



YETDA INDUSTRY LTD.

Technical Data Sheet

MODEL NO : Q282R4-G

0402 Package 1.0*0.5mm Chip LEDs

Features :

- 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	
Wavelength at peak emission	IF=20mA	$\Delta \lambda$		628		nm
Dominant wavelength	IF=20mA	λD	615	620	630	nm
Forward voltage	IF=20mA	VF	1.7	2.0	2.5	V
Luminous intensity	IF=20mA	Iv	63	100	200	mcd
Viewing angle at 50% Iv	IF=20mA	$2 \theta 1/2$		140		Deg
Reverse current	VR=5V	IR			10	μ A

Absolute Maximum Ratings(Ta=25°C)

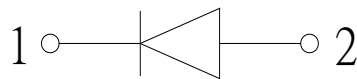
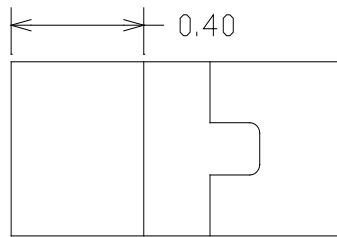
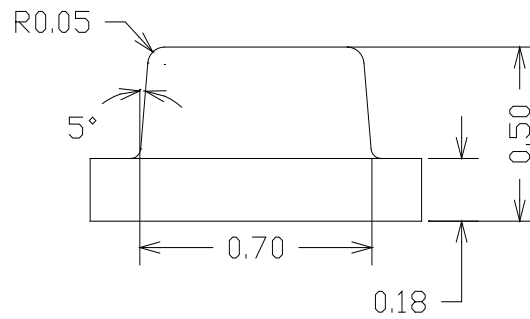
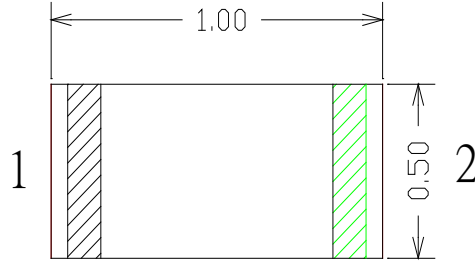
Parameter	Symbol	Value	Unit
Power dissipation	Pd	75	mW
Forward current	IF	30	mA
Reverse voltage	VR	5	V
Operating temperature range	Top	-40 ~+80	°C
Storage temperature range	Tstg	-40 ~+100	°C
Peak pulsing current (1/8 duty f=1kHz)	I _{fp}	125	mA

12OCT15D

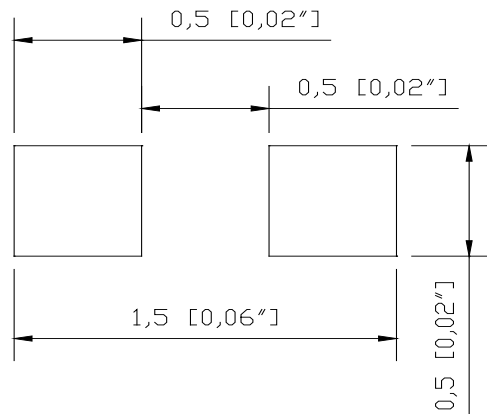


YETDA INDUSTRY LTD.

PACKAGING DIMENSIONS



RECOMMEND PAD LAYOUT





YETDA INDUSTRY LTD.

Typical Electro-Optical Characteristics Curve:

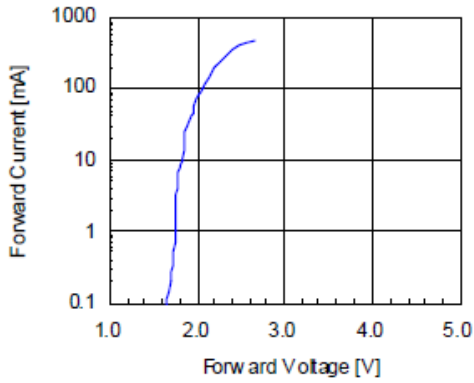


Fig 3. Forward Voltage vs. Temperature

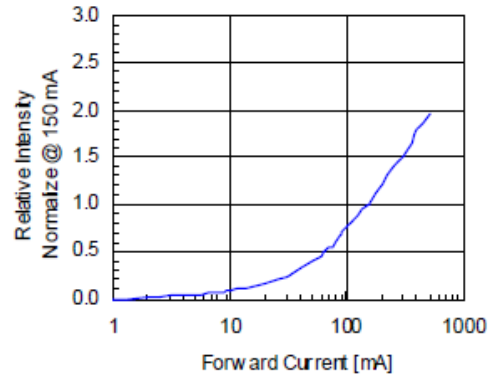


Fig 4. Relative Intensity vs. Temperature

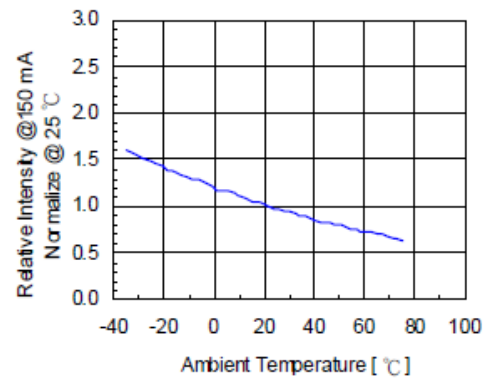
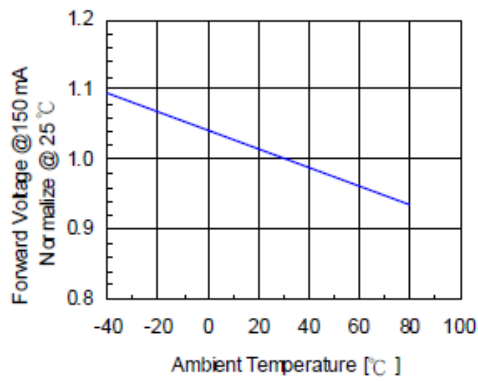
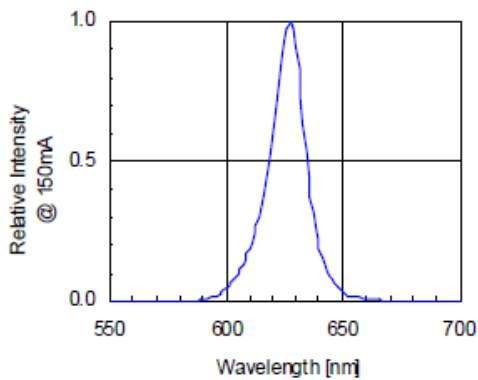


Fig 5. Relative Intensity vs. Wavelength



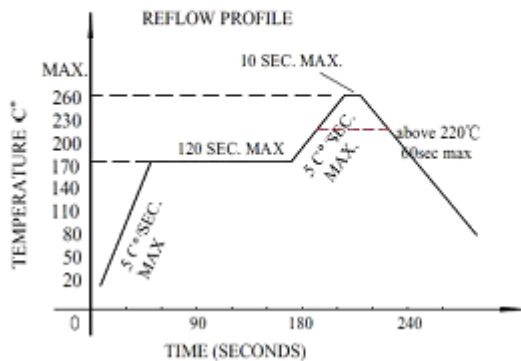


YETDA INDUSTRY LTD.

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

■ Temperature-profile (Surface of circuit board) Use the following conditions shown in the figure.



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.

■Soldering iron

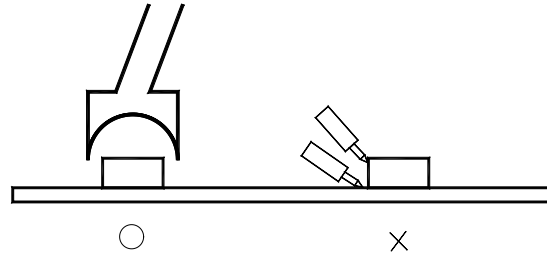
Basic spec is $\leq 5\text{sec}$ when 260°C . If temperature is higher, time should be shorter ($+10^{\circ}\text{C} \rightarrow -1\text{sec}$). Power dissipation of iron should be smaller than 20W, and temperatures should be controllable. Surface temperature of the device should be under 230°C .

■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.



YETDA INDUSTRY LTD.



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