CHINA
SEMICONDUCTOR
CORPORATION

| Spec. No. | PS-ND-08090308 |
|---|---|
| Rev. | A |

# PRODUCT SPECIFICATION

## Model No：CSM-16151V9/16161V9

### Descriptions:

- 1.5 Inch 16X16 Dot-Matrix Display
- Dot Pitch 2.5mm
- CSM-16151: Column Anode, Row Cathode
- CSM-16161: Column Cathode, Row Anode
- Emitting Color: Super Bright Orange

| CUSTOMER APPROVED SIGNATURES | APPROVED BY | CHECKED BY | PREPARED BY |
|---|---|---|---|
| | | | |

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## Model No：CSM-16151/16161V9

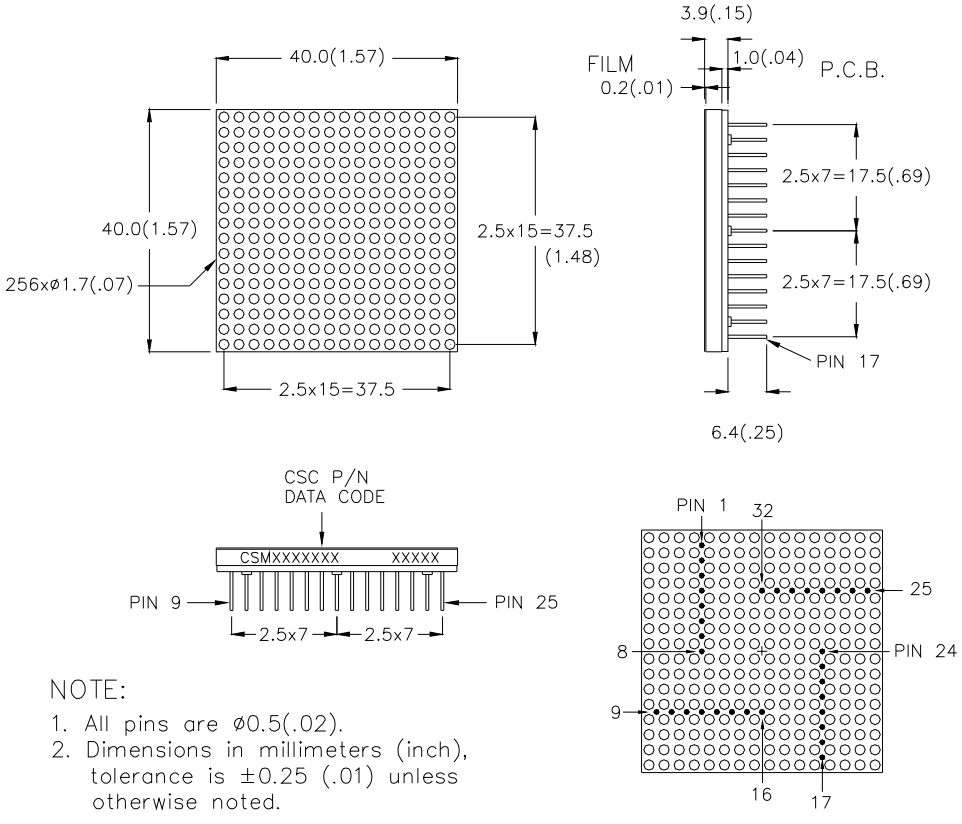
### ■ Features -

1. 1.5 inch (39.2mm) Matrix height.
2. Case mold type.
3. RoHs compliant.
4. Low power consumption.
5. Easy mounting on P.C. board or socket.

### ■ Device Selection Guide -

| Part No. | Chip | | Column | Row |
|---|---|---|---|---|
| | Material | Emitted Color | | |
| CSM-16151V9 | AlGaInP | Super Bright Orange | Anode | Cathode |
| CSM-16161V9 | AlGaInP | Super Bright Orange | Cathode | Anode |

### ■ Package Dimensions -




NOTE:
1. All pins are ø0.5(.02).
2. Dimensions in millimeters (inch), tolerance is ±0.25 (.01) unless otherwise noted.

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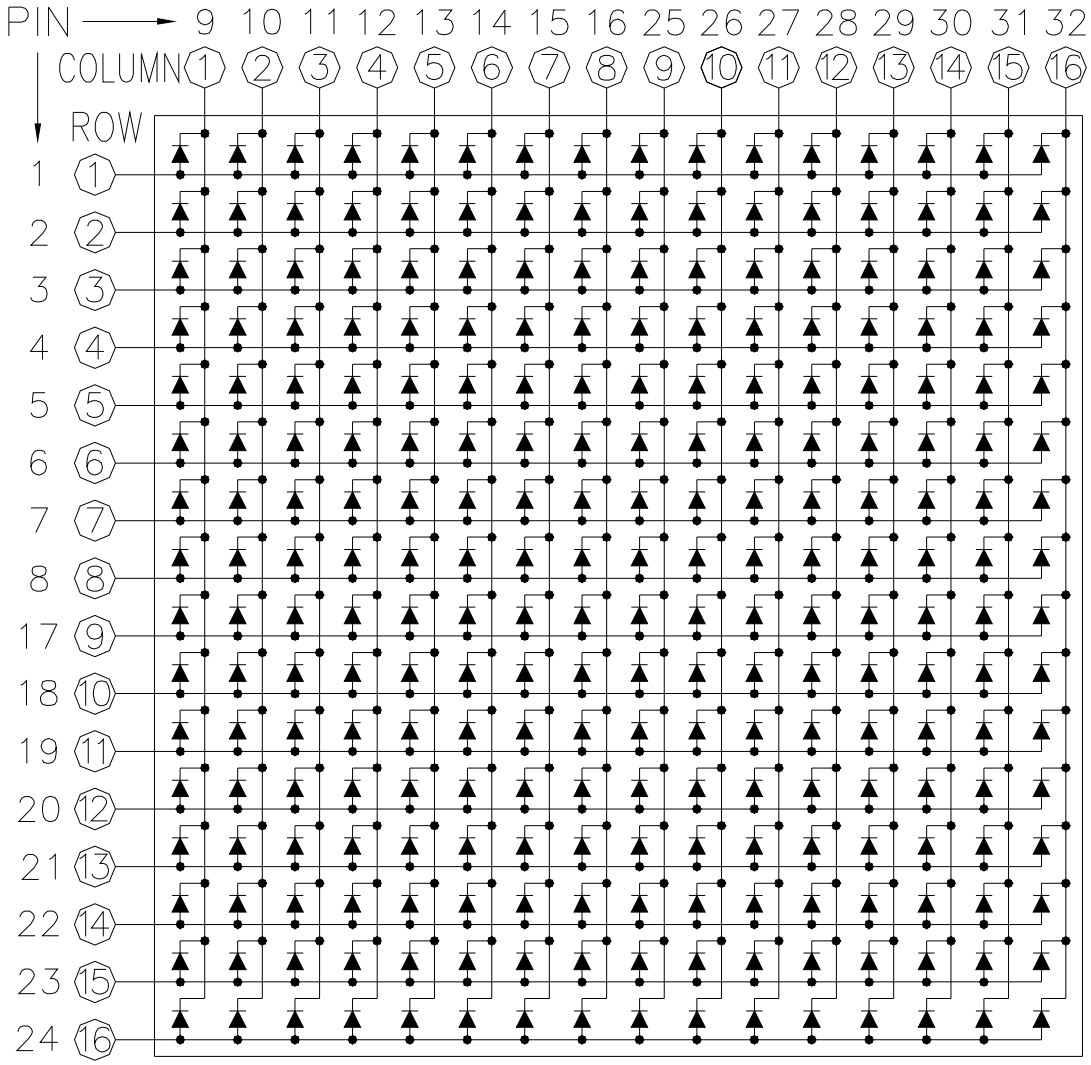
### ■ Internal Circuit Diagrams -




CSM－16151 Column Anode, Row Cathode.
(CSM－16161 Column Cathode, Row Anode.)

## Model No：CSM-16151/16161V9

### ■ Absolute Maximum Rating -

(Ta=25℃)

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Power Dissipation Per Dice | Pd | 75 | mW |
| Continuous Forward Current Per Dice | $I_{AF}$ | 25 | mA |
| Peak Current Per Dice(duty cycle 1/10, 1kHz) | $I_{PF}$ | 90 | mA |
| Derating Linear From 25℃ Per Dice | - | 0.33 | mA/℃ |
| Reverse Voltage Per Dice | $V_R$ | 5 | V |
| Operating Temp. | Topr | -35 ~ +85 | ℃ |
| Storage Temp. | Tstg | -35 ~ +85 | ℃ |
| Solder temperature 1/16 inch below seating plane for 3 seconds at 260℃ | | | |

### ■ Electro-optical Characteristics -

(Ta=25℃)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Condition |
|---|---|---|---|---|---|---|
| Forward Voltage Per Segment | $V_F$ | - | 2.1 | 2.8 | V | $I_F$=20mA |
| Luminous Intensity Per Segment | Iv | - | 15 | - | mcd | $I_F$=10mA |
| Peak Emission Wavelength | $\lambda p$ | - | 632 | - | nm | $I_F$=20mA |
| Dominant Wavelength | $\lambda d$ | - | 624 | - | nm | $I_F$=20mA |
| Spectrum Radiation Bandwidth | $\Delta \lambda$ | - | 20 | - | nm | $I_F$=20mA |
| Reverse Current | IR | - | - | 100 | $\mu$A | $V_R$=5V |
| Luminous Intensity Matching Ratio | IV-m | - | - | 2:1 | - | $I_F$=10mA |

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### ■ Typical Electrical / Optical Charateristics Curves -

**(Ta = 25℃ Unless Otherwise Noted)**

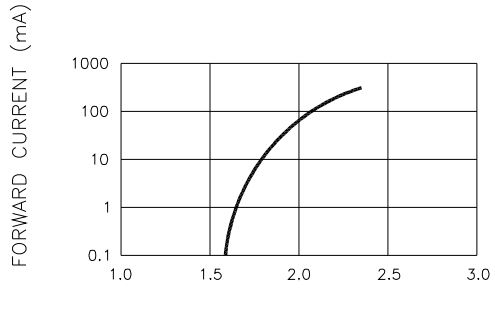


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

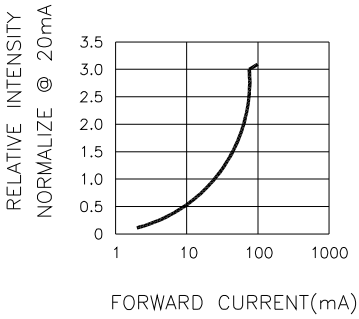


Fig.2 RELATIVE INTENSITY
VS. FORWARD CURRENT

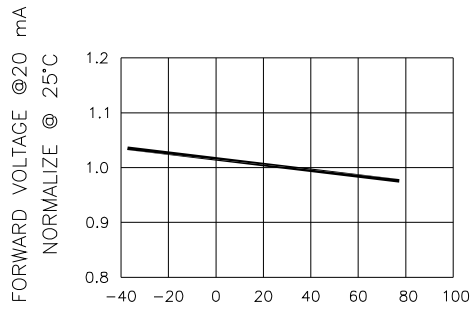


Fig.3 FORWARD VOLTAGE
VS. TEMPERATURE

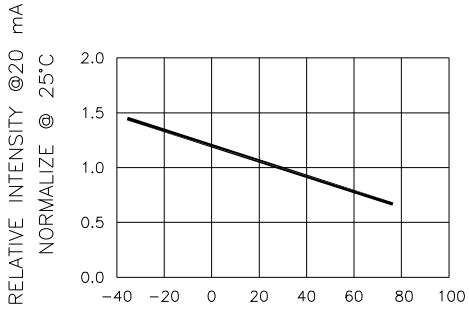


Fig.4 RELATIVE INTENSITY
VS. TEMPERATURE

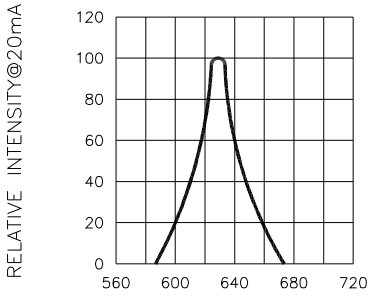


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH