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Technical Data Sheet

MODEL NO : Q282R4

Features :

- 1.0x0.5mm SMT LED, 0.2mm thickness
- Compatible with automatic placement equipment
- Compatible with reflow solder process

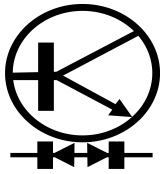
Applications :

- 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 | |
| Dominant Wavelength | IF=20mA | λ_d | | 635 | | nm |
| Forward voltage | IF=20mA | VF | 1.8 | | 2.3 | V |
| Luminous intensity | IF=20mA | Iv | 70 | 150 | | mcd |
| Viewing angle at 50% Iv | IF=10mA | $2\theta_{1/2}$ | | 120 | | Deg |
| Reverse current | VR=5V | IR | | | 10 | μ A |



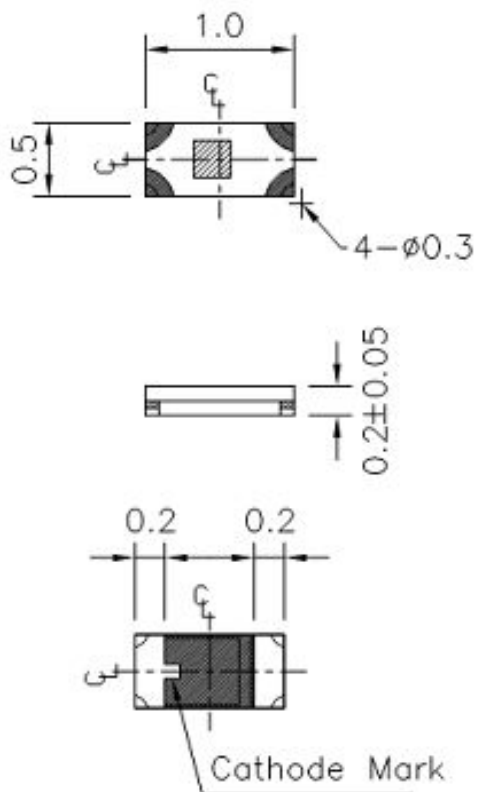
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Absolute Maximum Ratings(Ta=25°C)

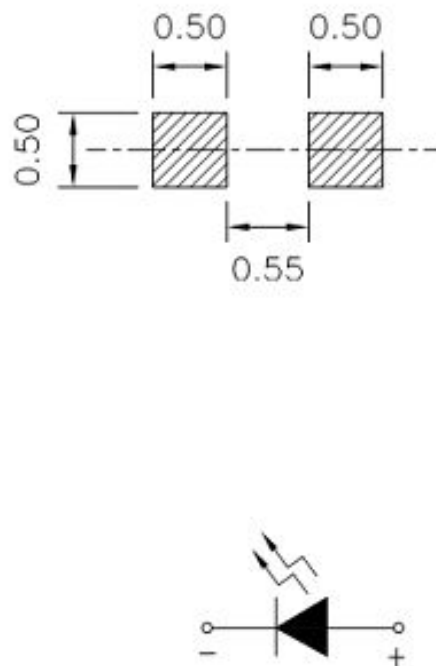
| Parameter | Symbol | Value | Unit |
|--|-----------------|----------|------|
| Power dissipation | Pd | 70 | mW |
| Forward current | I _F | 20 | mA |
| Reverse voltage | V _R | 5 | V |
| Operating temperature range | Top | -40 ~+80 | °C |
| Storage temperature range | Tstg | -40 ~+85 | °C |
| Peak pulsing current (1/8 duty f=1kHz) | I _{FP} | 125 | mA |

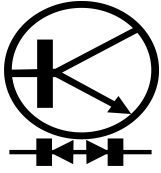
PACKAGING DIMENSIONS (mm):

Package outlines



Recommend Pad Layout

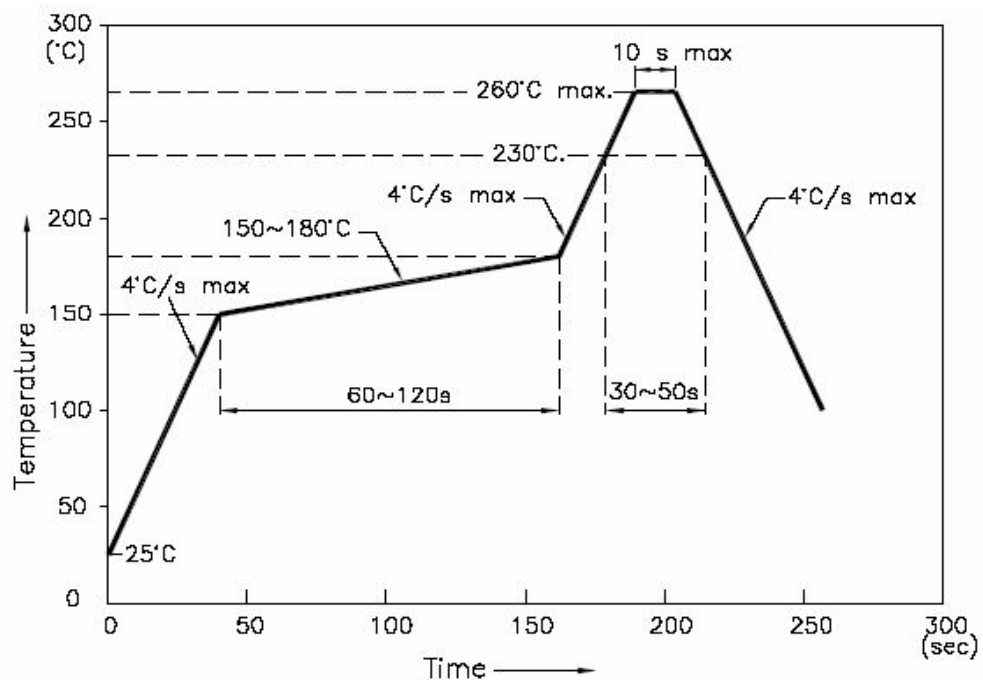




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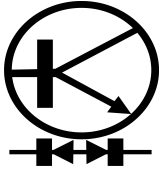
| |
|--|
| Precautions For Use : |
| Over– current– proof |
| Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen) |
| Storage |
| 1. The operation of temperature and R.H. are : $5^{\circ}\text{C} \sim 30^{\circ}\text{C}$, 60%R.H.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

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