Specifications for Approval

※ 方舟 P/N (ARKLED P/N): SZ023058/SZ013058
※ 客户 P/N (CUSTOMER P/N): _________________
※ 产品说明 (DESCRIPTION):
  1. 3 inch (91.2mm) Dot Height
  2. 5x8 LED Dot Matrix Display
  3. Ultra Brightness Red-green
※ 日期 (DATE): 2012-5-23
FEATURES

- High intensity and reliability
- High quality, Low power requirement and low cost
- IC compatible, Easy assembly
- Meet RoHS EU Directive

DESCRIPTION

- The device of this 3 inch 5x8 dot matrix LED display is made of 4 elements (AlGaInP) material, designed for viewing distance up to 15 meters.
- It can be used in audio equipment, instruments, numeric read out display and so on.
- Standard appearance color is black or grey face and white dot.

Selection Guide

<table>
<thead>
<tr>
<th>Part No. CC(^{[1]})</th>
<th>Part No. CA(^{[2]})</th>
<th>Dice</th>
<th>Iv(mcd)(^{[3]})(@20mA)</th>
</tr>
</thead>
</table>
| SZ023058               | SZ013058               | Ultra Bright Red (AlGaInP) | 45 | 68
|                        |                        | Ultra Bright Green (AlGaInP) |                |

Note:
1. CC is Common Cathode.
2. CA is Common Anode.
3. Luminous intensity/ luminous Flux: +/-15%.
### ABSOLUTE MAXIMUM RATINGS AT Ta=25°C

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>SYMBOL</th>
<th>ULTRA-BRIGHT RED</th>
<th>ULTRA-BRIGHT Green</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Dissipation Per Dot</td>
<td>PAD</td>
<td>120</td>
<td>150</td>
<td>mw</td>
</tr>
<tr>
<td>Reverse Voltage Per Dot</td>
<td>VR</td>
<td>5</td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Continuous Forward Current Per Dot</td>
<td>IAF</td>
<td>30</td>
<td></td>
<td>mA</td>
</tr>
<tr>
<td>Peak Forward Current Per Dot(Duty-0.1,1KHz)</td>
<td>IPF</td>
<td>200</td>
<td></td>
<td>mA</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>TOPr</td>
<td>-20°C to 80°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>Tstg</td>
<td>-30°C to 85°C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Lead Soldering Temperature 260°C at 1.6mm From Body for 3 second

### ELECTRICAL/OPTICAL CHARACTERISTICS AT Ta=25°C

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>SYMBOL</th>
<th>TEST CONDITION</th>
<th>Color</th>
<th>TYP.</th>
<th>MAX.</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward Voltage</td>
<td>VF</td>
<td>IF=20mA</td>
<td>ULTRA-BRIGHT RED</td>
<td>3.8</td>
<td>5.2</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ULTRA-BRIGHT Green</td>
<td>4.2</td>
<td>5.2</td>
<td></td>
</tr>
<tr>
<td>Reverse Current</td>
<td>IR</td>
<td>VR=5V</td>
<td>ULTRA-BRIGHT RED</td>
<td>50</td>
<td></td>
<td>µA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ULTRA-BRIGHT Green</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peak Emission Wavelength</td>
<td>λp</td>
<td>IF=20mA</td>
<td>ULTRA-BRIGHT RED</td>
<td>640</td>
<td></td>
<td>nm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ULTRA-BRIGHT Green</td>
<td>565</td>
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</tr>
</tbody>
</table>
3 Inch Dot Matrix Display
Part No: SZ023058, SZ013058

Package Dimensions and Internal Circuit Diagram

NOTES:
1. All dimensions are in millimeters. (Inches)
2. Tolerance is $\pm 0.25(0.010\text{"})$ unless otherwise specified.
3 Inch Dot Matrix Display  
Part No: SZ023058, SZ013058

**Typical Electrical-Optical Characteristics Curves: Ultra Bright Red**

- **Forward Current Vs Forward Voltage**
- **Relative Intensity Vs Forward Current**
- **Forward Current Vs Environmental Temp**
- **Relative Intensity Vs Environmental Temp**
- **Relative Intensity Vs Wavelength**

![Graphs showing various characteristics curves for the Ultra Bright Red 3 Inch Dot Matrix Display.](image-url)
Typical Electrical-Optical Characteristics Curves: Ultra Bright Green

Forward Current Vs Forward Voltage

Relative Intensity Vs Forward Current

Forward Current Vs Environmental Temp

Relative Intensity Vs Environmental Temp

Relative Intensity Vs Wavelength