



CHINA
SEMICONDUCTOR
CORPORATION

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| Spec. No. | PS-ND-0712 |
| Rev. | A |

PRODUCT SPECIFICATION

Model No : CSS-5160A9/CSS-5161A9

Descriptions:

- 0.50 Inch Single Digit Alphanumeric Display
- Emitting Color: Super-Bright Amber



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

CHINA SEMICONDUCTOR CORPORATION

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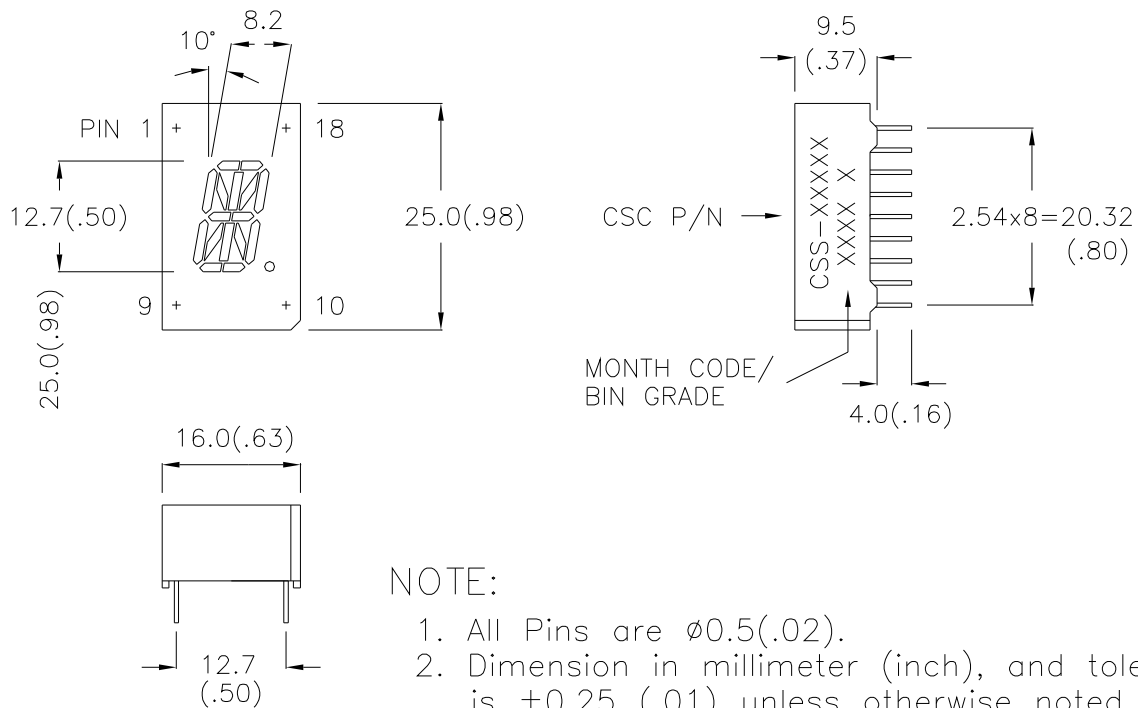
■ **Features -**

1. 0.50 inch (12.7 mm) digit 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 | |
| CSS-5160A9 | AlGaInP | Super-Bright Amber | Common Anode |
| CSS-5161A9 | | | Common Cathode |

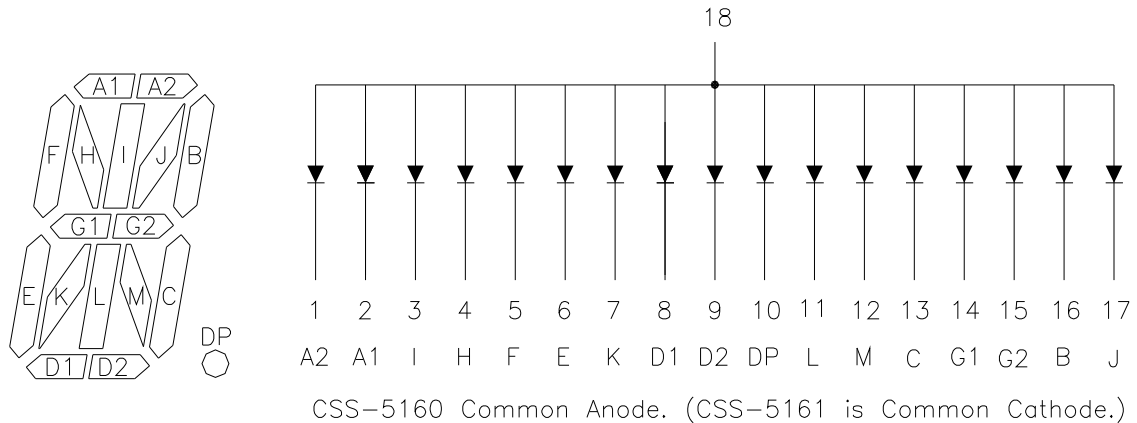
■ **Package Dimensions -**





Model No : CSS-5160A9/5161A9

Internal Circuit Diagrams -



Absolute Maximum Rating -

(Ta=25°C)

| Parameter | Symbol | Rating | Unit |
|--|--------|-----------|-------|
| Power Dissipation Per Dice | Pd | 65 | mW |
| Continuous Forward Current Per Dice | IAF | 25 | mA |
| Peak Current Per Dice (duty cycle 1/10, 1kHz) | IPF | 90 | mA |
| Derating Linear From 25°C Per Dice | - | 0.33 | mA/°C |
| Reverse Voltage Per Dice | VR | 5 | V |
| Operating Temperature | Topr | -25 ~ +85 | °C |
| Storage Temperature | Tstg | -25 ~ +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 | VF | - | 2.0 | 2.6 | V | IF=20mA |
| Luminous Intensity Per Segment | Iv | - | 20 | - | mcd | IF=10mA |
| Peak Emission Wavelength | λ_p | - | 612 | - | nm | IF=20mA |
| Spectrum Radiation Bandwidth | $\Delta \lambda$ | - | 20 | - | nm | IF=20mA |
| Reverse Current | IR | - | - | 100 | μA | VR=5V |
| Luminous Intensity Matching Ratio | IV-m | - | - | 2 : 1 | - | IF=20mA |



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Typical Electrical / Optical Characteristics Curves -

(Ta = 25°C Unless Otherwise Noted)

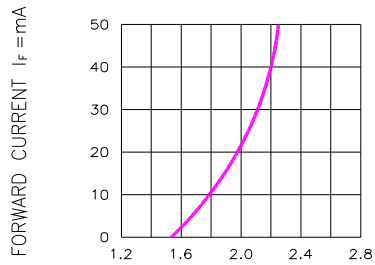


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

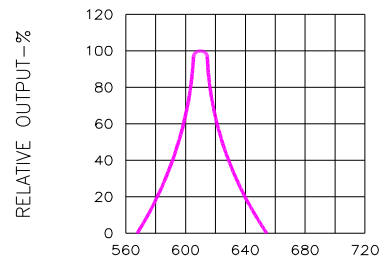


Fig.2 SPECTRAL RESPONSE

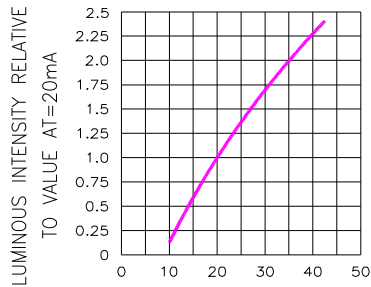


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

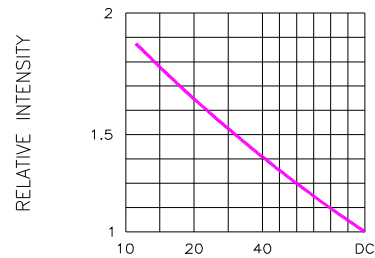


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

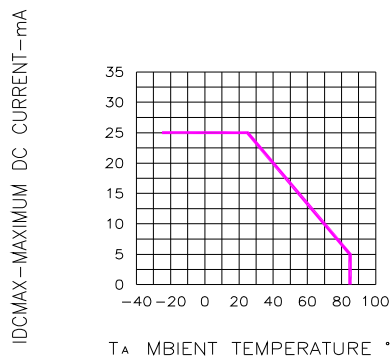


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

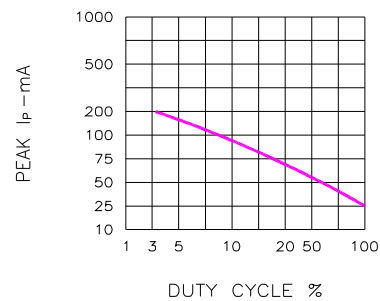


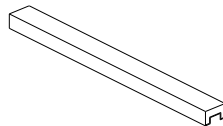
Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE f=1 KHz)



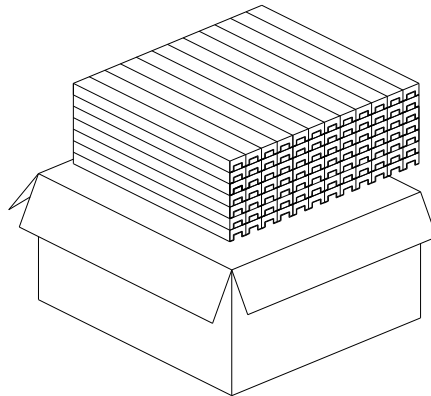
Model No : CSS-516A9/5161A9

■ Package Dimensions

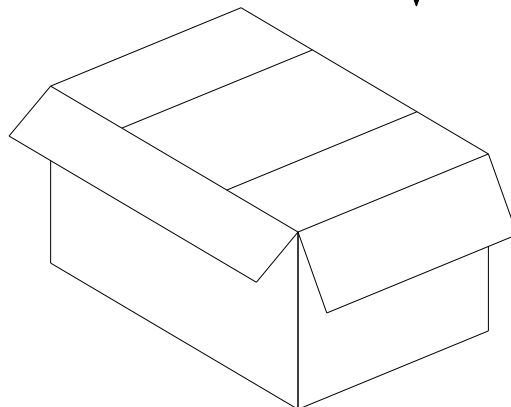
S = Single Digit Display
Dice Code
CSS-516xX-XX
Segment Resin Color Code.
Surface silk Screen Ink Code.



1 TUBE From Box = 20 PCS



1 BOX= 60 TUBE From Box
Q'TY: 1200 PCS.



1 CARTON = 3 BOX.
Q'TY: 3600 PCS.

CARTON SIZE:
L540xW485xH305mm

Note: The specifications are subject to change without notice. Please contact us for updated information.