



# PRODUCT SPECIFICATION

**Model No: CSD-322V9/323V9**

## Descriptions:

- 0.3 Inch Dual Digits Display
- CSD-322: Common Anode
- CSD-323: Common Cathode
- Emitting Color: Super Bright Orange



| CUSTOMER APPROVED<br>SIGNATURES | APPROVED BY | CHECKED BY | PREPARED BY |
|---------------------------------|-------------|------------|-------------|
|                                 |             |            |             |

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**Model No : CSD-322/323V9**

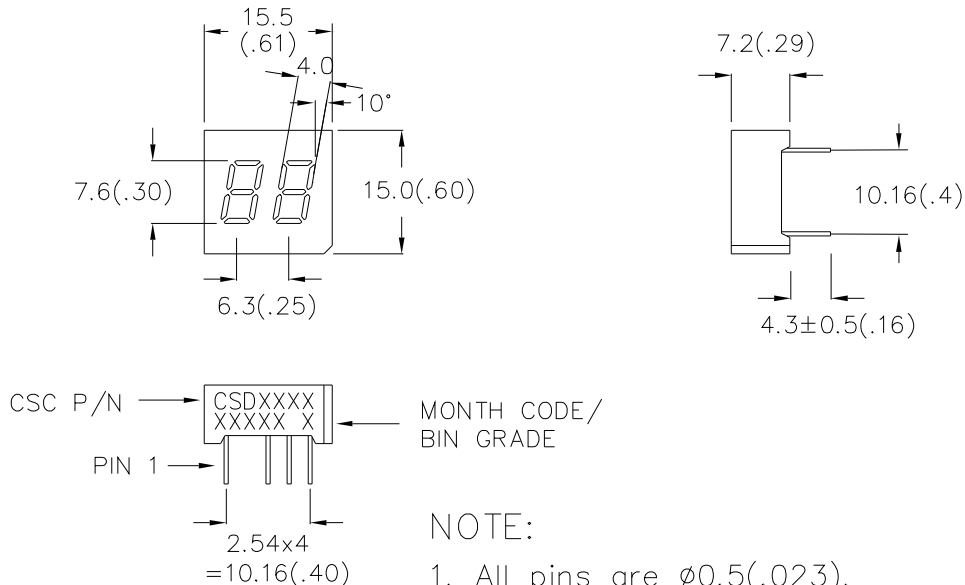
**Features -**

1. 0.3 inch (7.2mm) dight 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           |                            | Description           |
|------------------|----------------|----------------------------|-----------------------|
|                  | Material       | Emitted Color              |                       |
| <b>CSD-322V9</b> | <b>AlGaInP</b> | <b>Super Bright Orange</b> | <b>Common Anode</b>   |
| <b>CSD-323V9</b> | <b>AlGaInP</b> | <b>Super Bright Orange</b> | <b>Common Cathode</b> |

**Package Dimensions -**



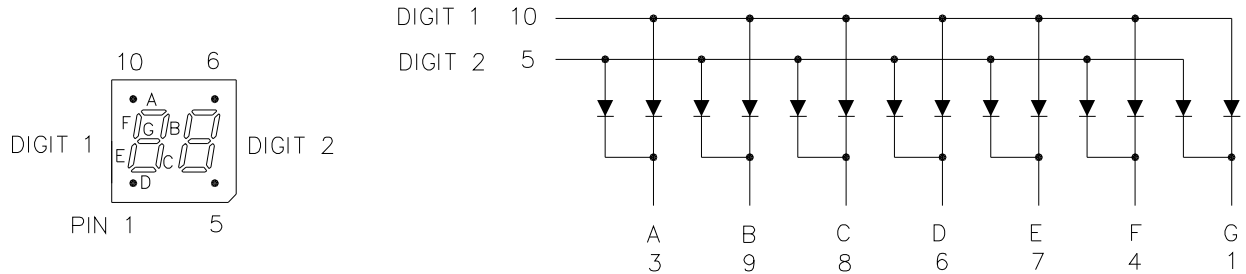
**NOTE:**

1. All pins are  $\phi 0.5 (.023)$ .
2. Dimension in millimeter (inch), and tolerance is  $\pm 0.25 (.01)$  unless otherwise noted.



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Internal Circuit Diagrams -



CSD-322 Common Anode.(CSD-323 is Common Cathode.)  
No. 2 No Pin.

Absolute Maximum Rating -

(Ta=25°C)

| Parameter   | Symbol      | Rating    | Unit  |
|---|-------------|-----------|-------|
| Power Dissipation Per Dice  | <b>Pd</b>   | 75        | mW    |
| Continuous Forward Current Per Dice                                     | <b>IAF</b>  | 25        | mA    |
| Peak Current Per Dice   | <b>IPF</b>  | 90        | mA    |
| Derating Linear From 25°C Per Dice                                      | -           | 0.33      | mA/°C |
| Reverse Voltage Per Dice  | <b>VR</b>   | 5         | V     |
| Operating Temp.   | <b>Topr</b> | -35 ~ +85 | °C    |
| Storage Temp.   | <b>Tstg</b> | -35 ~ +85 | °C    |
| Solder temperature 1/16 inch below seating plane for 3 seconds at 260°C |             |           |       |



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■ Electro-optical Characteristics -

(Ta=25°C)

| Parameter                         | Symbol           | Min. | Typ.  | Max. | Unit | Condition            |
|-----------------------------------|------------------|------|-------|------|------|----------------------|
| Forward Voltage Per Segment       | V <sub>F</sub>   | -    | 2.1   | 2.8  | V    | I <sub>F</sub> =20mA |
| Luminous Intensity Per Segment    | I <sub>v</sub>   | -    | 12000 | -    | ucd  | I <sub>F</sub> =10mA |
| Peak Emission Wavelength          | λ <sub>p</sub>   | -    | 632   | -    | nm   | I <sub>F</sub> =20mA |
| Dominant Wavelength               | λ <sub>d</sub>   | -    | 624   | -    | nm   | I <sub>F</sub> =20mA |
| Spectrum Radiation Bandwidth      | Δλ               | -    | 20    | -    | nm   | I <sub>F</sub> =20mA |
| Reverse Current                   | I <sub>R</sub>   | -    | -     | 100  | μA   | V <sub>R</sub> =5V   |
| Luminous Intensity Matching Ratio | I <sub>V-m</sub> | -    | -     | 2:1  | -    | I <sub>F</sub> =10mA |



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■ Typical Electrical / Optical Characteristics Curves -

(Ta = 25°C Unless Otherwise Noted)

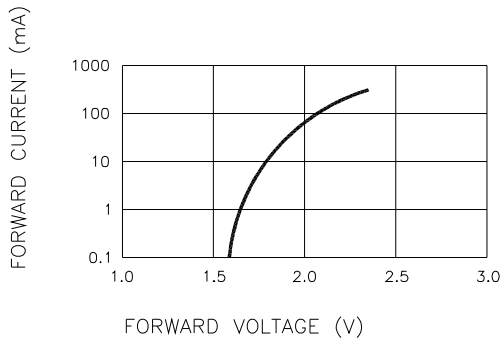


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

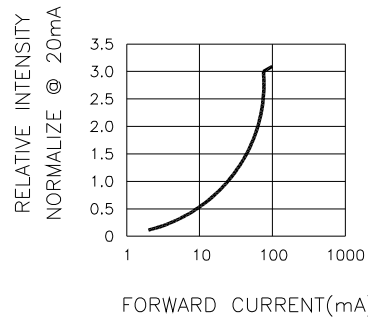


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

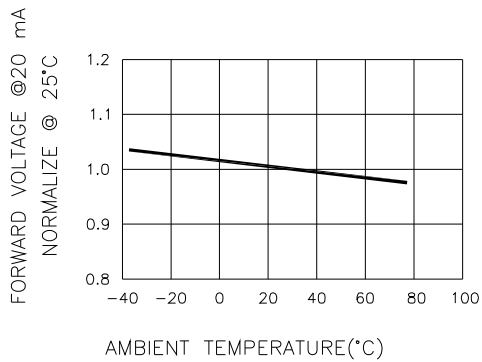


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

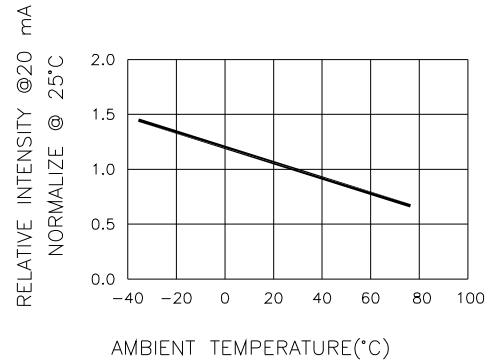


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

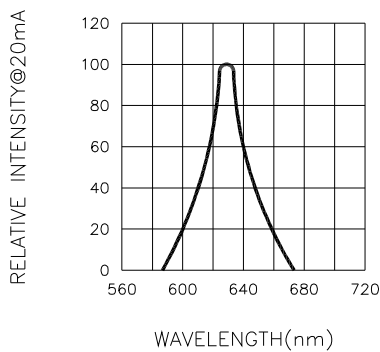


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH