

### SURFACE MOUNT DISPLAY



**ATTENTION** OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE **DEVICES** 

Part Number: ACSA56-51PBWA/A Blue

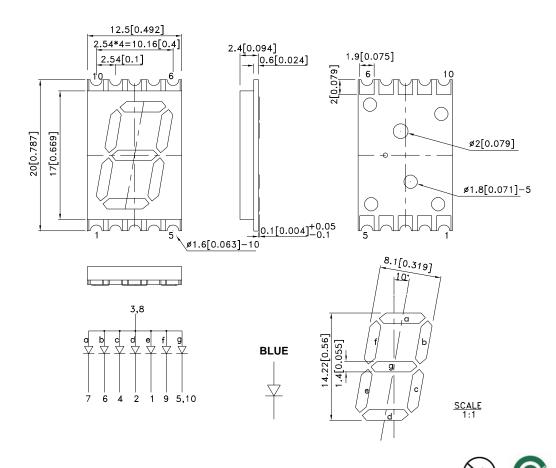
### **Features**

- 0.56 inch digit height.
- Low current operation.
- Excellent character appearance.
- Mechanically rugged.
- Gray face, white segment.
- Package: 400pcs/ reel.
- Moisture sensitivity level : level 2a.
- RoHS compliant.

### **Descriptions**

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



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

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# **Selection Guide**

Part No.	Dice	Lens Type	lv (ucd) [1] @ 10mA		Description
		,	Min.	Тур.	•
ACSA56-51PBWA/A	Blue (InGaN)	White Diffused	1400	4000	Common Anode

- 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	Тур.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Blue	468		nm	IF=20mA
λD [1]	Dominant Wavelength	Blue	465		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Blue	21		nm	IF=20mA
С	Capacitance	Blue	100		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Blue	3.2	4.0	V	IF=20mA
lR	Reverse Current	Blue		10	uA	V <sub>R</sub> =5V

### Notes:

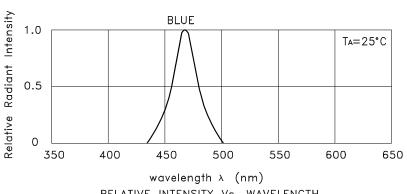
- 1.Wavelength: +/-1nm. 2. Forward Voltage: +/-0.1V.
- 3. Wavelength value is traceable to the CIE127-2007 compliant national standards.
- 4.Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

# Absolute Maximum Ratings at TA=25°C

Parameter	Blue	Units	
Power dissipation	120	mW	
DC Forward Current	30	mA	
Peak Forward Current [1]	100	mA	
Reverse Voltage	5	V	
Operating / Storage Temperature	-40°C To +85°C		

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

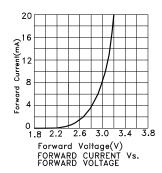
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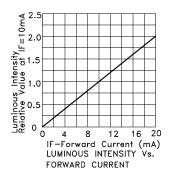


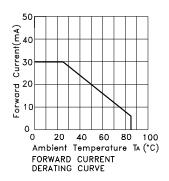
RELATIVE INTENSITY Vs. WAVELENGTH

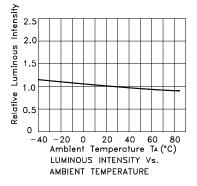
**Blue** 

### ACSA56-51PBWA/A



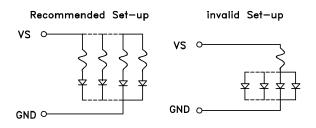






# CIRCUIT DESIGN NOTES

- 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.



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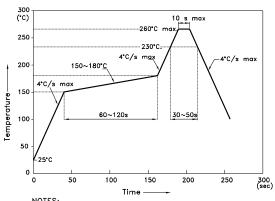
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### ACSA56-51PBWA/A

Reflow Soldering Profile For Lead-free SMT Process.



NOTES:

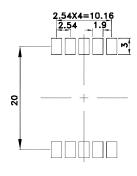
1.We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.

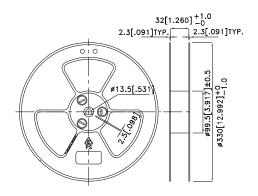
2.Don't cause stress to the epoxy resin while it is exposed to high temperature.

3.Number of reflow process shall be 2 times or less.

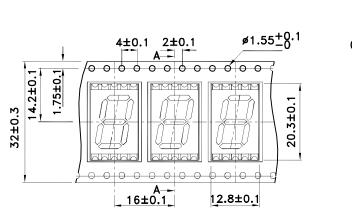
# **Recommended Soldering Pattern** (Units: mm; Tolerance: ± 0.15)

# **Reel Dimension**

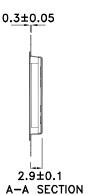




# **Tape Specifications** (Units: mm)



TAPE

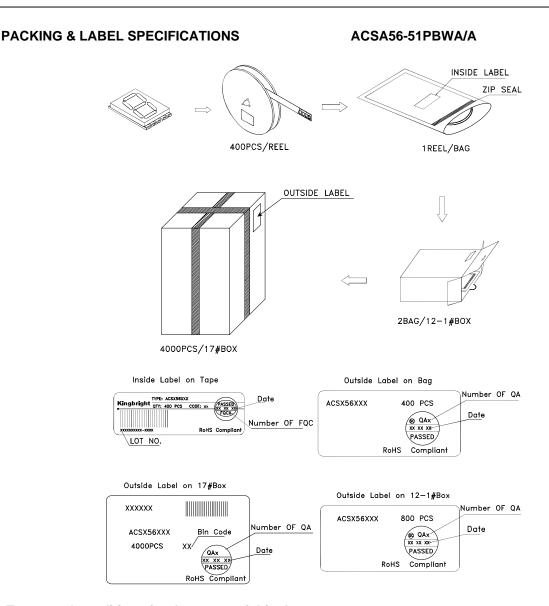


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