

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



### Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China









#### SURFACE MOUNT DISPLAY



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: ACSC08-51QBWA/D

#### **Features**

- 0.8 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.

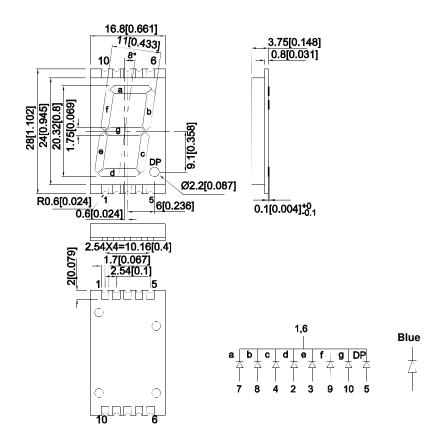
#### **Descriptions**

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

Blue

- Electrostatic discharge and power surge could damage the LEDs.
- It is recommended to use a wrist band or antielectrostatic 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.

 SPEC NO: DSAJ8874
 REV NO: V.6B
 DATE: DEC/21/2015
 PAGE: 1 OF 5

 APPROVED: Wynec
 CHECKED: Joe Lee
 DRAWN: F.T.Liu
 ERP: 1351000646

## **Kingbright**

#### **Selection Guide**

Part No.	Emitting Color (Material)	Lens Type	lv (uc @ 10	,	Description
		,	Min.	Тур.	•
ACSC08-51QBWA/D	Blue (InGaN)	White Diffused	3600	8700	Common Cathode, Rt. Hand Decimal.

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

#### Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	<b>Emitting Color</b>	Тур.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Blue	460		nm	IF=10mA
λD [1]	Dominant Wavelength	Blue	465		nm	IF=10mA
Δλ1/2	Spectral Line Half-width	Blue	25		nm	IF=10mA
С	Capacitance	Blue	100		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Blue	3	4.0	V	IF=10mA
lr	Reverse Current	Blue		50	uA	VR=5V

#### Notes:

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

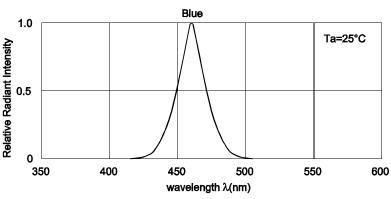
Parameter	Values	Units	
Power dissipation	120	mW	
DC Forward Current	30	mA	
Peak Forward Current [1]	150	mA	
Electrostatic Discharge Threshold (HBM)	250	V	
Reverse Voltage	5	V	
Operating / Storage Temperature	-40°C To +85°C		

#### Note:

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

SPEC NO: DSAJ8874 **REV NO: V.6B DATE: DEC/21/2015** PAGE: 2 OF 5 **APPROVED:** Wynec **CHECKED:** Joe Lee DRAWN: F.T.Liu ERP: 1351000646

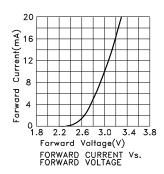
## **Kingbright**

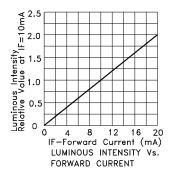


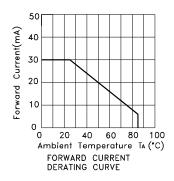
Relative Intensity Vs. Wavelength

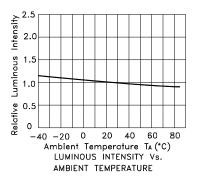
**Blue** 

#### ACSC08-51QBWA/D



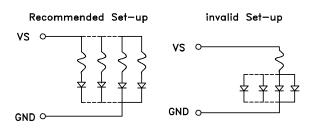






#### CIRCUIT DESIGN NOTES

- 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.

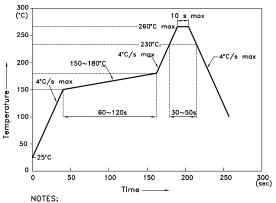


SPEC NO: DSAJ8874 APPROVED: Wynec REV NO: V.6B CHECKED: Joe Lee DATE: DEC/21/2015 DRAWN: F.T.Liu PAGE: 3 OF 5 ERP: 1351000646

## Kingbright

#### ACSC08-51QBWA/D

Reflow Soldering Profile For Lead-free SMT Process.



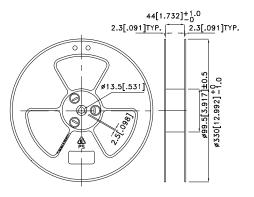
- NOTES:

  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.

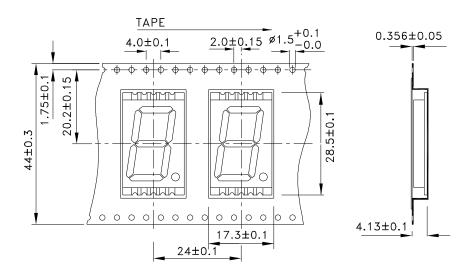
#### **Recommended Soldering Pattern** (Units: mm; Tolerance: ± 0.15)

# 2.54X4=10.16 9 27

#### **Reel Dimension**

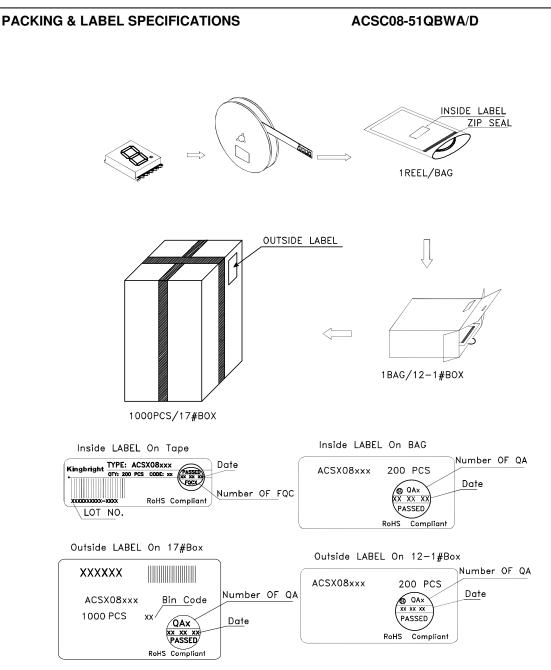


**Tape Specifications** (Units:mm)



SPEC NO: DSAJ8874 **REV NO: V.6B DATE: DEC/21/2015** PAGE: 4 OF 5 **APPROVED: Wynec CHECKED:** Joe Lee DRAWN: F.T.Liu ERP: 1351000646





#### Terms and conditions for the usage of this document

- 1. The information included in this document reflects representative usage scenarios and is intended for technical reference only.
- 2. The part number, type, and specifications mentioned in this document are subject to future change and improvement without notice. Before production usage customer should refer to the latest datasheet for the updated specifications.
- When using the products referenced in this document, please make sure the product is being operated within the environmental and electrical limits specified in the datasheet. If customer usage exceeds the specified limits, Kingbright will not be responsible for any subsequent issues.
- 4. The information in this document applies to typical usage in consumer electronics applications. If customer's application has special reliability requirements or have life-threatening liabilities, such as automotive or medical usage, please consult with Kingbright representative for further assistance.
- 5. The contents and information of this document may not be reproduced or re-transmitted without permission by Kingbright.
- 6. All design applications should refer to Kingbright application notes available at <a href="http://www.KingbrightUSA.com/ApplicationNotes">http://www.KingbrightUSA.com/ApplicationNotes</a>

SPEC NO: DSAJ8874 REV NO: V.6B DATE: DEC/21/2015 PAGE: 5 OF 5
APPROVED: Wynec CHECKED: Joe Lee DRAWN: F.T.Liu ERP: 1351000646