

## Dot Matrix Display Data Sheet

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### Description

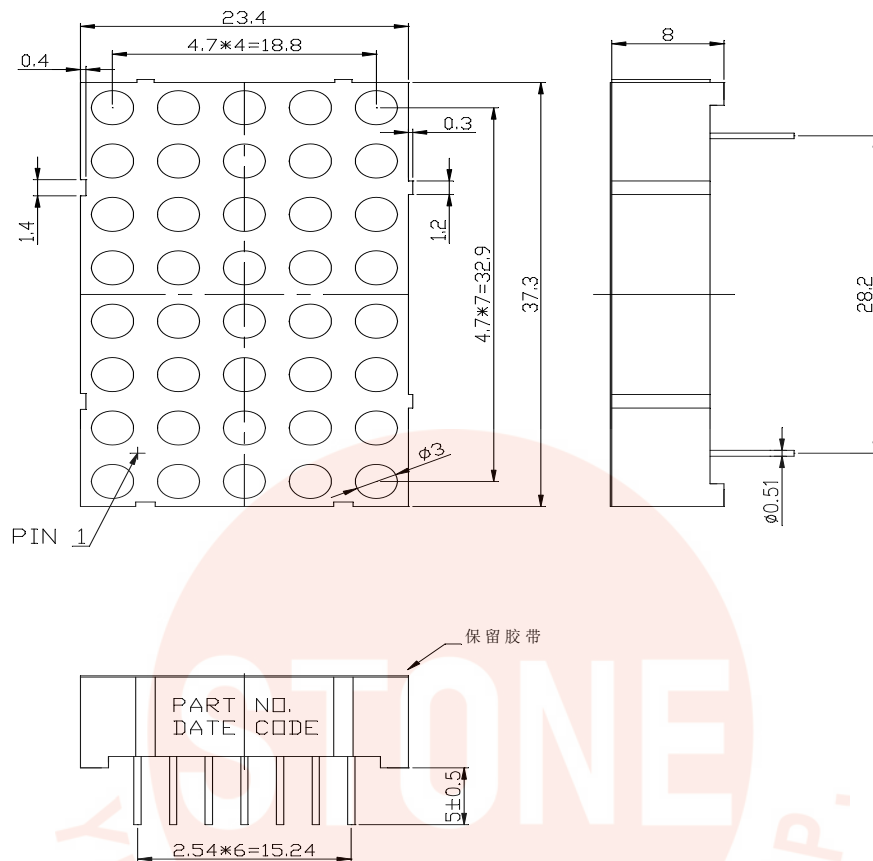
This YDM-12583AR-N is a 0.12inch (3.0mm) dot height 5X8 dot matrix display.

This device uses AlInGaP RED chips, which are made from AlInGaP on a non-transparent GaAs substrate. and has a black face and white segments with encap tape.

### Features

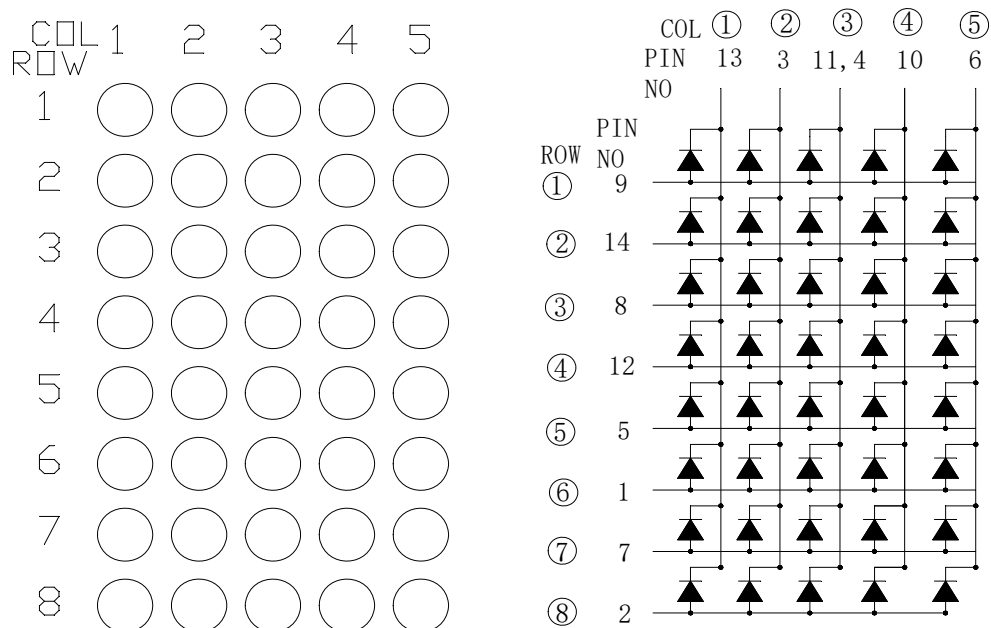
- 0.12-inch (3.0 mm) dot height
- 5x8 array with x-y select
- Low power requirement
- Excellent characters appearance
- High brightness & high contrast
- Wide viewing angle
- Solid state reliability
- Categorized for luminous intensity

## Package Dimensions



All dimensions are in millimeters. Tolerances are 0.25 mm (0.01") unless otherwise noted.  
 Retain encap tape.

## Internal Circuit Diagram



### Absolute Maximum Rating (Ta = 25°C)

| PARAMETER                                                                 | RED            | UNIT |
|---------------------------------------------------------------------------|----------------|------|
| Power Dissipation Per Segment                                             | 70             | mW   |
| Peak Froward Current<br>( Frequency 1Khz, 10% duty cycle)                 | 90             | mA   |
| Continuous Forward Current Per Segment                                    | 25             | mA   |
| Reverse Voltage Per Segment                                               | 5              | V    |
| Operating Temperature Range                                               | -35°C to +85°C |      |
| Storage Temperature Range                                                 | -35°C to +85°C |      |
| Soldering Conditions:Max 260°C for max 3sec at 1.6mm below seating plane. |                |      |

This product should be operated in forward bias. If a reverse voltage is continuously applied to the product, such operation can cause migration resulting in LED damage.

### Electrical / Optical Characteristics (Ta = 25°C)

| PARAMETER                         | SYMBOL           | MIN. | TYP. | MAX. | UNIT | TEST CONDITION |
|-----------------------------------|------------------|------|------|------|------|----------------|
| Average Luminous Intensity        | Iv               | 13.7 | 21.8 |      | mcd  | IF=10mA        |
| Peak Emission Wavelength          | $\lambda_p$      |      | 639  |      | nm   | IF=20mA        |
| Spectral Line Half-Width          | $\Delta \lambda$ |      | 20   |      | nm   | IF=20mA        |
| Dominant Wavelength               | $\lambda_d$      |      | 631  |      | nm   | IF=20mA        |
| Forward Voltage Per Segment       | VF               |      | 2.0  | 2.6  | V    | IF=20mA        |
| Reverse Current Per Segment       | IR               |      |      | 10   | uA   | VR=5V          |
| Luminous Intensity Matching Ratio | Iv-m             |      |      | 2:1  |      | IF=10mA        |

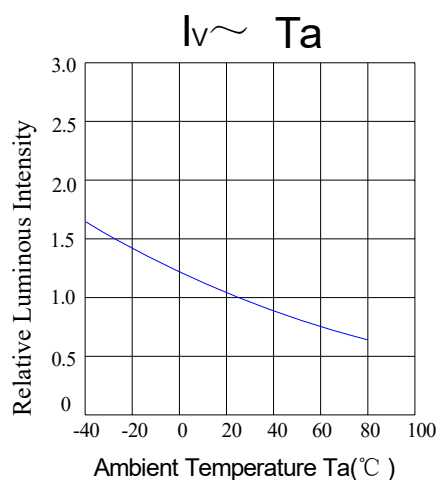
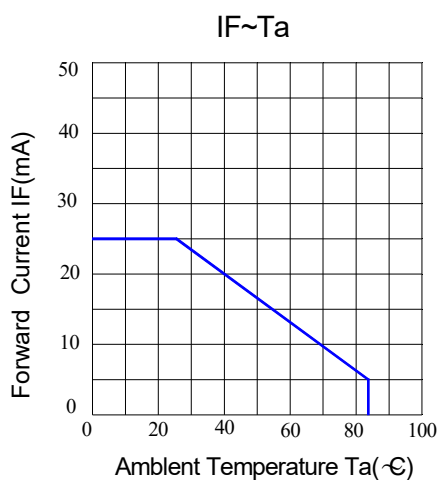
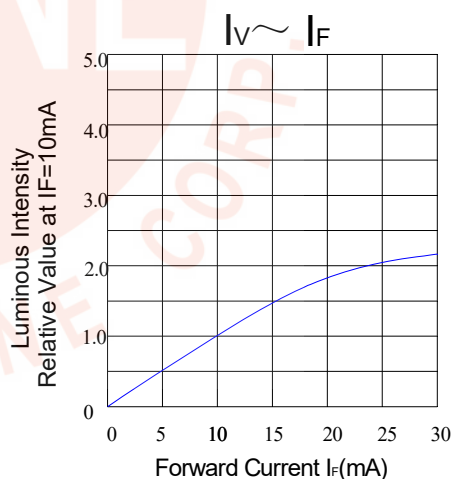
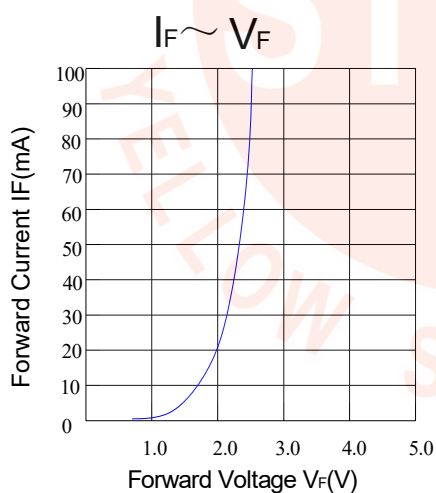
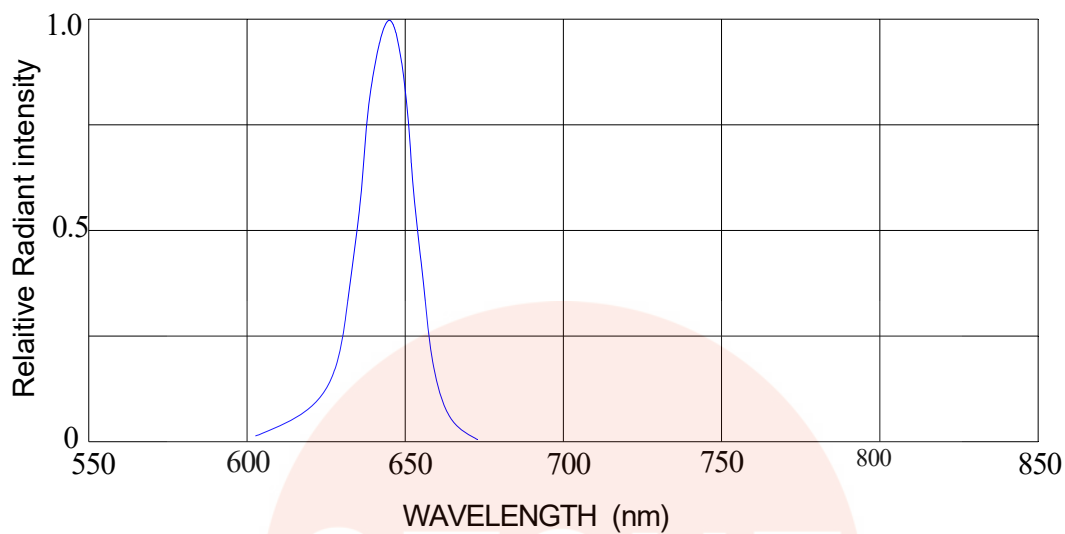
Note:1.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclairage) eye-response curve.

2.Wavelength: +/-1nm Luminous Intensity: +/-15% Forward Voltage: +/-0.1V

## Typical Electrical / Optical Characteristic Curves

(25°C Ambient Temperature Unless Otherwise Noted)

RELATIVE INTENSITY VS WAVELENGTH



## Package Flow

