

JZD056115NB-BW

DATA SHEET

规格书

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文件编号

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版次

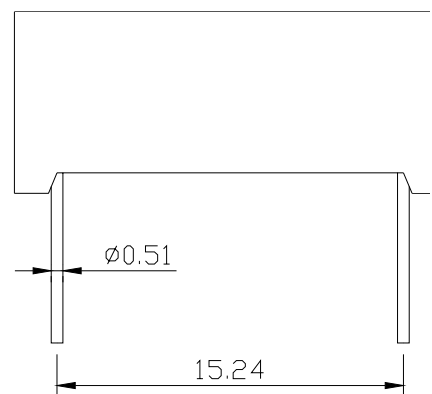
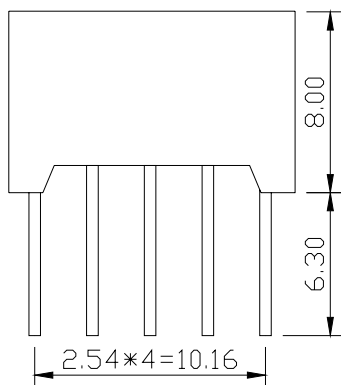
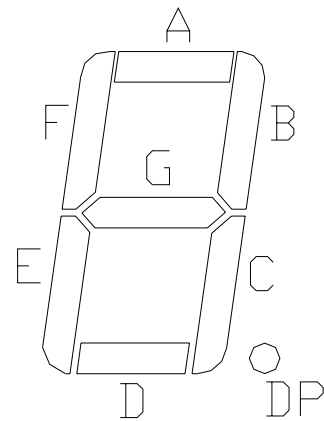
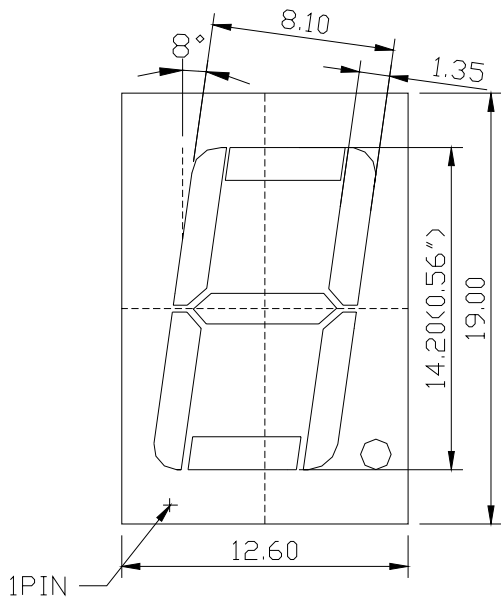


Revised record 「变更记录」

| No | Description 修改内容 | Reviser 修改者 | Edition 版次 | Date 修改日期 |
|----|---------------------|----------------|---------------|--------------|
| 1 | | | | |
| 2 | | | | |

PART NO. 「产品型号」: JZD056115NB-BW

Outer Dimension 「外形尺寸」



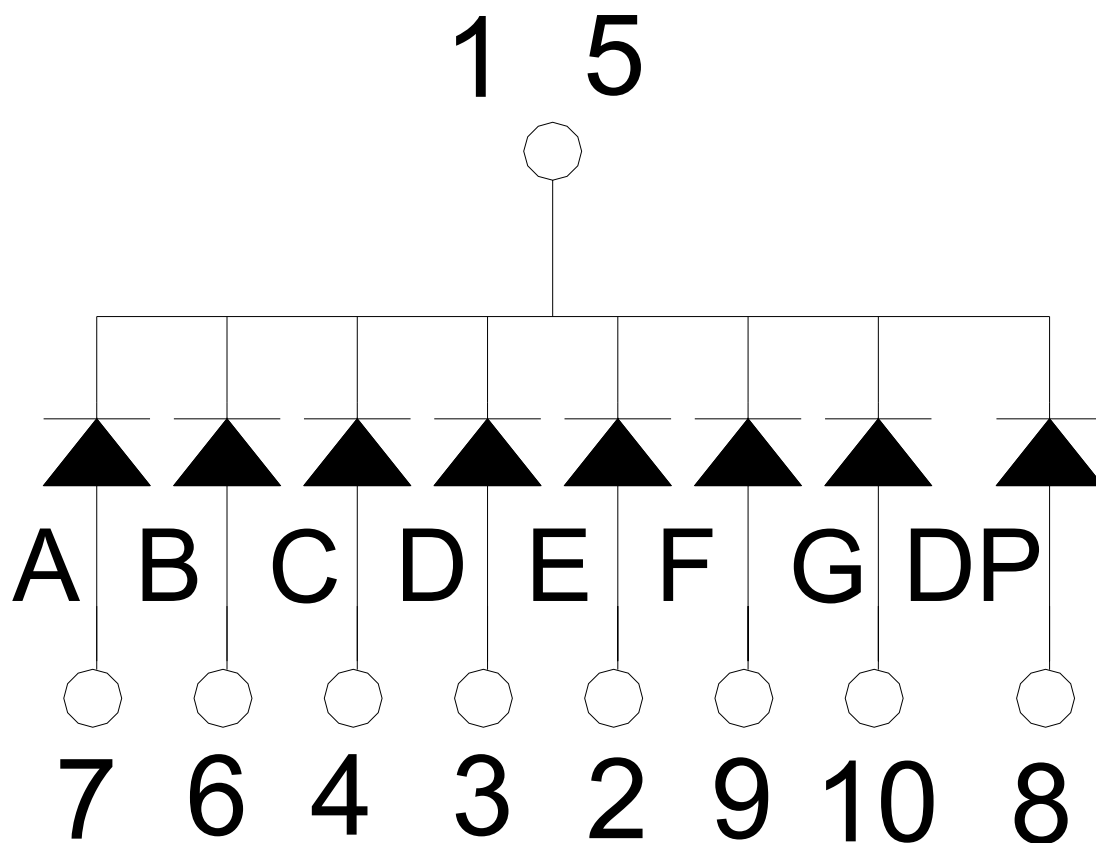
Notes 「备注」:

1. All dimension are in millimeters and(Inch)tolerance is ± 0.25 mm unless otherwise noted.
所有尺寸以毫米或英寸为单位，未注明的公差 ± 0.25 mm。
2. Specifications are subject to change without notice.
规格修改恕不另行提前通知。

PART NO. 「产品型号」: JZD056115NB-BW

INTERNAL CIRCUIT DIAGRAM: 「产品内部电路图」

JZD056115NB-BW



PIN CONNECTION 「PIN 连接说明」:

| PIN NO. | ROW COMMON ANODE |
|---------|------------------------|
| 1 | Digital common cathode |
| 2 | E segment anode |
| 3 | D segment anode |
| 4 | C segment anode |
| 5 | Digital common cathode |
| 6 | B segment anode |

| | |
|----|------------------|
| 7 | A segment anode |
| 8 | DP segment anode |
| 9 | F segment anode |
| 10 | G segment anode |

PART NO. 「产品型号」: **JZD056115NB-BW**

DESCRIPTION 「产品描述」:

- Black face, White segment, Bright Blue Segment Display 黑面、白胶, 蓝色
- Common Cathode 共阴,
- Dice material: GaN Blue. 晶片材质: 氮化镓 蓝色

ELECTRICAL/OPTICAL CHARACTERISTICS AT Ta=25°C:

「产品光电参数值, 测试环境温度为 25°C」

| Parameter 参数 | Symbol 符号 | Test Condition 测试条件 | MIN. 最小值 | TYP. 典型值 | MAX. 最大值 | UNIT 单位 |
|---|--------------|------------------------|-------------|-------------|-------------|------------|
| Luminous Intensity Per Segment 每段亮度 | I_v | $I_F=20mA$ | 30 | 32.5 | 35 | mcd |
| Dominant Wavelength 主波长 | λ_D | $I_F=20mA$ | 467 | 468.5 | 470 | nm |
| Forward Voltage Per Segment 每段正向电压 | V_F | $I_F=20mA$ | 2.8 | 3.5 | 4.0 | V |
| Reverse Current Per Segment 每段反向电流 | I_R | $V_R=5V$ | / | / | 50 | μA |
| Luminous Intensity Matching Ratio (Segment To Segment) 段与段之间亮度比 | I_{v-m} | $I_F=20mA$ | / | / | 1:1.2 | / |

Important Notes:

1. V_f maximum tolerance include is $\pm 0.1V$. (电压最大误差 $\pm 0.1V$)
2. I_v maximum tolerance include is $\pm 15\%$. (亮度最大误差 $\pm 15\%$)
3. λ_D maximum tolerance include is $\pm 1nm$. (波长最大误差 $\pm 1nm$)

Absolute Maximum Rating at Ta=25℃

「产品最大绝对参数值」

| Parameter 参数 | Symbol 符号 | Ratings | UNIT 单位 |
|---|--------------|---------|------------|
| | | SGM | |
| Continuous Forward Current 直流电流 | IF | 20 | mA |
| Peak Forward Current 脉冲电流 | IFP | 100 | mA |
| Power Dissipation single 单个字节功耗 | PD | 45 | mW |
| Reverse Voltage 反向电压 | VR | 5 | V |
| Reverse Current Per Chip 反向电流 | Ir | 20 | uA |
| Static Electricity Voltage 静电电压人体放电模式 | ESD | 1000 | V |
| Operating Temperature Range 工作温度 | Topr | -25~+85 | □ |
| Storage Temperature 储存温度 | Tstg | -25~+85 | □ |
| Solder Temperature 1/16 Inch Below Seating Plane For 3 Seconds At 260℃ 在水平位置下的 1/16 英寸处焊接温度为 260℃，时间 3 秒 | | | |

Typical Optical-Electronic Characteristic Curves

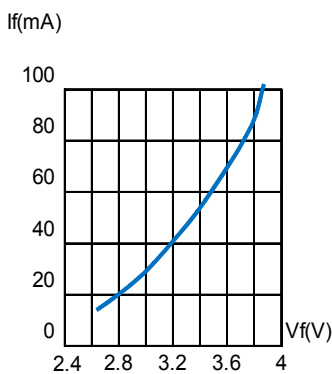


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

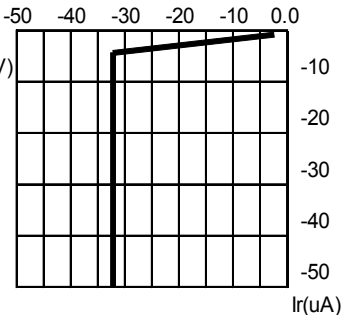
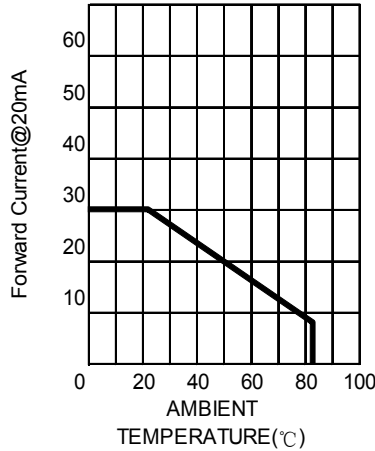


Fig.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

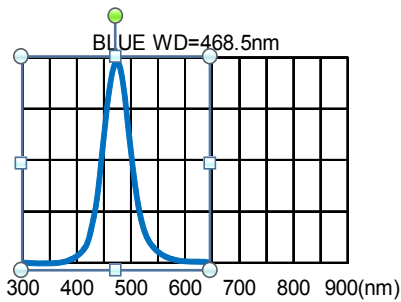


Fig.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

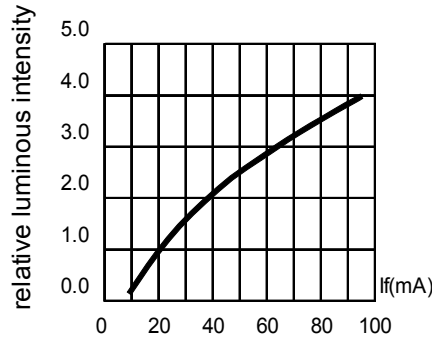


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

Reliability Test 「可靠性测试」：

(1)Test Items And Results 「测试项目和结果」

| Test Item 测试项目 | Standard Test Method 测试标准 | Test Conditions 测试条件 | Note 备注 | Number of Damaged 允收水准 |
|-------------------------------------|------------------------------|--|----------------------|---------------------------|
| Resistance to Soldering Heat 波峰焊 | JEITA ED-4701 300 302 | Tsld=260± 5°C,10sec. 3mm from the base of the epoxy bulb | 1time | 0/100 |
| Solderability 手动焊接 | JEITA ED-4701 300 303 | Tsld=235± 5°C,5sec. (using flux) | 1time over 95% | 0/100 |
| Thermal Shock 冷热冲击 | JEITA ED-4701 300 307 | -20°C/15min.~80°C/15min. | 100cycles | 0/100 |
| Temperature Cycle 冷热循环 | JEITA ED-4701 100 105 | -40°C/30min.~25°C/5min. ~100°C/30min.~25°C/5min. | 100cycles | 0/100 |
| Moisture Resistance Cyclic 耐湿循环 | JEITA ED-4701 200 203 | 25°C~65°C~-10°C 90%RH 24hrs./1cycle | 10cycles | 0/100 |
| Terminal Strength(bending test) | JEITA ED-4701 400 401 | Load 5N(0.5kgf) 0°~90°~0°bend 2 times | No noticeable damage | 0/100 |

| | | | | |
|---|--------------------------|------------------------|----------------------|-------|
| 强度测试(弯曲模式) | | | | |
| Terminal Strength(pull test) 强度测试(拉伸模式) | JEITA ED-4701 400 401 | Load 10N(1kgf)10±1sec. | No noticeable damage | 0/100 |
| High temperature Storage 高温储存 | JEITA ED-4701 200 201 | Ta=100°C | 1000hrs. | 0/100 |
| Temperature Humidity Storage 高温高湿储存 | JEITA ED-4701 100 103 | Ta=60°C,RH=90% | 1000hrs. | 0/100 |
| Low Temperature Storage 低温储存 | JEITA ED-4701 200 203 | Ta= - 20°C | 1000hrs. | 0/100 |
| Steady state Operating Life 稳定操作温度寿命 | | Ta=25°C,IF=20mA | 1000hrs. | 0/100 |
| Steady State Operating Life of High Humidity Heat 稳定高温高湿操作温度寿命 | | 60°C,RH=90%,IF=20mA | 500hrs. | 0/100 |
| Steady State Operating Life of Low Temperature 稳定低温操作温度寿命 | | Ta=-20°C,IF=20mA | 1000hrs. | 0/100 |
| Resistance to UV Beam 抗紫外能力 | | 365nm/75W/mm | 192hrs. | 0/100 |

(2)Criteria For Judging The Damage 「缺失判定标准」

| Item 项目 | Symbol 符号 | Test Conditions 测试条件 | Criteria for Judgement 判定标准 | |
|------------------------------|--------------|-------------------------|--------------------------------|---------------------|
| | | | Min.最小值 | Max.最大值 |
| Forward Voltage | Vf | IF=20mA | - | U.S.L.*) x 1.1 |
| Reverse Current | Ir | VR=5V | - | U.S.L.*) x 2.0 |
| Luminous Intensity | Iv | IF=20mA | - | Initial value x 0.7 |
| *)U.S.L:Upper Standard Level | | | **)L.S.L:Lower Standard Level | |

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