



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: KCDC56-131

Blue

Features

- 0.56 inch digit height.
- Low current operation.
- Excellent character appearance.
- Mechanically rugged.
- Gray face, white segment.
- Package: 200pcs/ reel.
- Moisture sensitivity level : level 2a.
- RoHS compliant.

Description

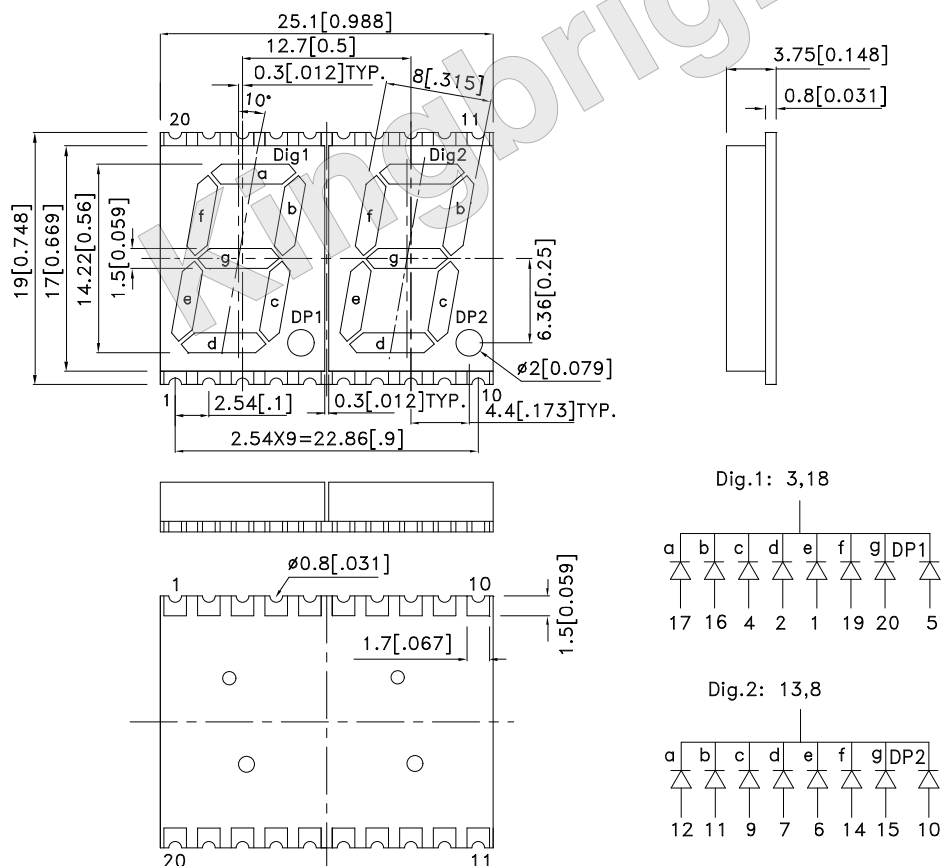
The Blue source color devices are made with InGaN Light Emitting Diode.

Static electricity and surge damage the LEDS.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

Package Dimensions & Internal Circuit Diagram



Notes:

1. All dimensions are in millimeters (inches), Tolerance is $\pm 0.25(0.01)$ 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.	Dice	Lens Type	Iv (ucd) [1] @ 10mA		Description
			Min.	Typ.	
KCDC56-131	Blue (InGaN)	White Diffused	5600	15000	Common Cathode, Rt. Hand Decimal

Notes:

1. Luminous intensity/ luminous Flux: +/-15%.
2. Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.		Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	Blue	468	*460		nm	I _F =20mA
λ_D [1]	Dominant Wavelength	Blue	470	*465		nm	I _F =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Blue	25			nm	I _F =20mA
C	Capacitance	Blue	100			pF	V _F =0V;f=1MHz
V _F [2]	Forward Voltage	Blue	3.3		4.0	V	I _F =20mA
I _R	Reverse Current	Blue			50	uA	V _R =5V

Notes:

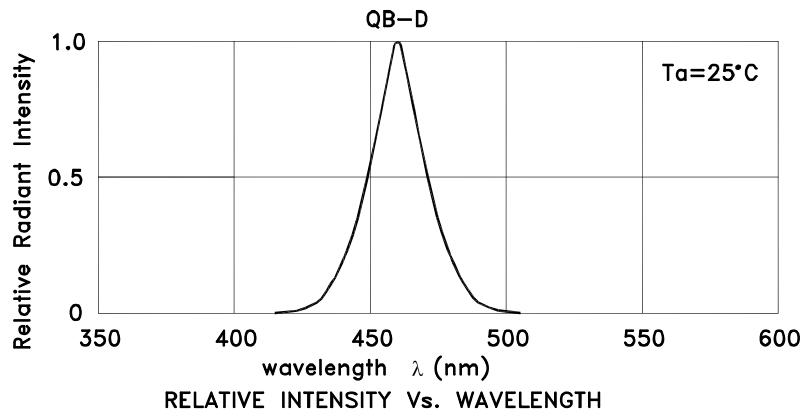
1. Wavelength: +/-1nm.
 2. Forward Voltage: +/-0.1V.
- * Wavelength value is traceable to the CIE127-2007 compliant national standards.

Absolute Maximum Ratings at TA=25°C

Parameter	Blue	Units
Power dissipation	120	mW
DC Forward Current	30	mA
Peak Forward Current [1]	150	mA
Reverse Voltage	5	V
Operating / Storage Temperature	-40°C To +85°C	

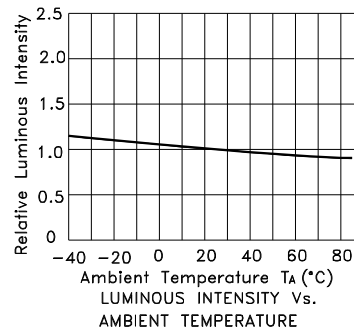
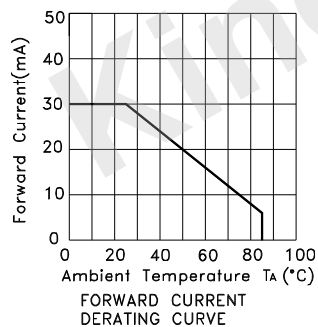
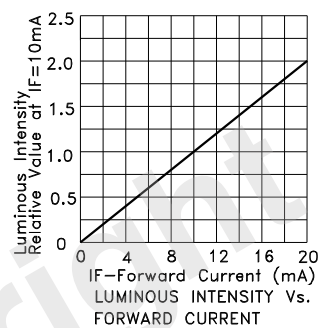
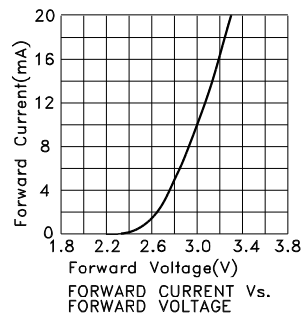
Note:

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



Blue

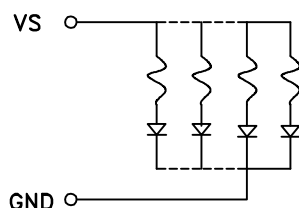
KCDC56-131



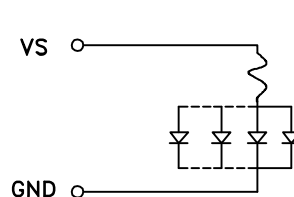
CIRCUIT DESIGN NOTES

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.

Recommended Set-up

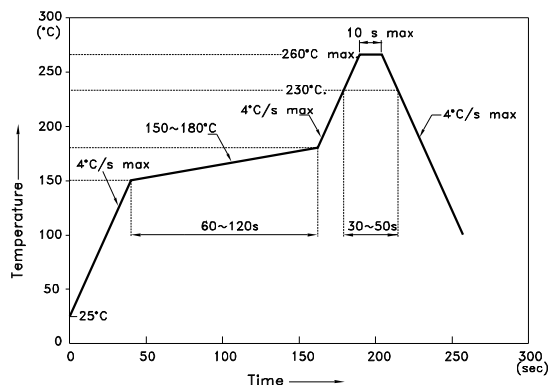


invalid Set-up



KCDC56-131

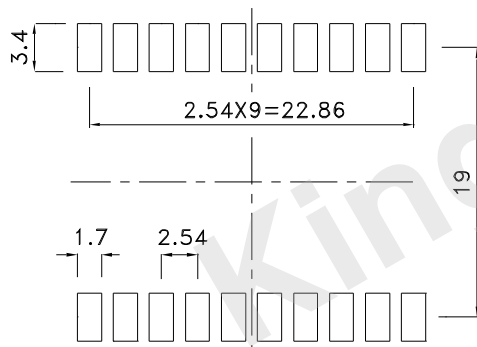
Reflow Soldering Profile For Lead-free SMT Process.



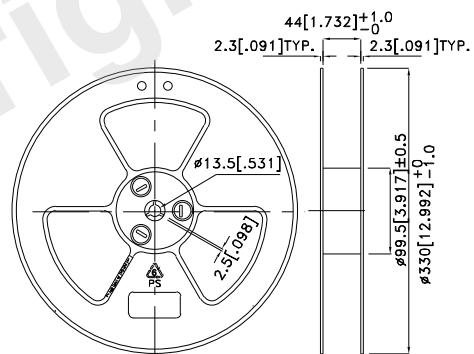
NOTES:

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.

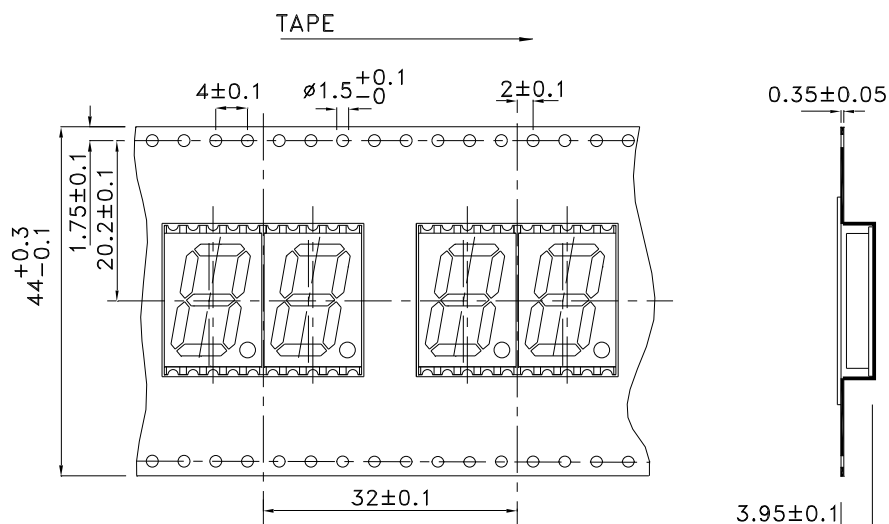
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.15)



Reel Dimension

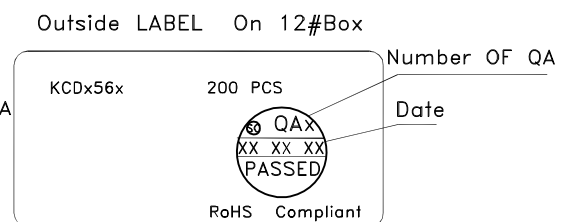
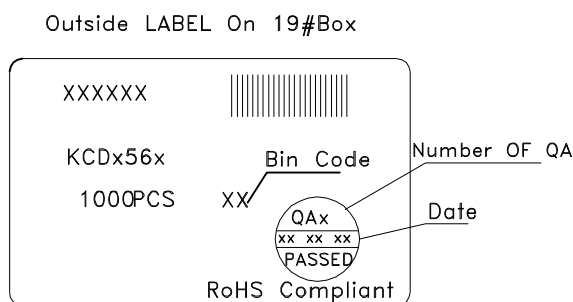
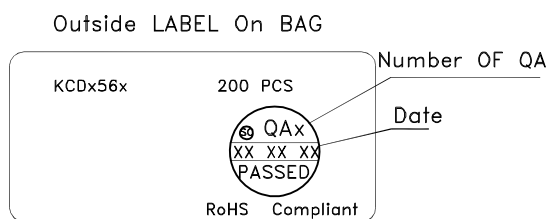
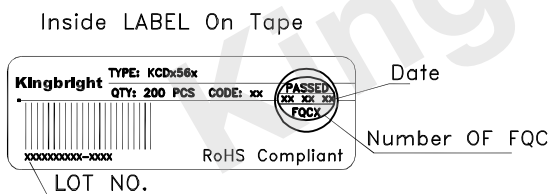
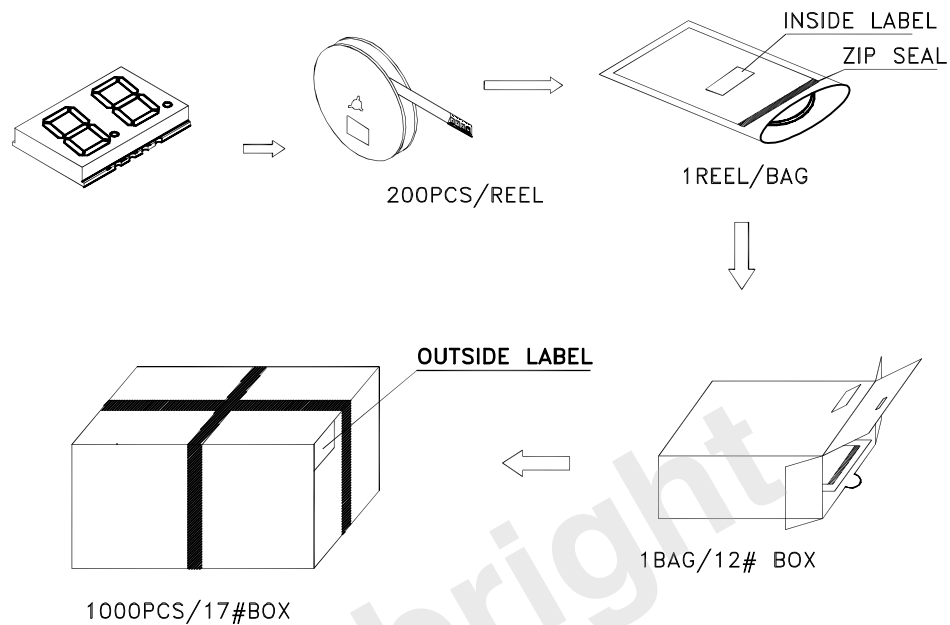


Tape Specifications (Units : mm)



PACKING & LABEL SPECIFICATIONS

KCDC56-131



Detailed application notes are listed on our website.

http://www.kingbright.com/application_notes