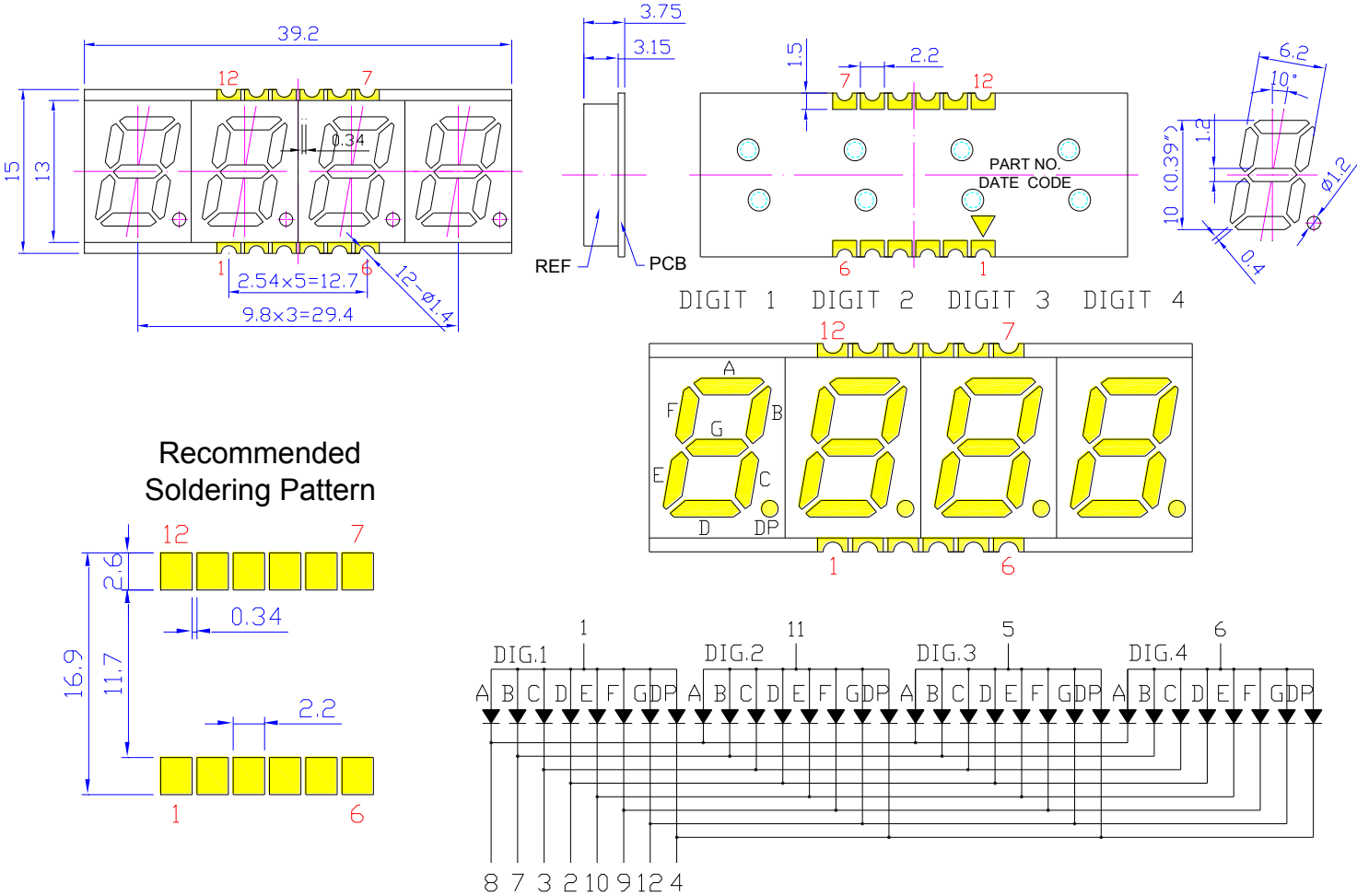


SPECIFICATIONS SDQA39B2W

MECHANICAL DIMENSIONS



- Notes:**
1. All dimensions are in millimeters (inches).
 2. Tolerance is $\pm 0.25\text{mm}$ (0.01") unless otherwise noted.
 3. Specifications are subject to change without notice.

| Part Number | Chip Material | Color of Emission | Lens Type | Description |
|-------------|---------------|-------------------|---------------|--------------|
| SDQA39B2W | InGaN | Blue | White Segment | Common Anode |



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ABSOLUTE MAXIMUM RATINGS
(TA=25°C)

| Parameter | Symbol | Value | Unit |
|-----------------------------------------------|------------------|----------|---------|
| Power Dissipation per Dice | P _{AD} | 120 | mW |
| Derating Liner from 25°C per Dice | - | 0.3 | mA / °C |
| Continuous Forward Current per Dice | I _{AF} | 30 | mA |
| Peak Current per Dice (duty cycle 1/10, 1kHz) | I _{PF} | 100 | mA |
| Reverse Voltage per Dice | V _R | 5 | V |
| Operating Temperature | T _{OPR} | -40~+105 | °C |
| Storage Temperature | T _{STG} | -40~+105 | °C |

OPTICAL-ELECTRICAL CHARACTERISTICS
(TA=25°C)

| Characteristic | Symbol | Condition | Value | | | Unit |
|---------------------------------------|----------------|----------------------|-------|-------|------|------|
| | | | Min. | Type. | Max. | |
| Forward Voltage per Dice | V _F | I _F = 5mA | - | 2.85 | 3.0 | V |
| Reverse Current per Dice | I _R | V _R = 8V | - | - | 10 | μA |
| Peak Wavelength per Dice | λ _P | I _F = 5mA | - | 472 | - | nm |
| Dominant Wavelength per Dice | λ _D | I _F = 5mA | 450 | 470 | 480 | nm |
| Luminous Intensity per Dice | I _V | I _F = 5mA | 10 | 30 | - | mcd |
| Spectral Radiation Bandwidth per Dice | Δλ | I _F = 5mA | - | 30 | - | nm |

*Tolerance of viewing angle: -10 / +5 deg.



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OPTICAL CHARACTERISTIC CURVES

**Typical Electro-optical Characteristic Curves
(25 °C Free Air Temperature Unless Otherwise Specified)**

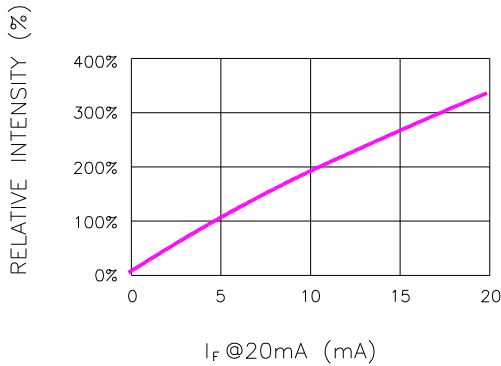


Fig.1 RELATIVE INTENSITY VS. FORWARD CURRENT

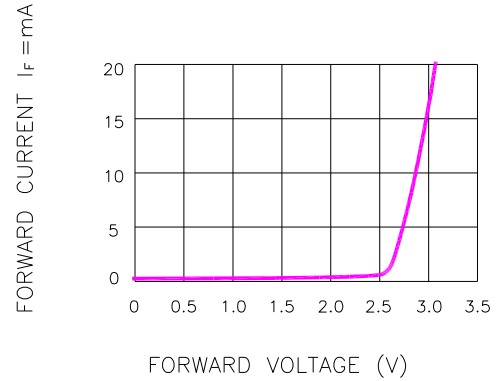


Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

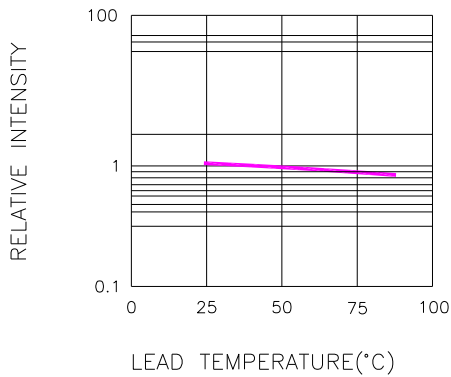


Fig.3 RELATIVE INTENSITY VS. LEAD TEMPERATURE
(PULSED 20 mA; 300us PULSE, 10ms PERIOD)

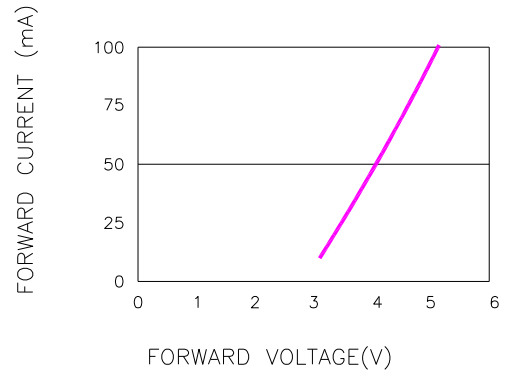


Fig.4 PEAK FORWARD VOLTAGE VS. FORWARD (100us TEST PULSE, 1% DUTY CYCLE)

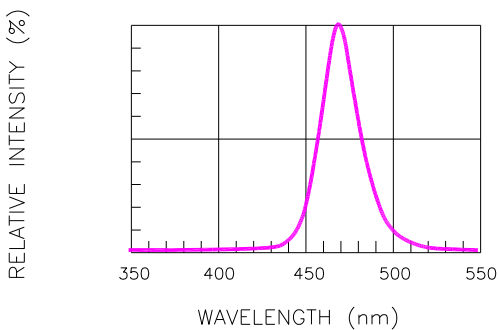


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

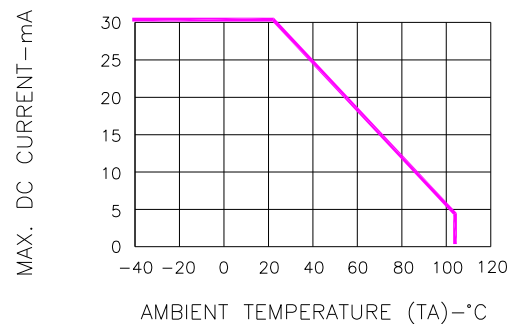


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



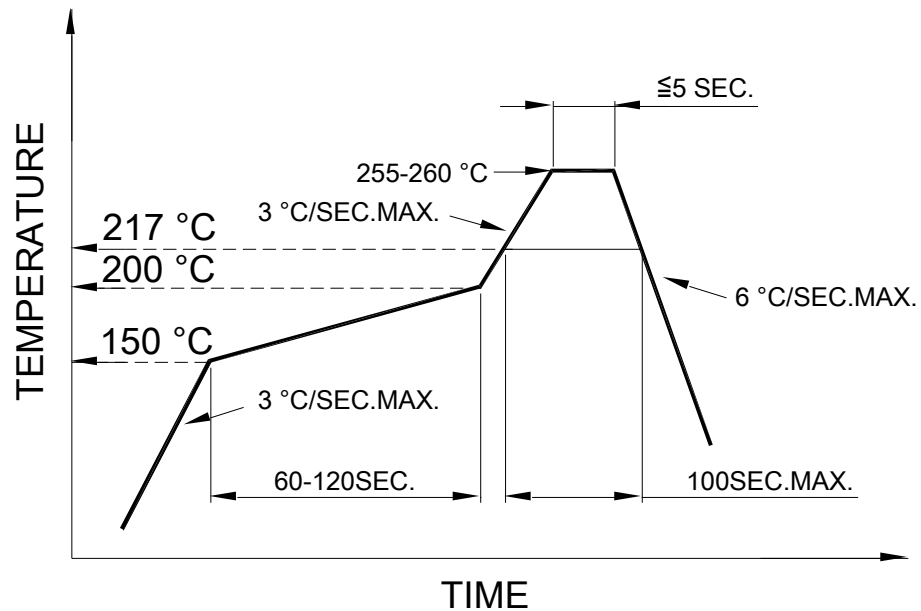
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SOLDERING CONDITIONS – LAMP TYPE LED

● SMT REFLOW SOLDERING INSTRUCTIONS

SMT Soldering Profile

Pb free reflow soldering Profile



● SOLDERING IRON

Basic spec is ≤ 4 sec when 260 °C. If temperature is higher, time should be shorter (+10 °C → 1 sec). Power dissipation of Iron should be smaller than 15W, and temperature should be controllable. Surface temperature of the device should be under 230 °C.

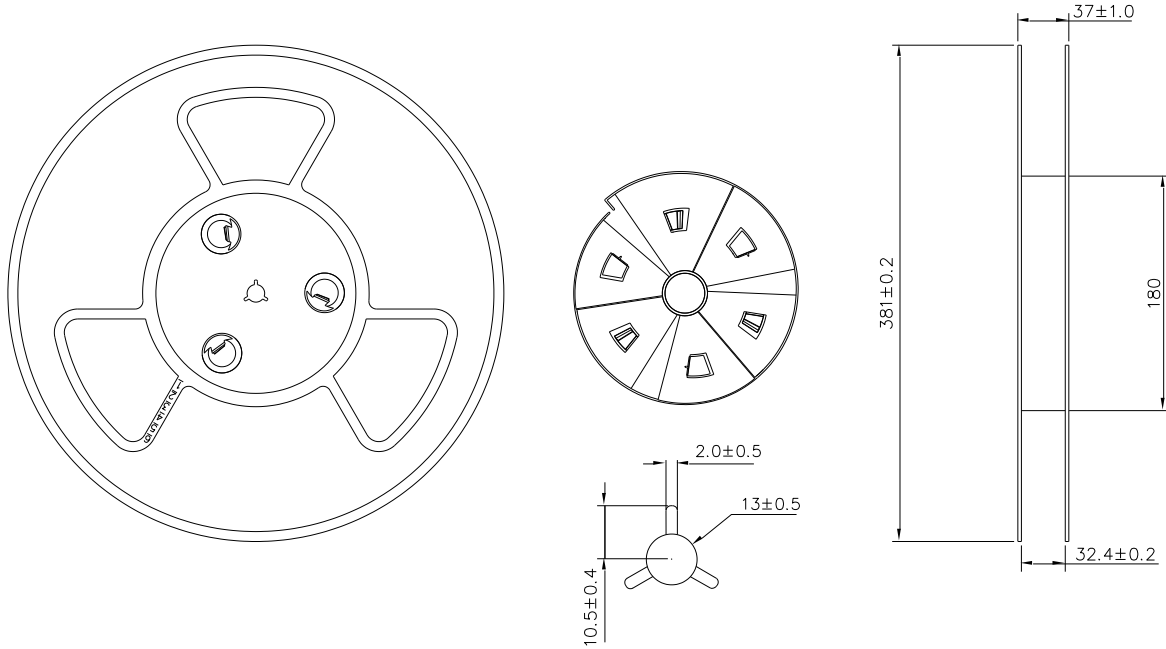
● REWORK

- Customer must finish rework within 5 sec. under 260 °C.
- The head of soldering iron cannot touch copper foil.

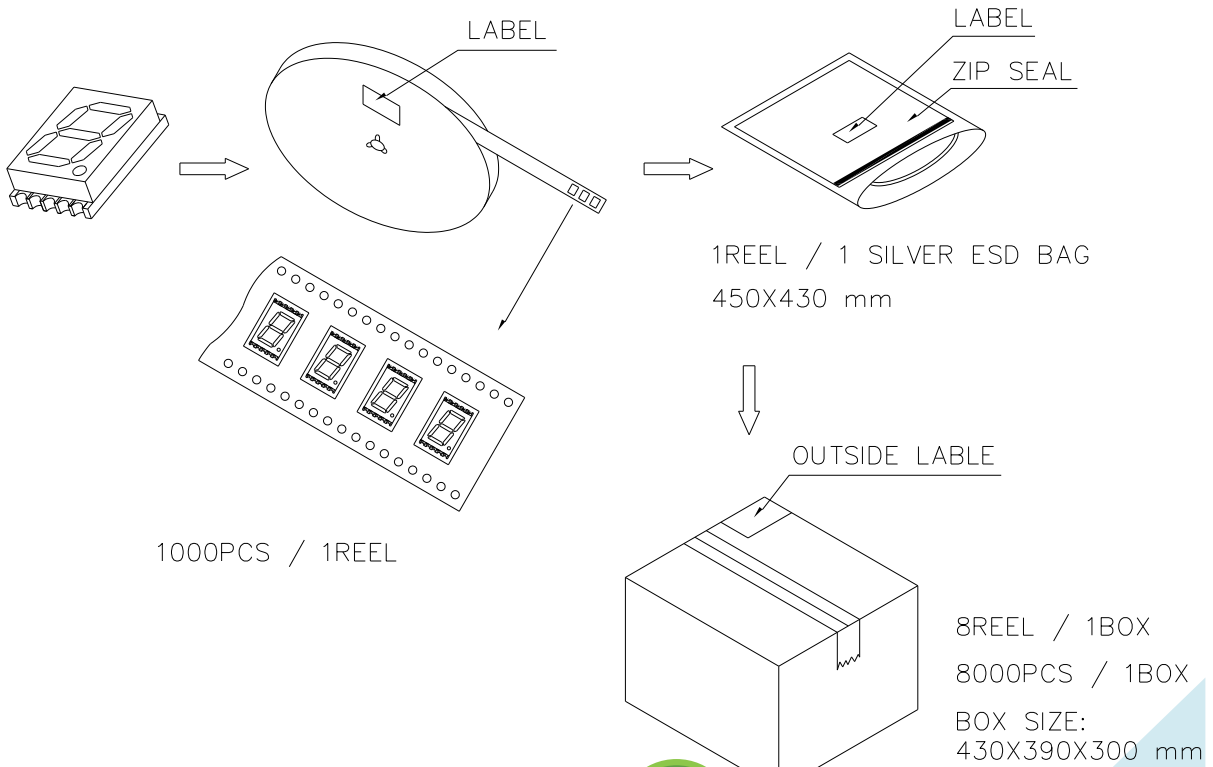


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DIMENSIONS OF TAPE (Unit: mm)



PACKAGING SPECIFICATION



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