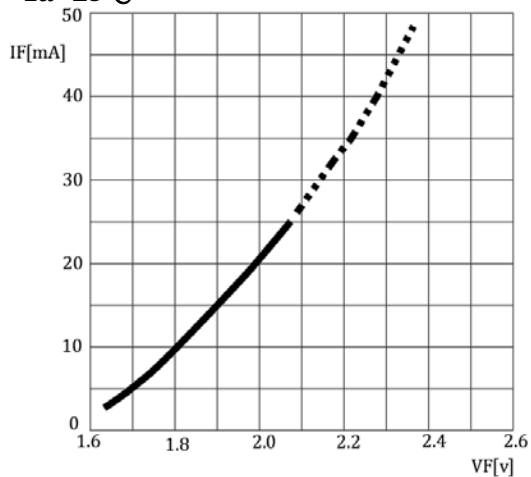
Radiation Characteristics

IF=10mA, Ta=25°C



Forward Current vs Forward Voltage Forward Current Derating Curve

Ta=25°C

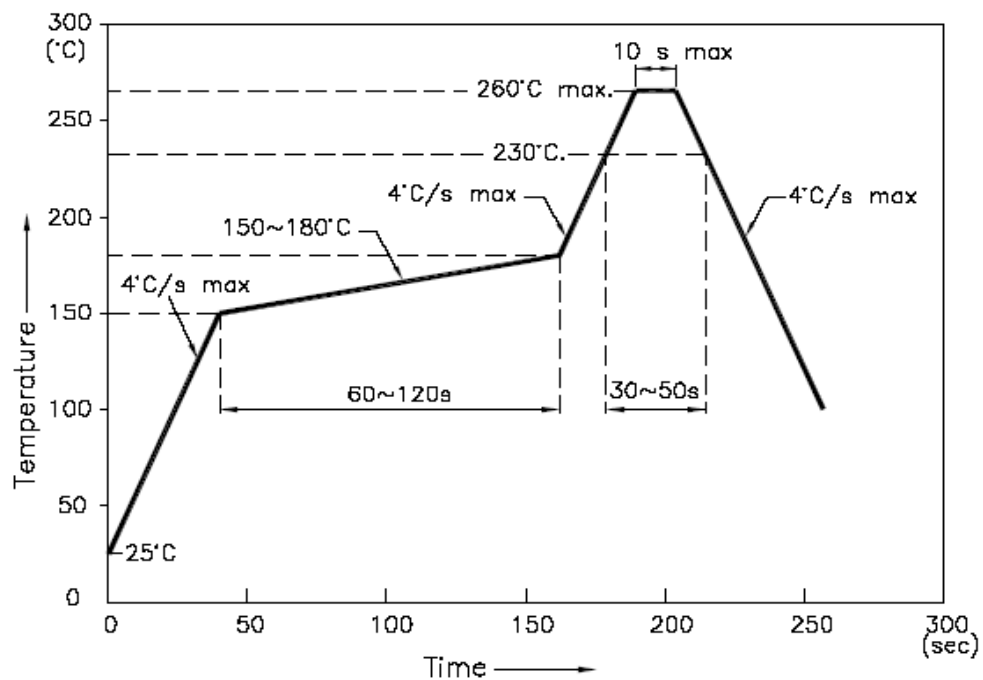




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Precautions For Use :
Over - current - proof
Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen)
Storage
1. The operation of temperature and R.H. are : $5^{\circ}\text{C}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



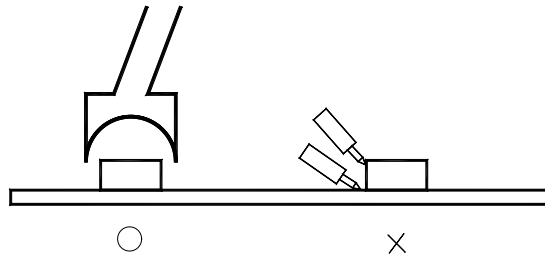
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■Soldering iron

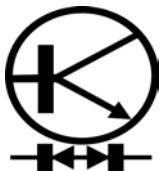
Basic spec is $\leq 5\text{sec}$ when 260°C . If temperature is higher, time should be shorter ($+10^{\circ}\text{C} \rightarrow -1\text{sec}$). Power dissipation of iron should be smaller than 20W, and temperatures should be controllable. Surface temperature of the device should be under 230°C .

■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.

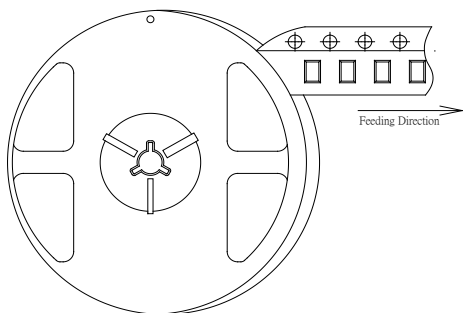


- Avoid rubbing or scraping the resin by any object, during high temperature, for example reflow 、 solder etc.

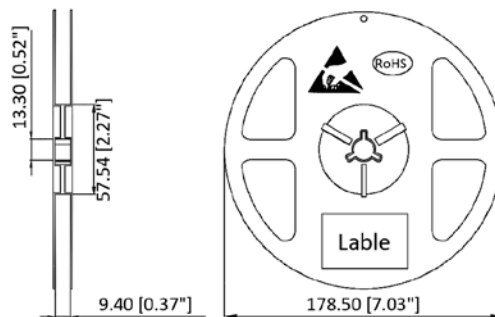


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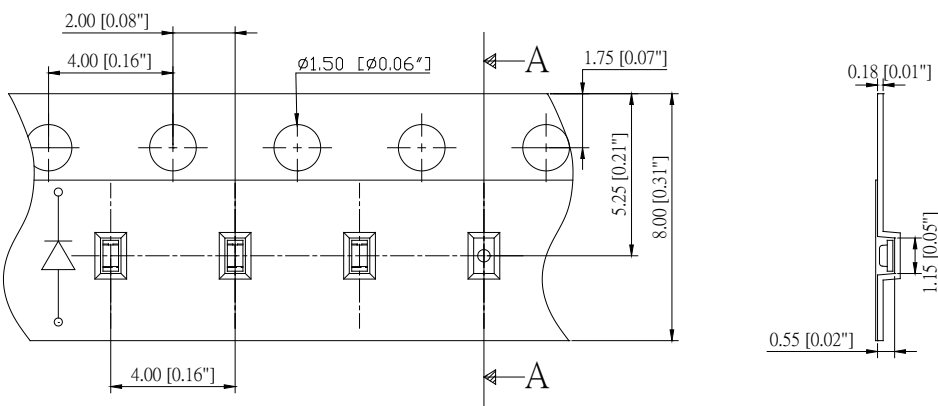
■ Feeding Direction



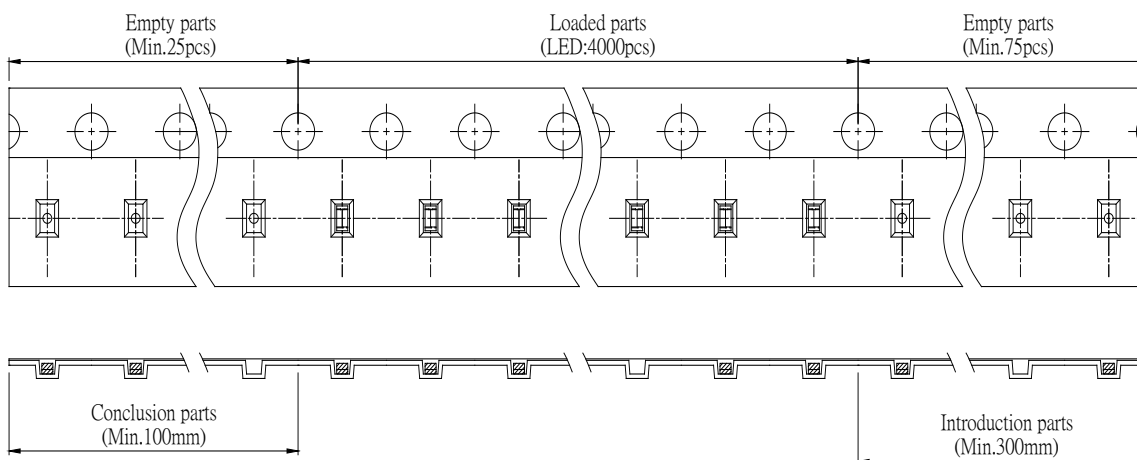
● Dimensions of Reel (Unit: mm)



■ Dimensions of Tape (Unit: mm)



■ Arrangement of Tape



■ 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.