

**DOT MATRIX DISPLAY**

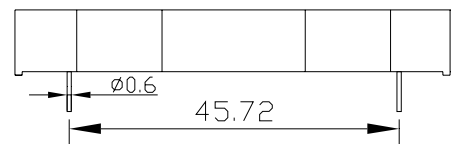
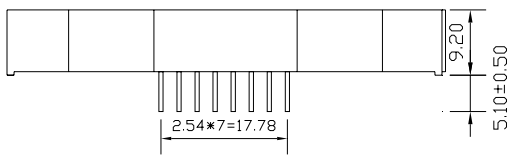
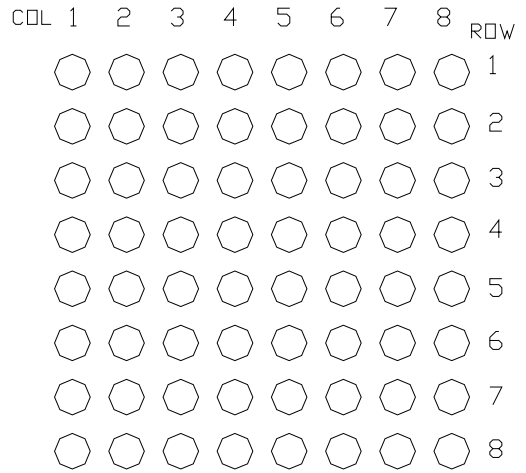
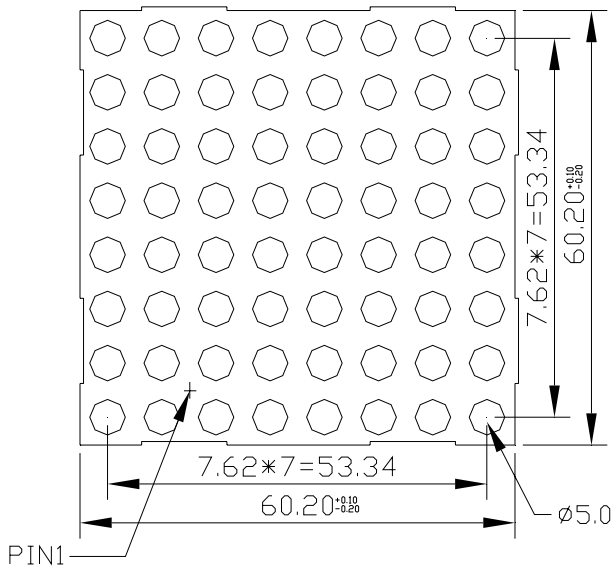
# **JZM23882ASR-GW**

## **DATA SHEET**

**DOCUMENT NO.: WI-RD-LDS-15882ASR-GW****RELEASE DATE: 2007-4-20****VERSION: A/0****RD No.: JZD20070420001**

# PART NO.: JZM23882ASR-GW

## Package Dimensions



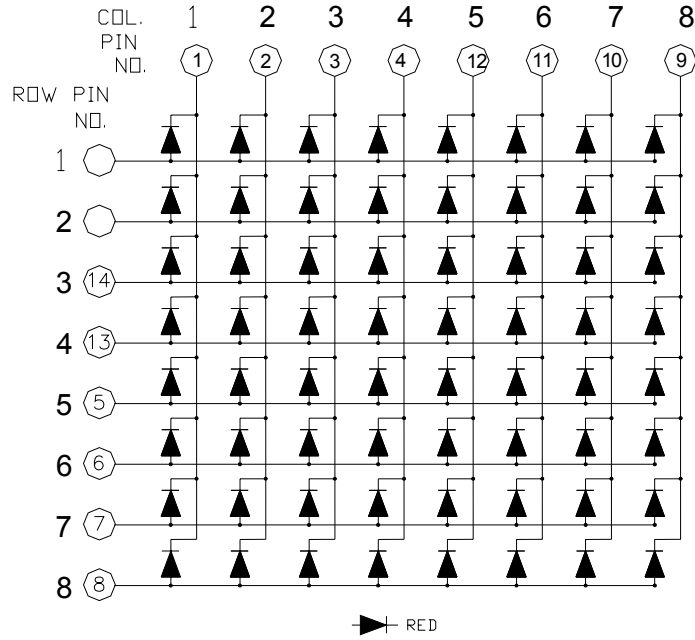
### Notes:

1. All dimension are in millimeters and(Inch)tolerance is  $\pm 0.25$ mm unless otherwise noted.
2. Specifications are subject to change without notice.

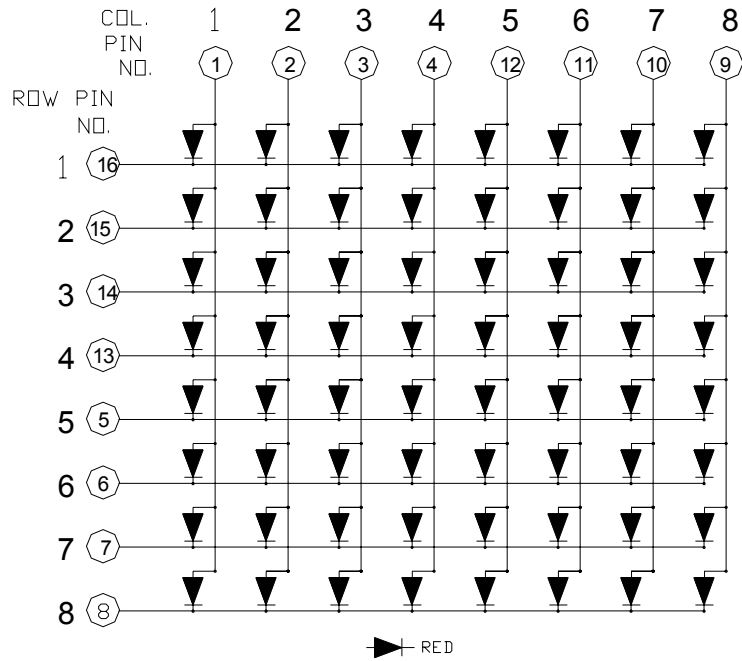
# PART NO.: JZM23882ASR-GW

## Internal Circuit Diagram

### JZM23882ASR-GW



### JZM23882BSR-GW



## PART NO.: JZM23882ASR-GW

### Electrical Connection

| PIN NO. | JZM23882ASR-GW   | PIN NO. | JZM23882BSR-GW |
|---------|------------------|---------|----------------|
| 1       | Anode Row 5      | 1       | Cathode Row 5  |
| 2       | Anode Row 7      | 2       | Cathode Row 7  |
| 3       | Cathode Column 7 | 3       | Anode Column 7 |
| 4       | Cathode Column 6 | 4       | Anode Column 6 |
| 5       | Anode Row 8      | 5       | Cathode Row 8  |
| 6       | Cathode Column 4 | 6       | Anode Column 4 |
| 7       | Anode Row 6      | 7       | Cathode Row 6  |
| 8       | Anode Row 3      | 8       | Cathode Row 3  |
| 9       | Anode Row 1      | 9       | Cathode Row 1  |
| 10      | Cathode Column 5 | 10      | Anode Column 5 |
| 11      | Cathode Column 3 | 11      | Anode Column 3 |
| 12      | Anode Row 4      | 12      | Cathode Row 4  |
| 13      | Cathode Column 8 | 13      | Anode Column 8 |
| 14      | Anode Row 2      | 14      | Cathode Row 2  |
| 15      | Cathode Column 2 | 15      | Anode Column 2 |
| 16      | Cathode Column 1 | 16      | Anode Column 1 |

### Absolute Maximum Rating at=Ta=25□

| Parameter                       | Symbol | Ratings | UNIT |
|---------------------------------|--------|---------|------|
|                                 |        | SGM     |      |
| Forward Current Per Chip        | IF     | 30      | mA   |
| Peak Forward Current Per Chip*1 | IFP    | 100     | mA   |
| Power Dissipation Per Chip      | PD     | 100     | mW   |
| Reverse Current Per Any Chip    | Ir     | 50      | uA   |
| Electrostatic Discharge*2       | ESD    | 1000    | V    |
| Operating Temperature           | Topr   | -25~+85 | □    |
| Storage Temperature             | Tstg   | -25~+85 | □    |

Solder Temperature 1/16 Inch Below Seating Plane For 3 Seconds At 260□

\*1:Duty 1/10,0.1ms Pulse With

\*2:Static Electricity or power surge will damage the LED. Use of a conductive wrist band or anti-electrosatic glove is recommended when handing these LED. All devices, equipment and machinery must be properly grounded.

## PART NO.: JZM23882ASR-GW

### Part selection And Application Information(Ratings at 25°C)

| PART NO.       | COLOR<br>□ EPOX<br>Y/SURF<br>ACE□ | CHIP     |         | Common<br>cathode<br>or anode | WD<br>(nm<br>) | Electrical |      |         |      | IV-<br>M   |
|----------------|-----------------------------------|----------|---------|-------------------------------|----------------|------------|------|---------|------|------------|
|                |                                   | Material | Emitted |                               |                | Vf(v)      |      | Iv(mcd) |      |            |
|                |                                   |          |         |                               |                | Typ.       | Max. | Min.    | Typ. |            |
| JZM23882ASR-GW | WHITE<br>DIFFUS<br>E/GRAY         | AlGaInP  | RED     | Common<br>anode               | 630            | 2.1        | 2.4  | 60      | 70   | 1 □<br>1.1 |
|                |                                   |          |         |                               |                |            |      |         |      |            |

Note:1.The forward voltage data did not including  $\pm 0.01V$  testing tolerance.

2.The luminous intensity data did not including  $\pm 15\%$  testing tolerance.

### Test Condition For Each Parameter

| Parameter                         | Symbol | Unit | Test Condition |
|-----------------------------------|--------|------|----------------|
| Forward Voltage Per Chip          | Vf     | volt | If=20mA        |
| Luminous Intensity Per Chip       | Iv     | mcd  | If=20mA        |
| Peak Wavelength                   | WP     | nm   | If=20mA        |
| Dominant Wavelength               | WD     | nm   | If=20mA        |
| Spectral Line Half-Width          | ▲W     | nm   | If=20mA        |
| Reverse Current Any Chip          | Ir     | μA   | If=20mA        |
| Luminous Intensity Matching Ratio | IV-M   |      |                |

# Typical Optical-Electronic Characteristic Curves

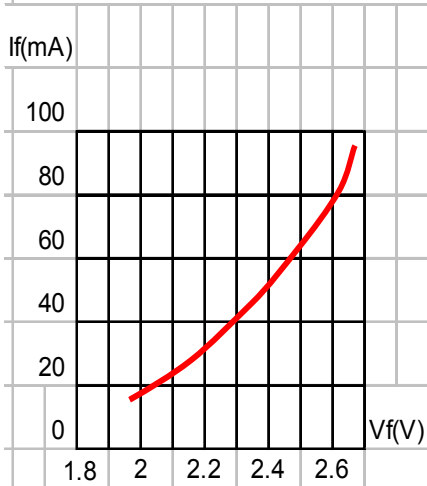
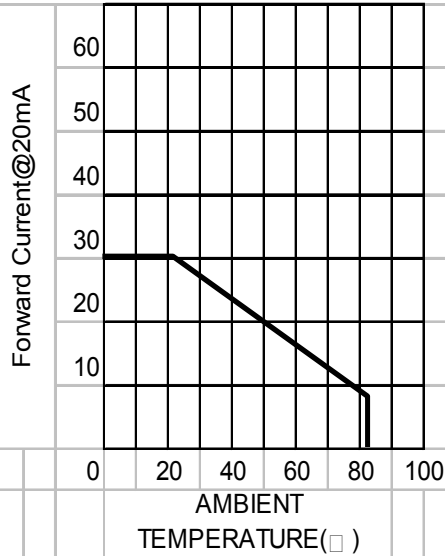


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.



AMBIENT TEMPERATURE(°C)

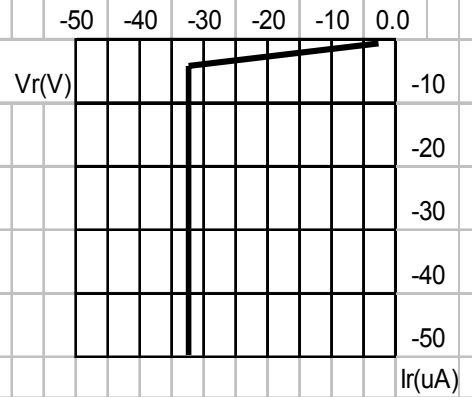


Fig.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

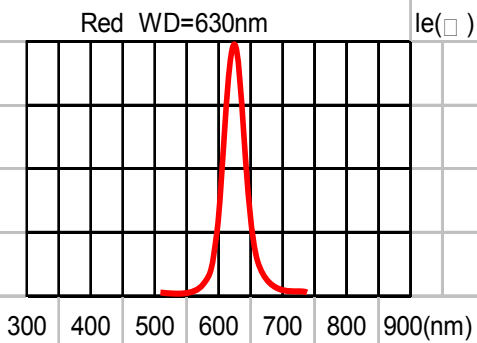


Fig.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

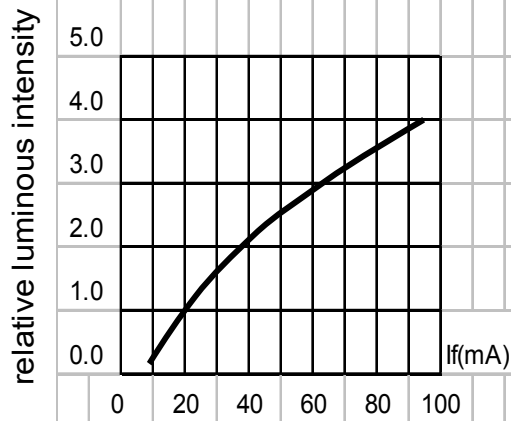


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

## Soldering Condition (Pb-Free)

### 1. Iron:

Soldering Iron: 30W Max

Temperature 350°C Max

Soldering Time: 3 Seconds Max (One time only)

Distance: Solder Temperature 1/16Inch Below Seating Plane

For 3 Seconds At 260°C

### 2. Wave Soldering Profile

Dip Soldering

Preheat: 120°C Max

Preheat time: 60 seconds Max

Ramp-up

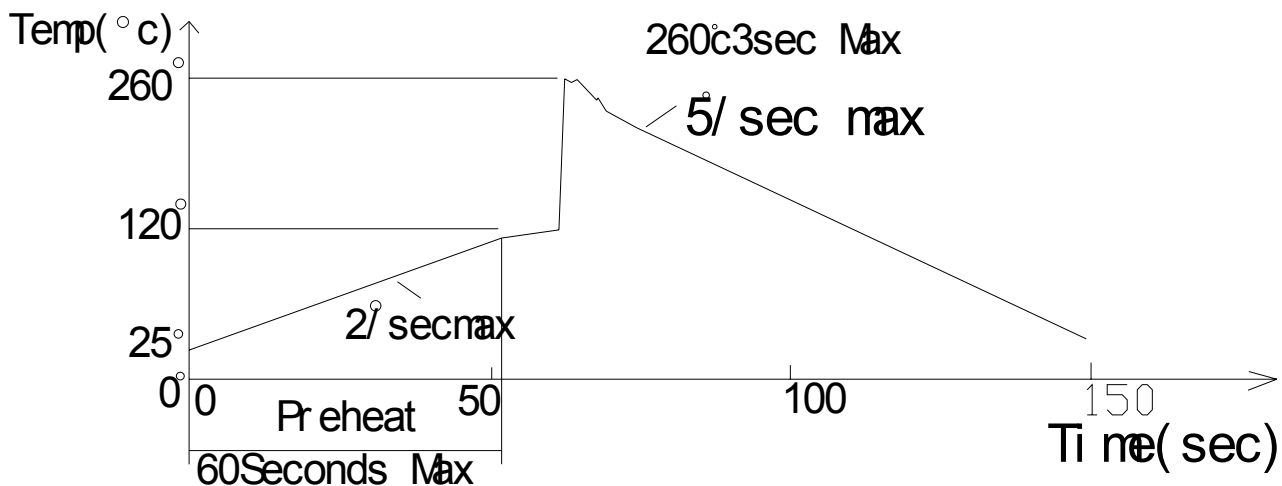
2°C/sec(max)

Ramp-Down: -5°C/sec(max)

Solder Bath: 260°C Max

Dipping Time: 3 seconds Max

Distance: Solder Temperature 1/16Inch Below Seating Plane for 3 Seconds At 260°C



Note: 1. Wave solder should not be made more than one time.

2. You can just only select one of the soldering conditions as above.

## Reliability Test:

| Test Item                           | Standard Test Method   | Test Condition  | Description  |
|-------------------------------------|--|---|--|
| Operating Life Test                 | JIS C7021:B-1<br>MIL-STD-750:1026<br>MIL-STD-883:1005                      | 1. Under Room Temperature<br>2. If=10 mA<br>3. t=1000hrs(-24hrs,+72hrs) | This test is conducted for the purpose of deteming the resistance of a part in electrical and themal stressed.   |
| High Temperature Storage Test       | JIS C 7021:B-10<br>MIL-STD-883:1008  | 1. Ta=105□±5□<br>2. t=1000hrs(-24hrs,+72hrs)                            | The purpose of this is the resistance of the device which is laid under condition of high temperature for hours.   |
| Low Temperature Storage Test        | JIS C 7021:B-12  | 1. Ta=-40□±5□<br>2. t=1000hrs(-24hrs,+72hrs)                            | The purpose of this is the resistance of the device which is laid under condition of low temperature for hours.  |
| High Temperature High Humidity Test | JIS C 7021:B-11<br>MIL-STD-202:103B  | 1. Ta=65□±5□<br>2. RH=90%~95%<br>3. Tt=240hrs±2hrs                      | The purpose of this id the resistance of the device which is laid under condition of low temperature for hours.  |
| Thermal Shock Test                  | MIL-STD-202:107D<br>MIL-STD-750:1051<br>MIL-STD-883:1011                   | 1. Ta=105□±5□&-40□±5□<br>(10min)(10min)                                 | The purpose of this is the resistance of the device to sudden extreme changes in high and low temperature.   |
| Solder Resistance Test              | JIS C 7021:A-1<br>MIL-STD-202:210A<br>MIL-STD-750:2031                     | 1.T.Sol=260□±5□<br>2.Dwell time=10±1sec.                                | This test intended to determine the thermal characteristic resistance of the device to sudden exposures at ex treme changes in temperature when soldering the lead wire. |
| Solderability Test                  | JIS C 7021:A-2<br>MIL-STD-202:208D<br>MIL-STD-750:2026<br>MIL-STD-883:2003 | 1.T.Sol=230□±5□<br>2.Dwell time=5±1sec.                                 | This test intended to see soldering well performed or not.   |

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