



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: KCDC02-123

Green

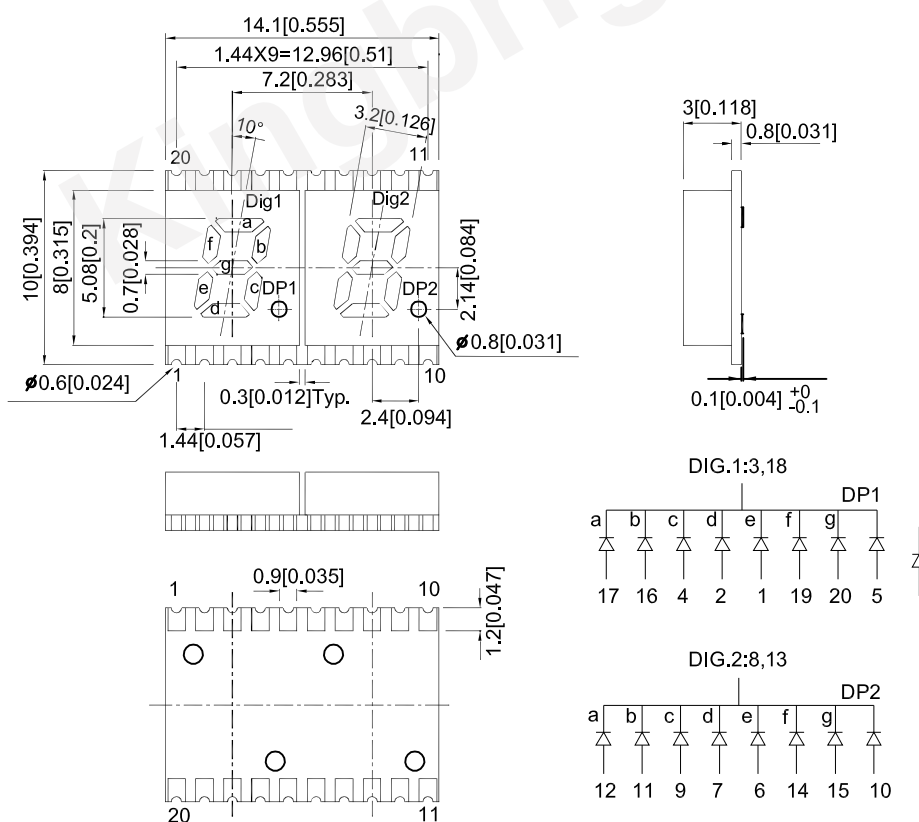
Features

- 0.2 inch digit height.
- Low current operation.
- Excellent character appearance.
- Mechanically rugged.
- Package :300pcs / reel.
- Gray face, white segment.
- Moisture sensitivity level : level 2a.
- RoHS compliant.

Descriptions

- The Green source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.
- Electrostatic discharge and power surge could damage the LEDs.
- It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.
- All devices, equipments and machineries must be electrically grounded.

Package Dimensions& Internal Circuit Diagram



Notes:

1. All dimensions are in millimeters (inches), Tolerance is ± 0.25 (0.01") unless otherwise noted.
2. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
3. The gap between the reflector and PCB shall not exceed 0.25mm.



Selection Guide

| Part No. | Emitting Color (Material) | Lens Type | Iv (ucd) [1] @ 10mA | | Description |
|------------|---------------------------|----------------|------------------------|-------|--------------------------------------|
| | | | Min. | Typ. | |
| KCDC02-123 | Green (AlGaInP) | White Diffused | 3600 | 12000 | Common Cathode, Rt. Hand Decimal. |
| | | | *2200 | *4300 | |

Note:

1. Luminous intensity/ luminous Flux: +/-15%.

* Luminous intensity value is traceable to CIE127-2007 standards.

Electrical / Optical Characteristics at TA=25°C

| Symbol | Parameter | Emitting Color | Typ. | Max. | Units | Test Conditions |
|-----------------------|--------------------------|----------------|------|------|-------|-----------------|
| λ_{peak} | Peak Wavelength | Green | 574 | | nm | IF=10mA |
| λ_D [1] | Dominant Wavelength | Green | 570 | | nm | IF=10mA |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Green | 20 | | nm | IF=10mA |
| C | Capacitance | Green | 15 | | pF | VF=0V;f=1MHz |
| VF [2] | Forward Voltage | Green | 2.0 | 2.5 | V | IF=10mA |
| IR | Reverse Current | Green | | 10 | uA | VR=5V |

Notes:

1. Wavelength: +/-1nm.

2. Forward Voltage: +/-0.1V.

3. Wavelength value is traceable to CIE127-2007 standards.

4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

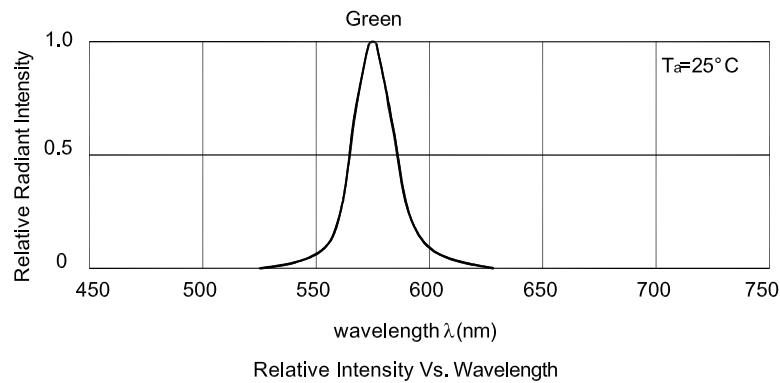
Absolute Maximum Ratings at TA=25°C

| Parameter | Values | Units |
|---------------------------------|----------------|-------|
| Power dissipation | 75 | mW |
| DC Forward Current | 30 | mA |
| Peak Forward Current [1] | 150 | mA |
| Reverse Voltage | 5 | V |
| Operating / Storage Temperature | -40°C To +85°C | |

Notes:

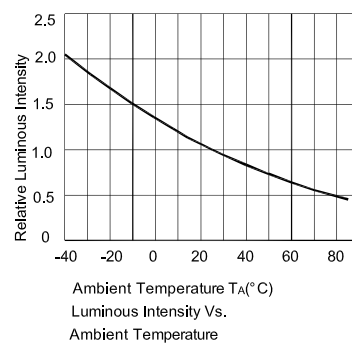
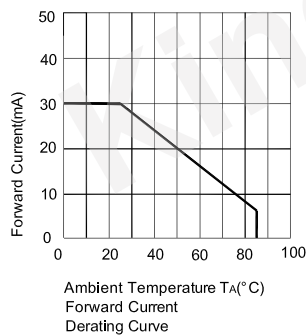
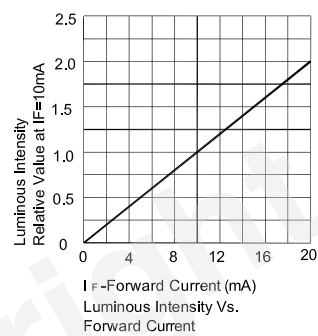
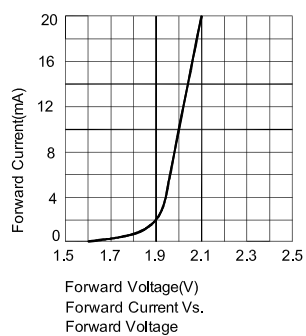
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

2. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.



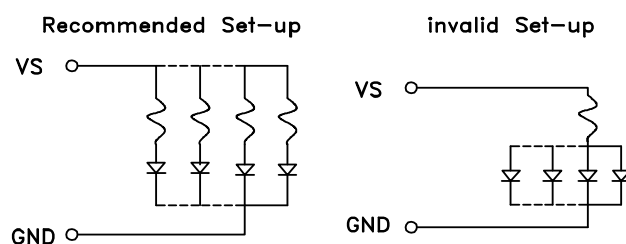
Green

KCDC02-123



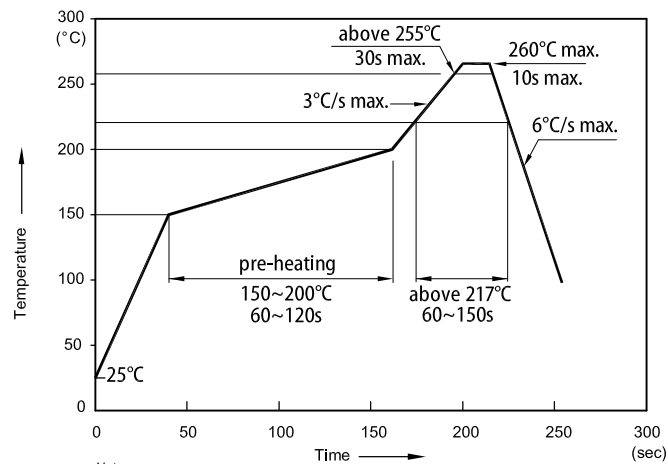
CIRCUIT DESIGN NOTES

1. Protective current-limiting resistors may be necessary to operate the Displays.
2. LEDs mounted in parallel should each be placed in series with its own current-limiting resistor.



KCDC02-123

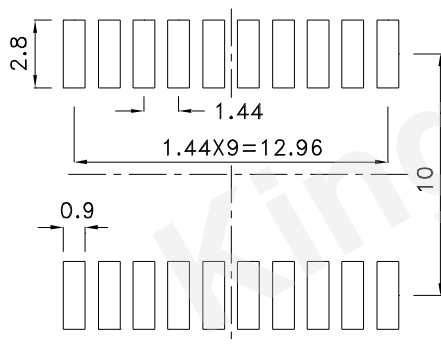
Reflow Soldering Profile for Lead-free SMD Process



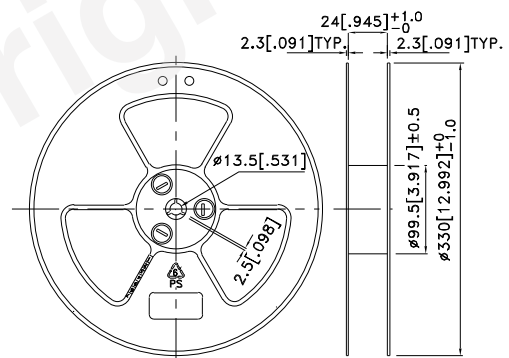
Notes:

1. Don't cause stress to the LEDs while it is exposed to high temperature.
2. The maximum number of reflow soldering passes is 2 times.
3. Reflow soldering is recommended. Other soldering methods are not recommended as they might cause damage to the product.

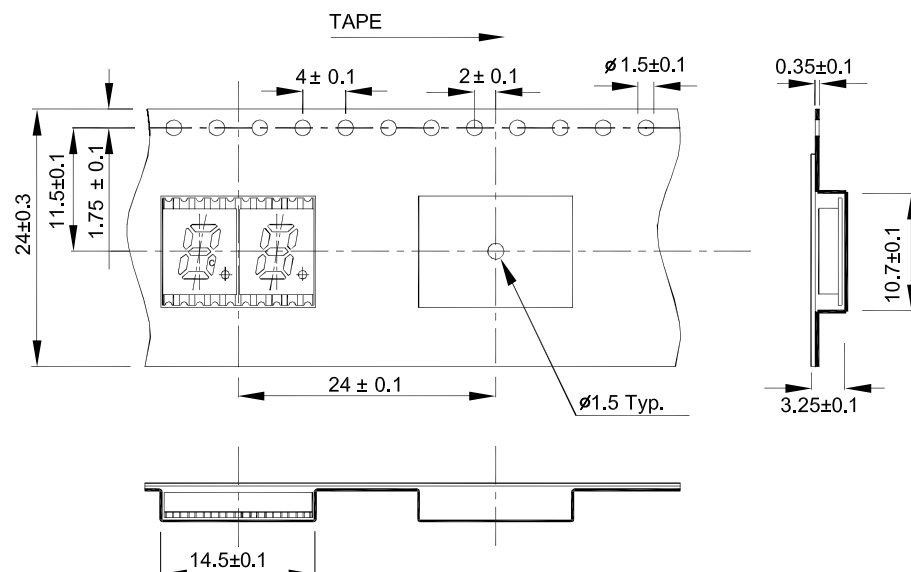
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.15)



Reel Dimension

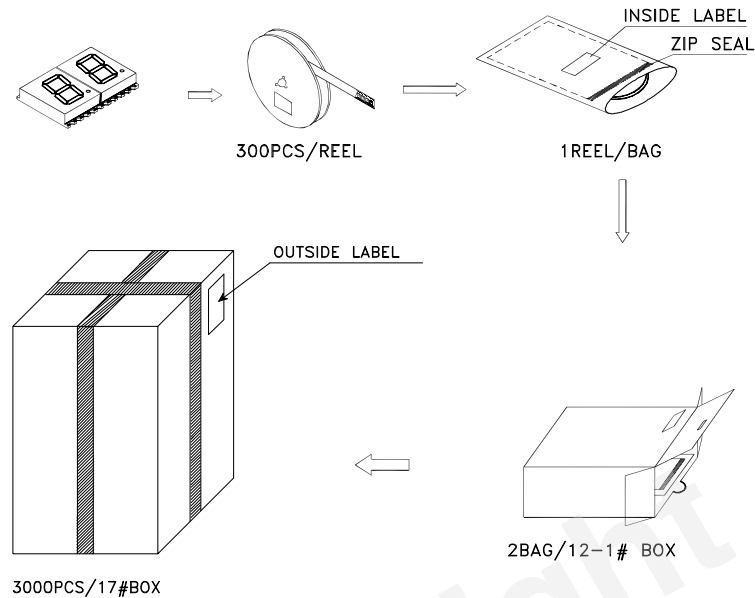


Tape Specifications (Units : mm)



PACKING & LABEL SPECIFICATIONS

KCDC02-123



Kingbright

P/NO: XXXXXXXX

QTY: XXXXpcs
S/N: XXXX
CODE: XXXX
COUNTRY: CN
LOT NO:

QC DATE: XXX XX XXXX PASSED

XXXXXXXXXX-XXXX

1 RoHS Compliant

XXXXXX

KCDX02
3000 PCS

Bin Code
XX

Number OF QA
QA
XX XX XX
PASSED

Date

RoHS Compliant

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