

SURFACE MOUNT DISPLAY



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

Part Number: ACSA56-51PBWA/A Blue

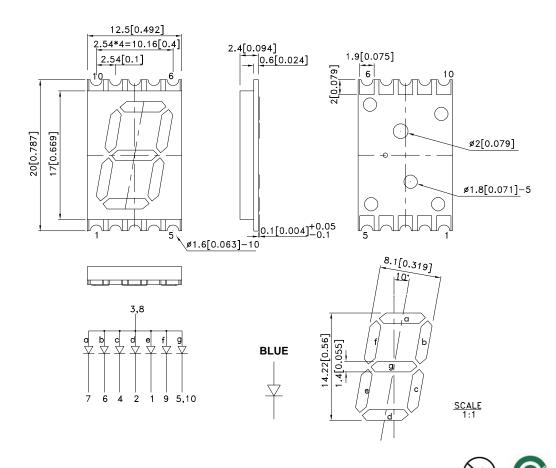
Features

- 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.

SPEC NO: DSAM7136 **REV NO: V.4B** DATE: SEP/02/2014 PAGE: 1 OF 5 APPROVED: WYNEC **CHECKED:** Joe Lee DRAWN: Q.M.Chen ERP: 1351000712

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 _R =5V |

Notes:

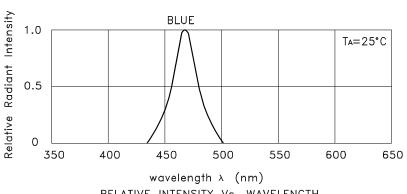
- 1.Wavelength: +/-1nm. 2. Forward Voltage: +/-0.1V.
- 3. Wavelength value is traceable to the CIE127-2007 compliant national standards.
- 4.Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

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.

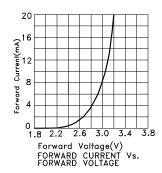
SPEC NO: DSAM7136 **REV NO: V.4B** DATE: SEP/02/2014 PAGE: 2 OF 5 APPROVED: WYNEC **CHECKED:** Joe Lee ERP: 1351000712 DRAWN: Q.M.Chen

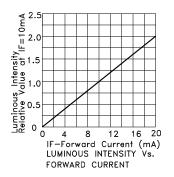


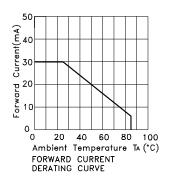
RELATIVE INTENSITY Vs. WAVELENGTH

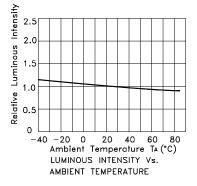
Blue

ACSA56-51PBWA/A



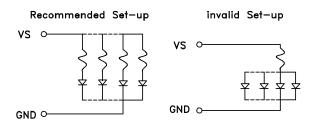






CIRCUIT DESIGN NOTES

- 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.



SPEC NO: DSAM7136 **APPROVED: WYNEC**

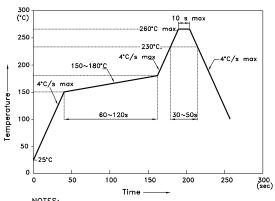
REV NO: V.4B CHECKED: Joe Lee

DATE: SEP/02/2014 DRAWN: Q.M.Chen

PAGE: 3 OF 5 ERP: 1351000712

ACSA56-51PBWA/A

Reflow Soldering Profile For Lead-free SMT Process.



NOTES:

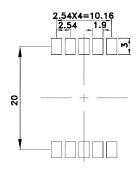
1.We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.

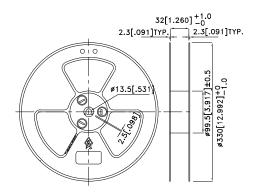
2.Don't cause stress to the epoxy resin while it is exposed to high temperature.

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

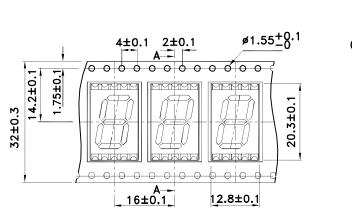
Recommended Soldering Pattern (Units: mm; Tolerance: ± 0.15)

Reel Dimension

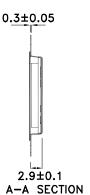




Tape Specifications (Units: mm)



TAPE

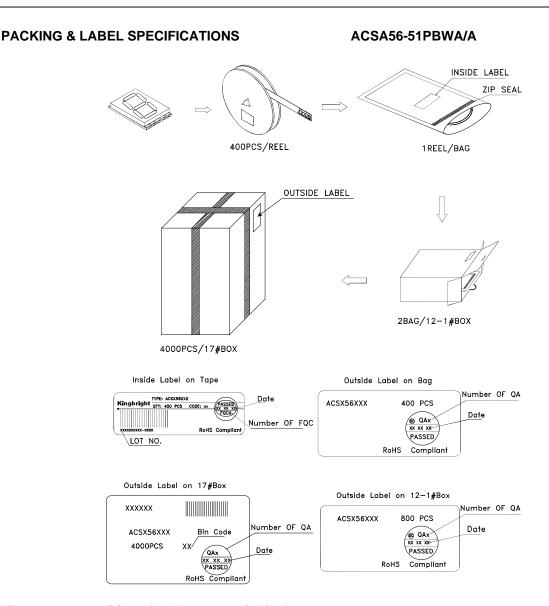


SPEC NO: DSAM7136 **APPROVED: WYNEC**

REV NO: V.4B CHECKED: Joe Lee

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PAGE: 4 OF 5 ERP: 1351000712



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 SPEC NO: DSAM7136
 REV NO: V.4B
 DATE: SEP/02/2014
 PAGE: 5 OF 5

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