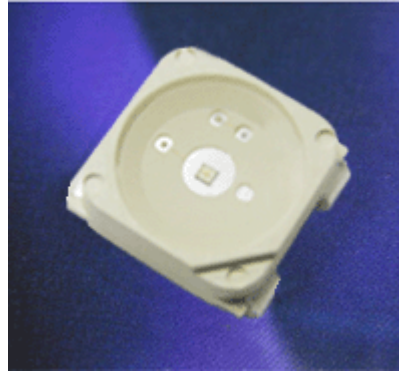


PRELIMINARY SPEC

Part Number: AA1010SE28ZC Reddish-Orange

Features

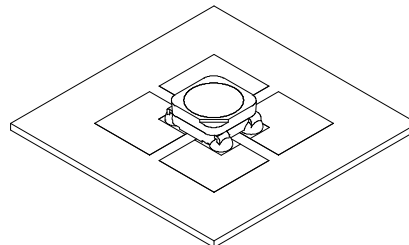
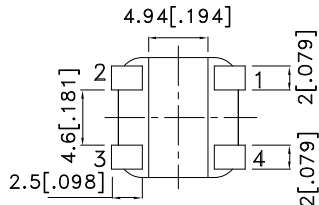
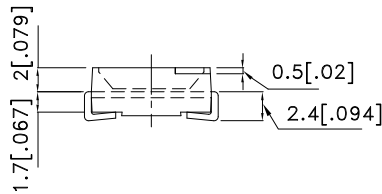
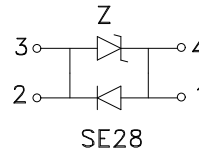
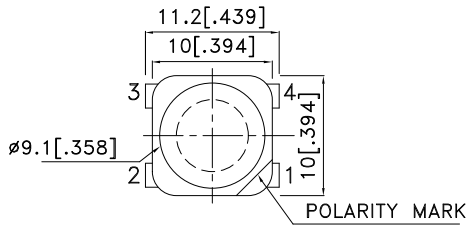
- PLCC-4 PACKAGE.
- SINGLE COLOR.
- HIGH LUMINANCE.
- HIGH POWER, OPERATING CURRENT @350mA.
- SUITABLE FOR ALL SMT ASSEMBLY METHODS.
- PACKAGE : 500PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 4.
- PATENT PENDING.
- RoHS COMPLIANT.



Applications

- traffic signaling
- backlighting (illuminated advertising , general lighting)
- interior and exterior automotive lighting
- substitution of micro incandescent lamps
- portable light source (e.g. bicycle flashlight)
- signal and symbol luminaire for orientation
- marker lights (e.g. steps, exit ways, etc)
- decorative and entertainment lighting
- indoor and outdoor commercial and residential architectural lighting

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25(0.01)$ unless otherwise noted.
3. Specifications are subject to change without notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.



Selection Guide

| Part No. | Dice | Lens Type | luminous Intensity [2] Iv(cd)@ 350mA | | Φv (lm) [2] @ 350mA | | Viewing Angle [1] |
|--------------|--------------------------|-------------|---|------|------------------------|------|----------------------|
| | | | Min. | Typ. | Min. | Typ. | 2θ1/2 |
| AA1010SE28ZC | Reddish-Orange (InGaAlP) | WATER CLEAR | 16 | 32 | 12.5 | 26 | 120° |

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous intensity / luminous Flux: +/-15%.

Absolute Maximum Ratings at TA=25°C

| Parameter | Symbol | Value | Unit |
|--------------------------|--------|------------|------|
| Power dissipation | Pt | 1.2 | W |
| Junction temperature | TJ | 110 | °C |
| Operating Temperature | Top | -40 To +85 | °C |
| Storage Temperature | Tstg | -40 To +85 | °C |
| DC Forward Current [1] | IF | 350 | mA |
| Peak Forward Current [2] | IFM | 500 | mA |
| Thermal resistance [1] | Rth | 60 | °C/W |

Notes:

1. Results from mounting on PC board FR4 (pad size ≥ 100mm² per pad), mounted on pc board-metal core PCB is recommend for lowest thermal Resistance.
2. 1/10 Duty Cycle, 0.1ms Pulse Width.

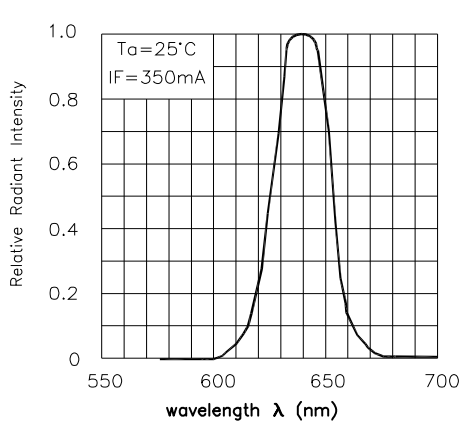
Electrical / Optical Characteristics at TA=25°C

| Parameter | Symbol | Value | Unit |
|--|----------|-------|-------|
| Wavelength at peak emission IF=350mA [Typ.] | λpeak | 640 | nm |
| Dominant Wavelength IF=350mA [Typ.] | λDom [1] | 625 | nm |
| Spectral bandwidth at 50%ΦREL MAX IF=350mA [Typ.] | Δλ | 30 | nm |
| Forward Voltage IF=350mA [Min.] | VF [2] | 2.0 | V |
| Forward Voltage IF=350mA [Typ.] | | 2.5 | |
| Forward Voltage IF=350mA [Max.] | | 3.0 | |
| Temperature coefficient of λpeak IF=350mA, -10°C ≤ T ≤ 100°C [Typ.] | TCλpeak | 0.14 | nm/°C |
| Temperature coefficient of λdom IF=350mA, -10°C ≤ T ≤ 100°C [Typ.] | TCλdom | 0.12 | nm/°C |
| Temperature coefficient of VF IF=350mA, -10°C ≤ T ≤ 100°C [Typ.] | TCv | -3.0 | mV/°C |

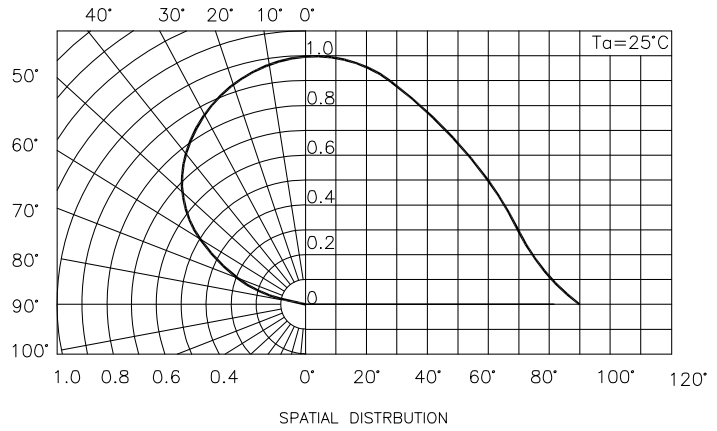
Notes:

1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

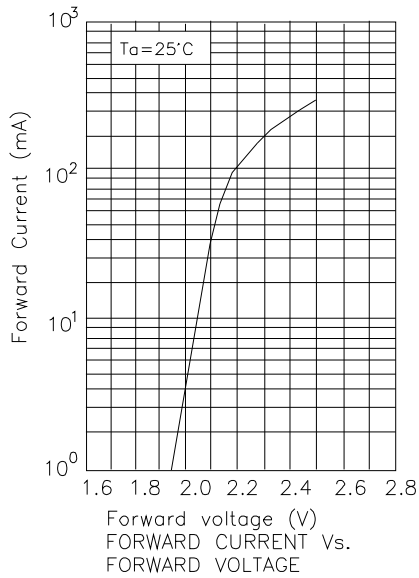
AA1010SE28ZC



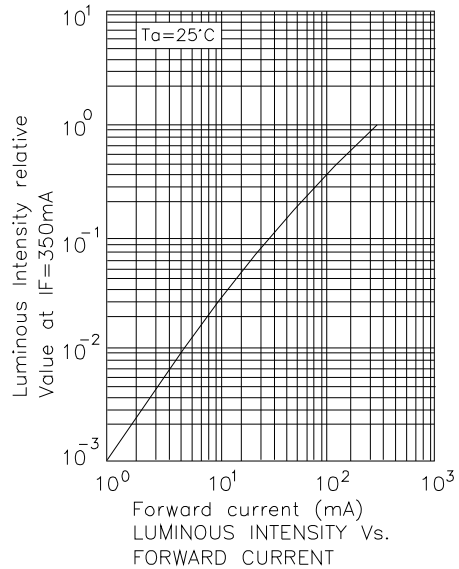
RELATIVE INTENSITY Vs. WAVELENGTH



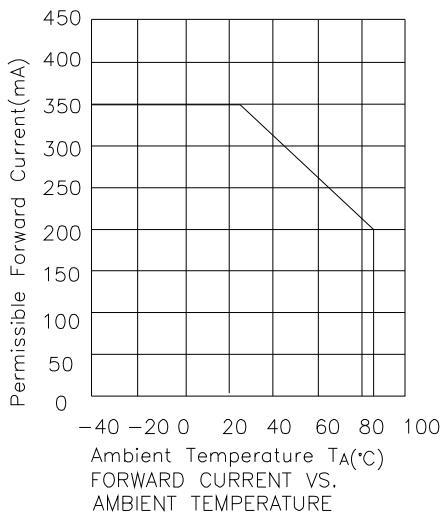
SPATIAL DISTRIBUTION



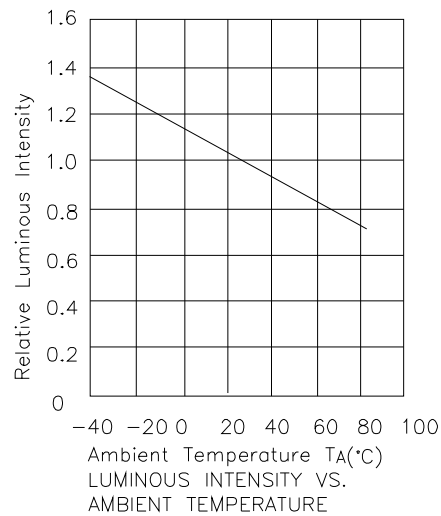
FORWARD CURRENT Vs. FORWARD VOLTAGE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



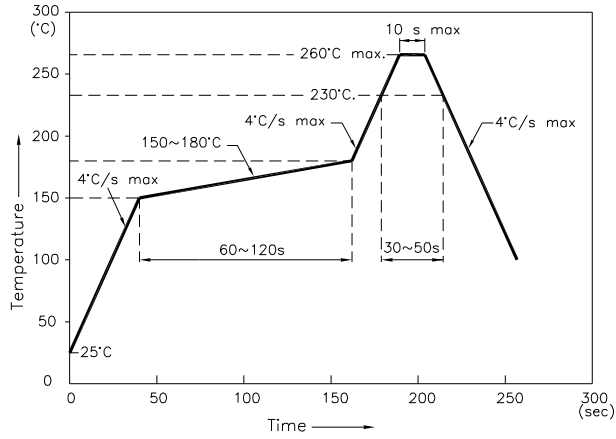
FORWARD CURRENT VS. AMBIENT TEMPERATURE



LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

AA1010SE28ZC

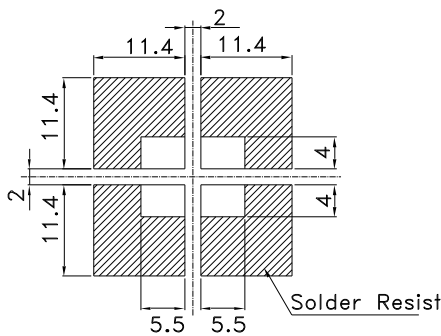
Reflow Soldering Profile For Lead-free SMT Process.



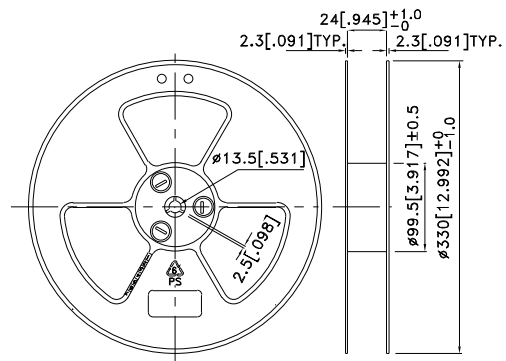
NOTES:

1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

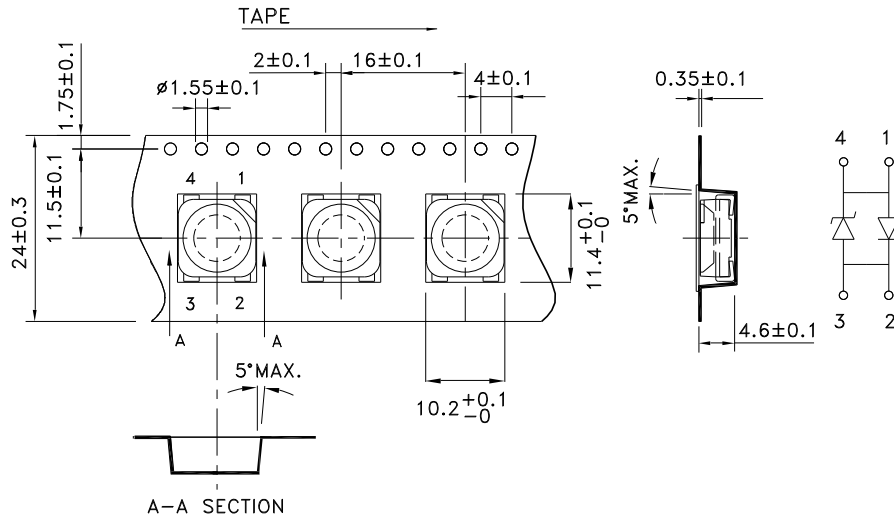
Recommended Soldering Pattern (Units : mm; Tolerance: ±0.1)



Reel Dimension



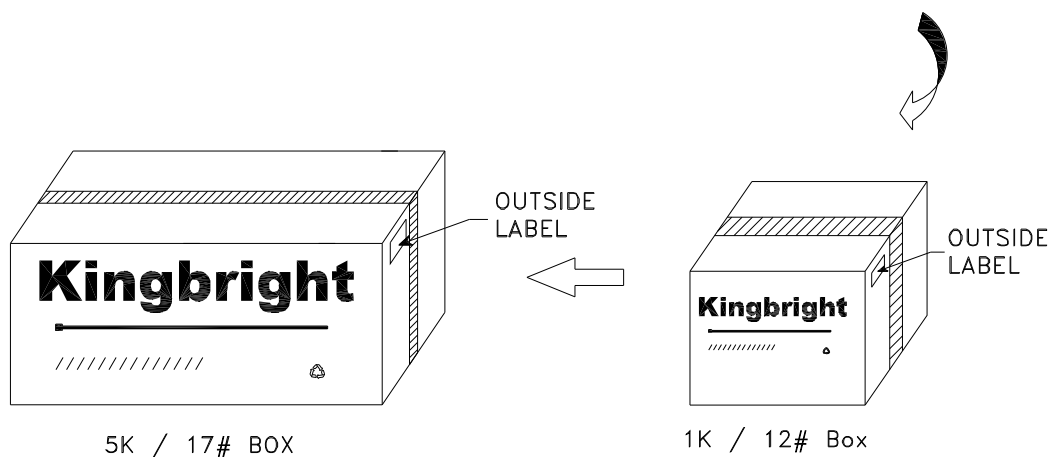
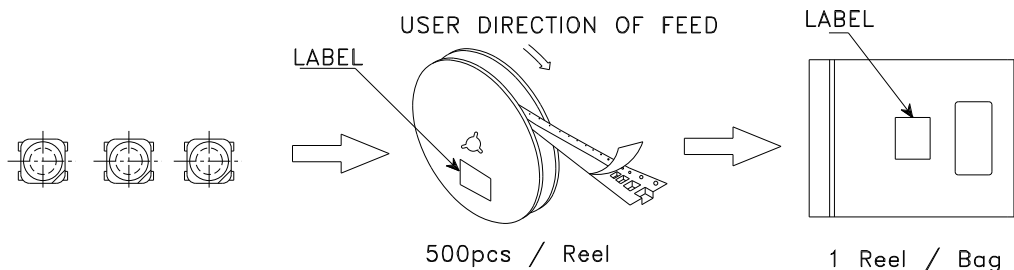
Tape Specifications (Units : mm)




Kingbright

PACKING & LABEL SPECIFICATIONS

AA1010SE28ZC



| | |
|---|--|
| Kingbright | |
| P/NO: AA1010XXX | |
| QTY: 500 pcs | Q.C. Q C xx xx xxxx PASSED |
| S/N: XXXX | |
| CODE: XXX | |
| LOT NO: | |
|  xxxxxxxxxxxxxxxxxxxxxxxx | |
| RoHS Compliant | |