



YETDA INDUSTRY LTD.

Technical Data Sheet

MODEL NO : Q110ANR4

3010 Package 3.0*1.0*2.0mm 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 transparent |
| | | |
| | | |

Electrical/Optical Characteristics(Ta=25°C)

| Parameter | Test Condition | Symbol | Value | | | Unit |
|-----------------------------|----------------|------------------|-------|-----|-----|---------|
| | | | Min | Typ | Max | |
| Wavelength at peak emission | If=20mA | λ peak | | 658 | | nm |
| Spectral half bandwidth | If=20mA | $\Delta \lambda$ | | 17 | | nm |
| Dominant wavelength | If=20mA | λ dom | 630 | 642 | 650 | nm |
| Forward voltage | If=20mA | Vf | 1.7 | 2.0 | 2.5 | V |
| Luminous intensity | If=20mA | Iv | 63 | 115 | 200 | mcd |
| Viewing angle at 50% Iv | If=100mA | 2 θ 1/2 | | 150 | | Deg |
| Reverse current | Vr=500V | Ir | | | 10 | μ A |

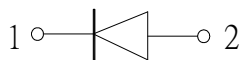
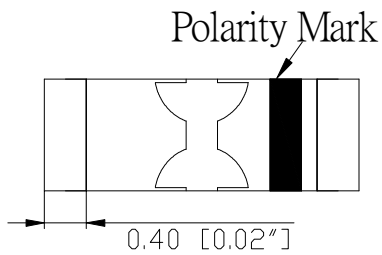
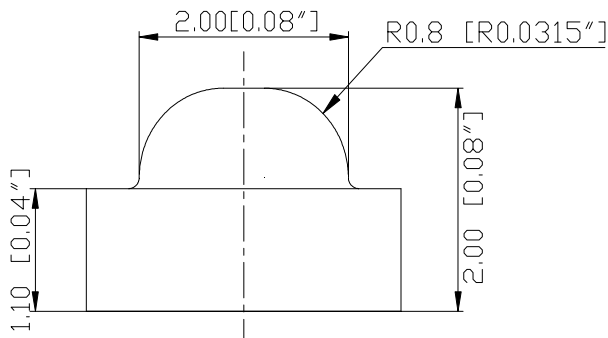
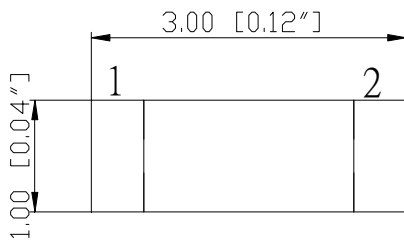
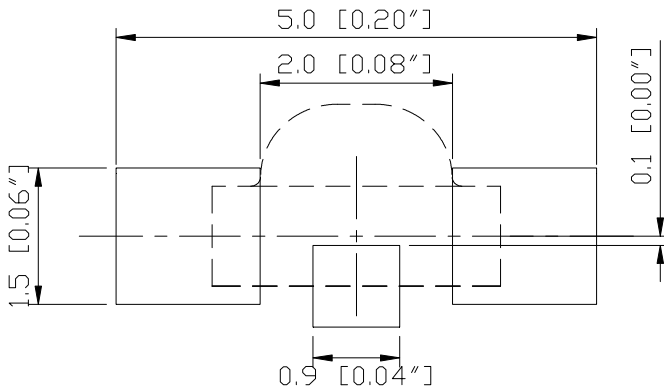
Absolute Maximum Ratings(Ta=25°C)

| 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 ~+80 | °C |
| Peak pulsing current (1/8 duty f=1kHz) | I _{fp} | 125 | mA |



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PACKAGING DIMENSIONS (mm):

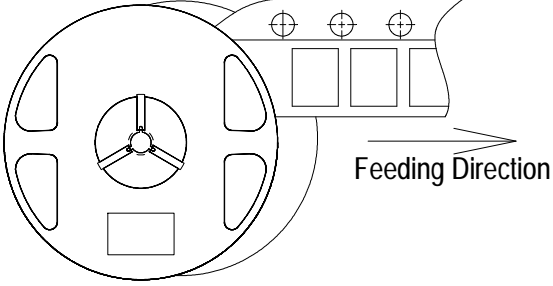
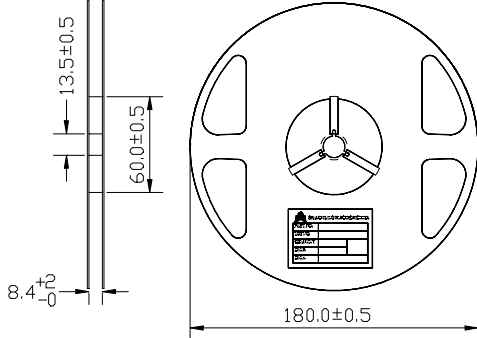


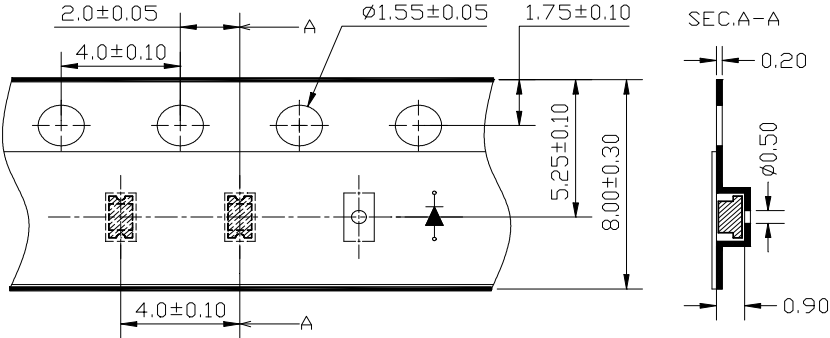
| | |
|--|---------------------------------|
| | ATTENTION |
| | OBSERVE PRECAUTIONS |
| | FOR HANDLING |
| | ELECTROSTATIC SENSITIVE DEVICES |

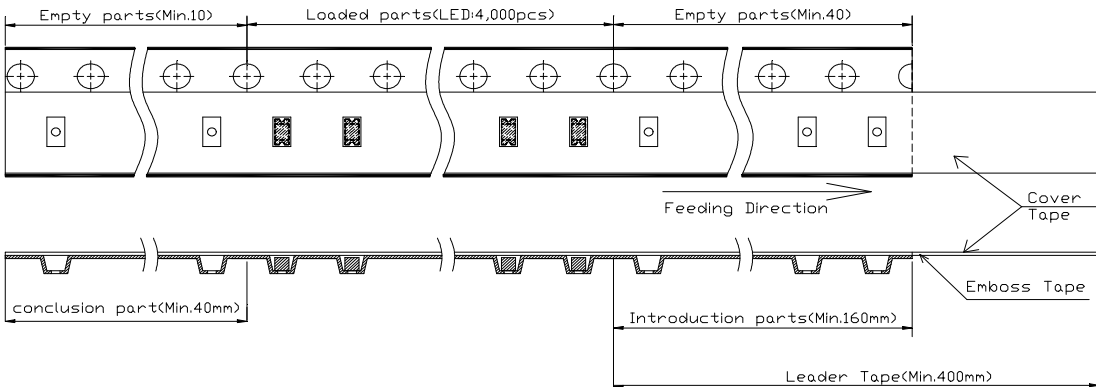


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PACKAGING SPECIFICATIONS

| Feeding Direction | Dimensions of Reel (Unit: mm) |
|---|--|
|  |  |

| Dimensions of Tape (Unit: mm) |
|---|
|  |

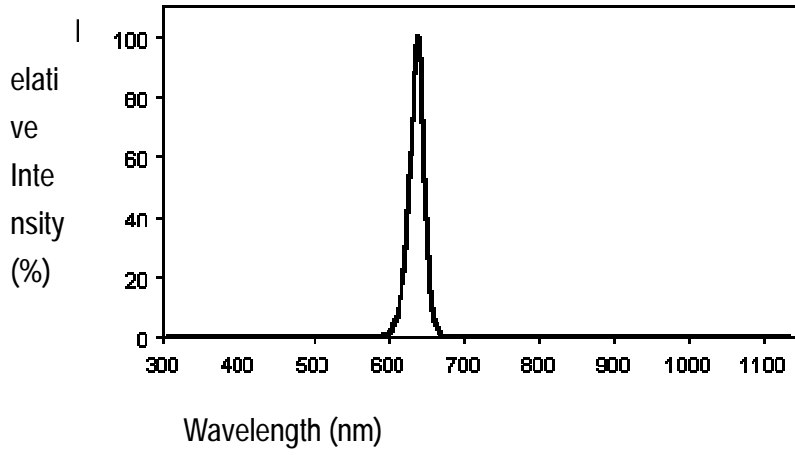
| Arrangement of Tape |
|--|
|  |

| NOTES |
|--|
| <ol style="list-style-type: none"> 1. Empty component pockets are sealed with top cover tape; 2. The maximum number of missing lamps is two; 3. The polarity mark is oriented towards the tape sprocket hole ; 4. 3,000pcs/Reel. |

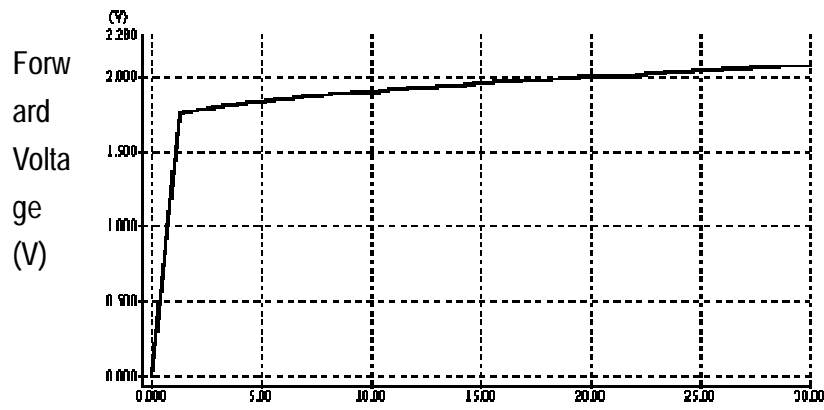


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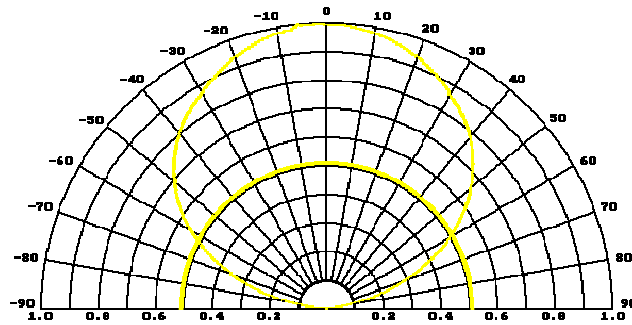
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



Forward Current vs. Forward Voltage



Directive Characteristics



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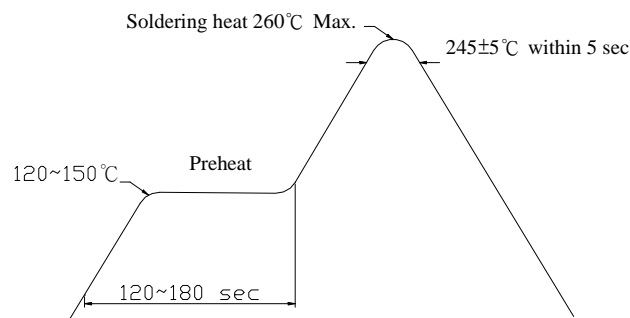
Descriptions :

The Chip-LED Taping is much smaller than lead frame type components, thus enable smaller board size, higher packing density, reduced storage space and finally smaller equipment to be obtained.

Besides, lightweight makes them ideal for miniature application, etc.

Soldering heat reliability (DIP) :

Please refer to the following figure :



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)

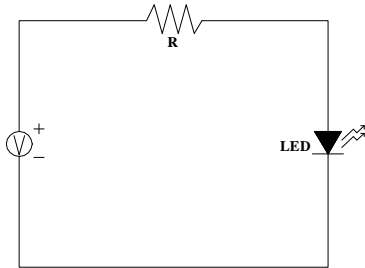
Storage

1. The operation of temperature and R.H. are : 5°C ~ 30°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°C±5°C for 15hrs.

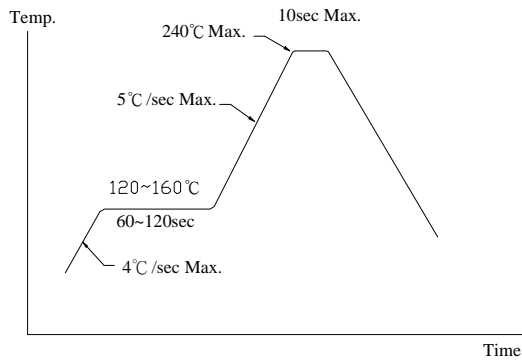


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Test Circuit



Reflow Temp. / Time :



Reliability Test Items And Conditions

The reliability of products shall be satisfied with items listed below.

| No. | Items | Test Condition | Test Hours/Cycles | Sample Size |
|-----|--------------------------------|--|-------------------|-------------|
| 1 | Solder Heat | TEMP : 260°C ±5°C | 5 sec | 48 pcs |
| 2 | Temperature Cycle | 90°C ~ 25°C ~ -30°C ~ 25°C 30m 5m 30m 5m | 300Cycles | 48 Pcs |
| 3 | Thermal Shick | 100°C ~ -55°C 10m 10m | 100Cycles | 48 Pcs |
| 4 | Operation Life | If=20mA | 1000 Hrs | 48 Pcs |
| 5 | High Temperature Storage | Temp:90°C | 1000Hrs | 48 Pcs |
| 6 | Low Temperature Storage | Temp:-30°C | 1000Hrs | 48 Pcs |
| 7 | High Temperature/High Humidity | 80°C / R.H80% | 1000Hrs | 48 Pcs |