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Technical Data Sheet

MODEL NO : Q150YG4-M-R

1206 Reverse 3.2*1.6mm 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 | Green | Water transparent |

Electrical/Optical Characteristics(Ta=25°C)

| Parameter | Test Condition | Symbol | Value | | | Unit |
|-------------------------------------|----------------------|------------------|-------|-----|-----|---------|
| | | | Min | Typ | Max | |
| Spectral half bandwidth | I _F =20mA | $\Delta \lambda$ | | 16 | | nm |
| Dominant wavelength | I _F =20mA | λ_D | 566 | | 576 | nm |
| Forward voltage | I _F =20mA | V _F | 1.8 | | 2.4 | V |
| Luminous intensity | I _F =20mA | I _v | 20 | 25 | | mcd |
| Viewing angle at 50% I _v | I _F =10mA | 2 θ 1/2 | | 120 | | Deg |
| Reverse current | V _R =5V | I _R | | | 10 | μ A |



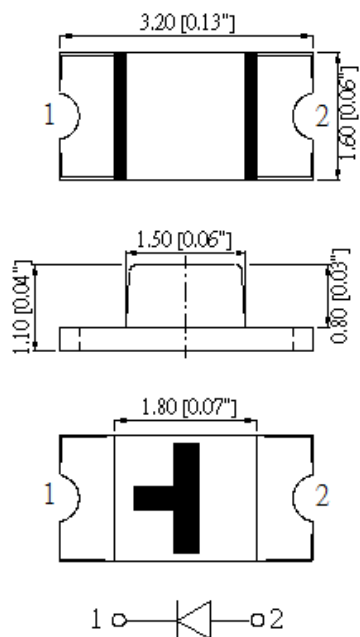
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Absolute Maximum Ratings(Ta=25°C)

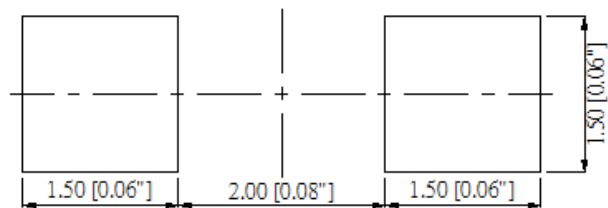
| Parameter | Symbol | Value | Unit |
|--|--------|----------|------|
| Power dissipation | Pd | 72 | mW |
| Forward current | IF | 30 | mA |
| Reverse voltage | VR | 5 | V |
| Operating temperature range | Top | -40 ~+80 | °C |
| Storage temperature range | Tstg | -40 ~+85 | °C |
| Peak pulsing current (1/8 duty f=1kHz) | IFP | 125 | mA |

PACKAGING DIMENSIONS (mm):

Package outlines



Recommend Pad Layout





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Typical Electro-Optical Characteristics Curve:

Fig 1. Forward Current vs. Forward Voltage

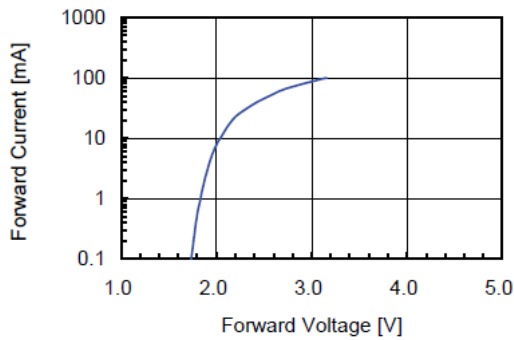


Fig 2. Relative Intensity vs. Forward Current

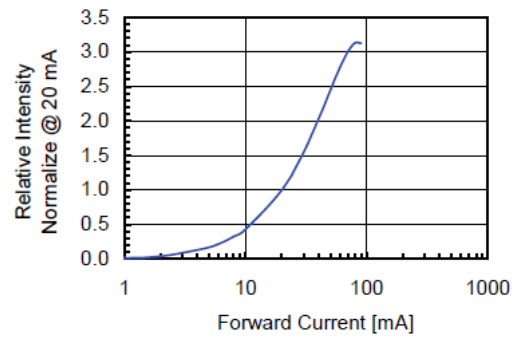


Fig 3. Forward Voltage vs. Temperature

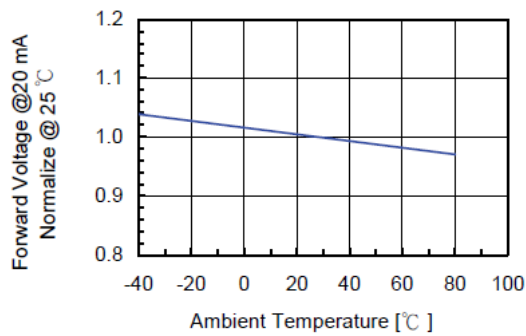


Fig 4. Relative Intensity vs. Temperature

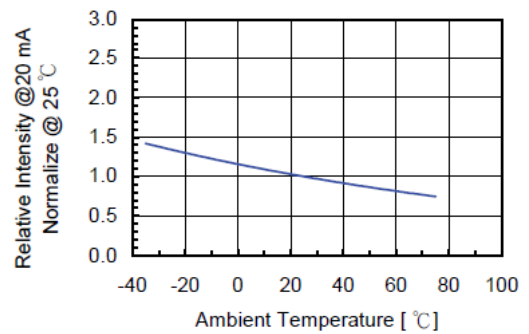
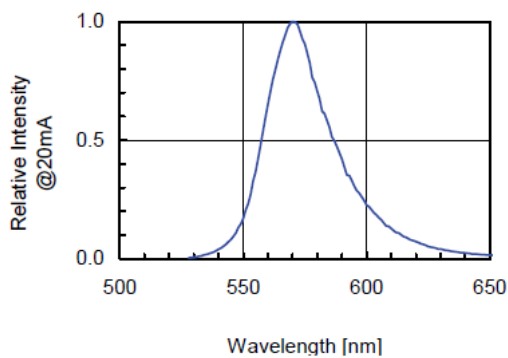


Fig 5. Relative Intensity vs. Wavelength

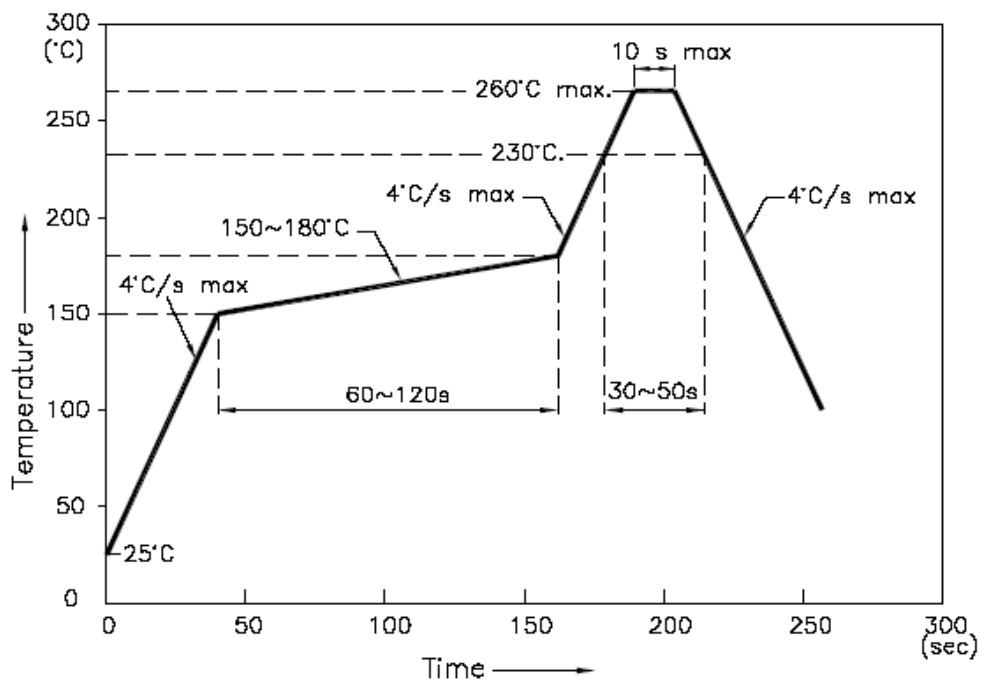




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| |
|--|
| Precautions For Use : |
| Over - current - proof |
| Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen) |
| Storage |
| 1. The operation of temperature and R.H. 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.



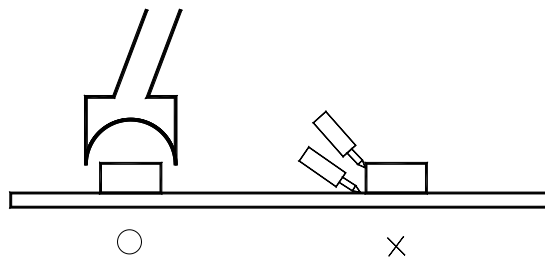
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■Soldering iron

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.

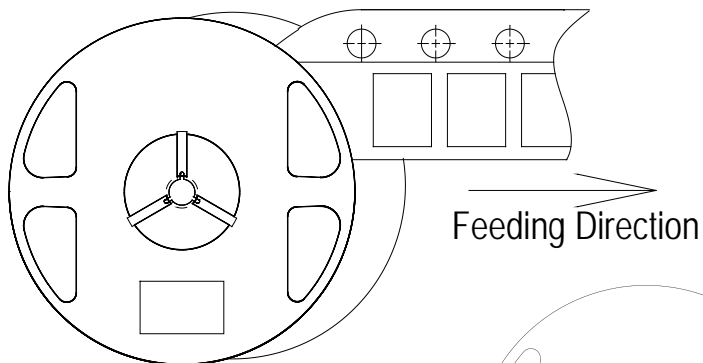


- Avoid rubbing or scraping the resin by any object, during high temperature, for example reflow 、 solder etc.

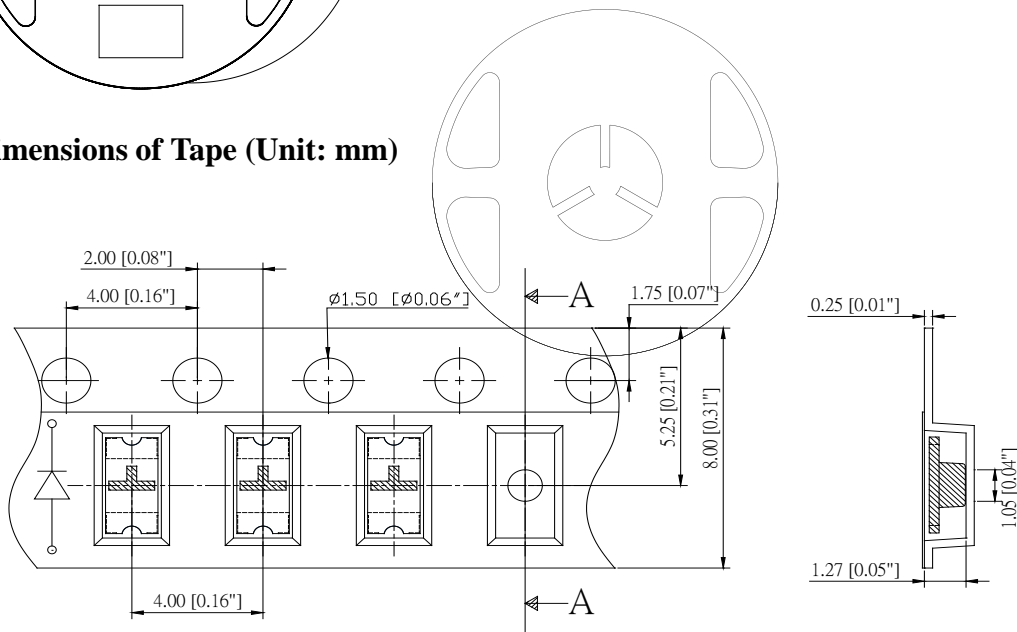


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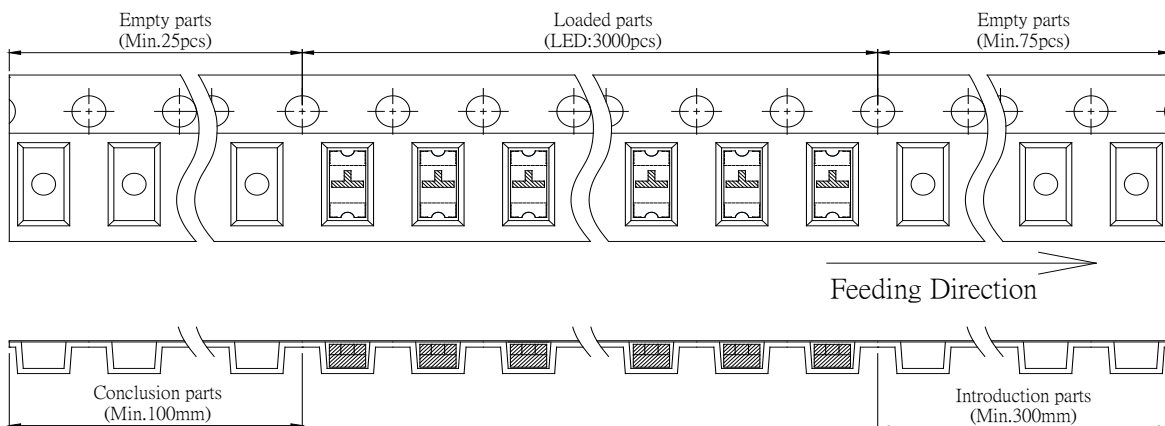
■ Feeding Direction



■ Dimensions of 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.