

# PRODUCT SPECIFICATION

**Model No : CSS-1116M9/CSS-1117M9**

## Descriptions:

- 1.00 Inch Single Digit Alphanumeric Display
- Emitting Color: Super-Bright Yellow Green



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

### CHINA SEMICONDUCTOR CORPORATION

Address:2FL. NO.909,Chung-Cheng Road,  
Chung-Ho City Taipei Hsien,Taiwan.

Tel:886-2-2223-9696

Fax:886-2-2223-9377

### OPTO PLUS TECHNOLOGIES CO.,LTD

Address:696 Shun jiang Rd.,Ji Shan St.Shaoxing,  
ZheJiang,China

Tel:86-0575-8623888

Fax:86-0575-8623112

<http://www.csctw.com.tw>

**Model No : CSS-1116M9/1117M9**

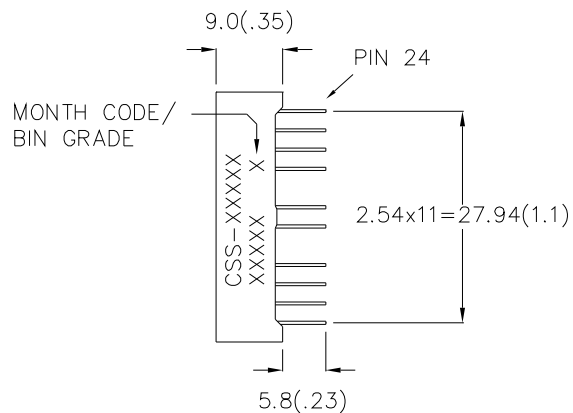
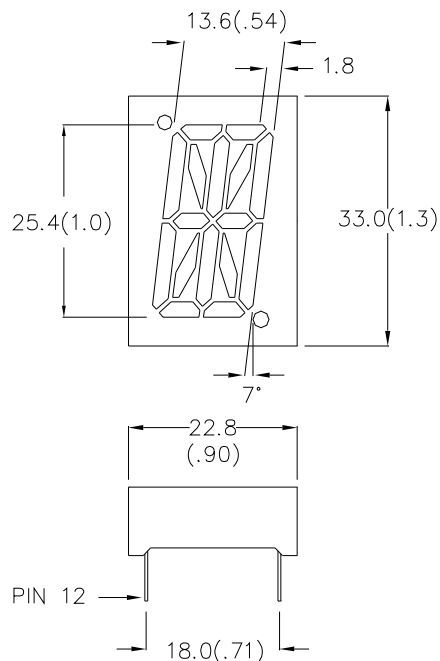
## ■ Features -

1. 1.00 inch (25.4 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-1116M9 | AlGaInP  | Super-Bright<br>Yellow Green | Common Anode   |
| CSS-1117M9 |          |                              | Common Cathode |

### ■ Package Dimensions -

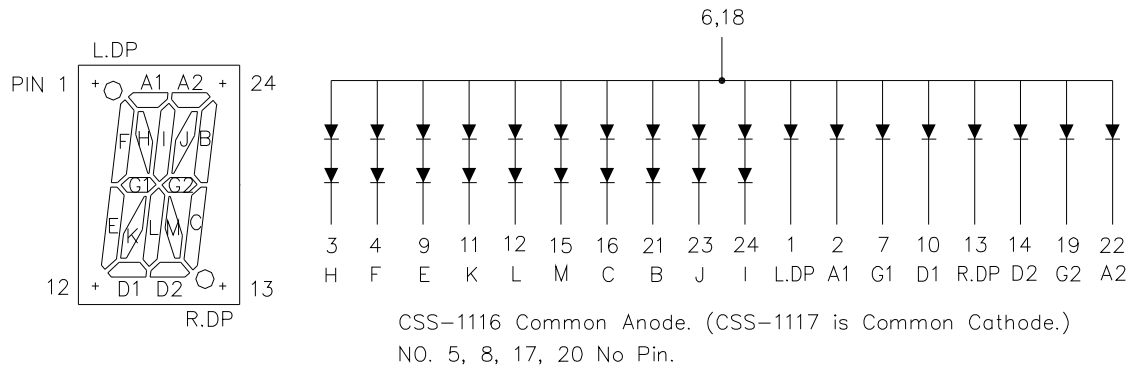


NOTE:

1. All pins are  $\varnothing.5(.02)$ .
2. Dimension in millimeter (inch), and tolerance is  $\pm.25 (.01)$  unless otherwise noted.

Model No : CSS-1116M9/1117M9

### 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 |        |           |       |

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

**Model No : CSS-1116M9/1117M9**

**■ Electro-optical Characteristics -**

(Ta=25°C)

| Parameter                           | Symbol           | Min. | Typ.     | Max.     | Unit    | Condition |
|-------------------------------------|------------------|------|----------|----------|---------|-----------|
| Forward Voltage Two Dice (One Dice) | VF               | -    | 4.2(2.1) | 5.2(2.6) | V       | IF=20mA   |
| Luminous Intensity Per Segment      | Iv               | -    | 20       | -        | mcd     | IF=10mA   |
| Peak Emission Wavelength            | $\lambda_p$      | -    | 572      | -        | nm      | IF=20mA   |
| Spectrum Radiation Bandwidth        | $\Delta \lambda$ | -    | 20       | -        | nm      | IF=20mA   |
| Reverse Current                     | IR               | -    | -        | 100      | $\mu A$ | VR=10V    |
| Luminous Intensity Matching Ratio   | IV-m             | -    | -        | 2 : 1    | -       | IF=20mA   |

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

Model No : CSS-1116M9/1117M9

## Typical Electrical / Optical Characteristics Curves -

(Ta = 25°C Unless Otherwise Noted)

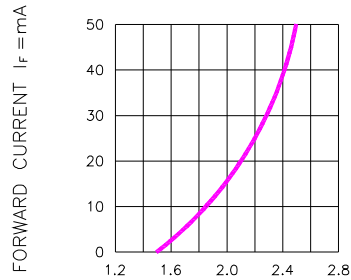


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

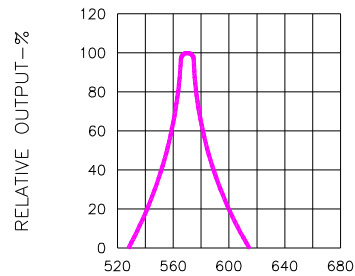


Fig.2 SPECTRAL RESPONSE

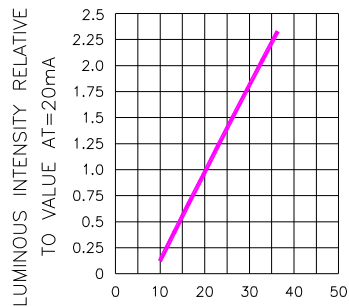


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

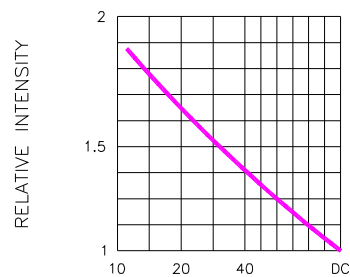


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

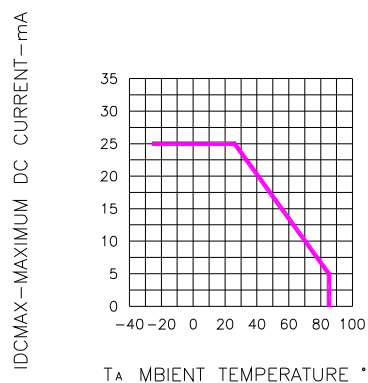


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

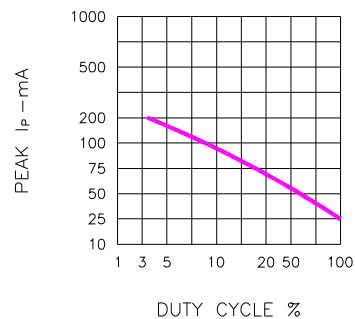


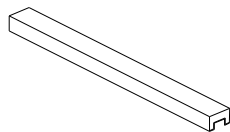
Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE f=1 KHz)

|           |   |
|-----------|---|
| Spec. No. | 0 |
| Rev.      | A |

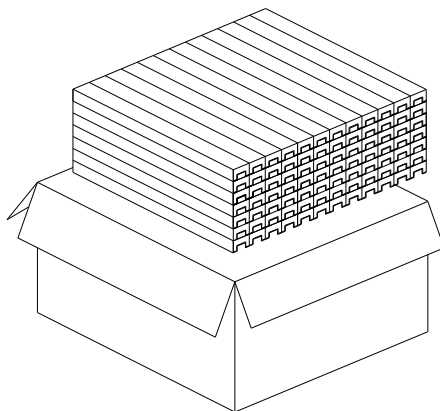
**Model No : CSS-1116M9/1117M9**

■ **Package Dimensions**

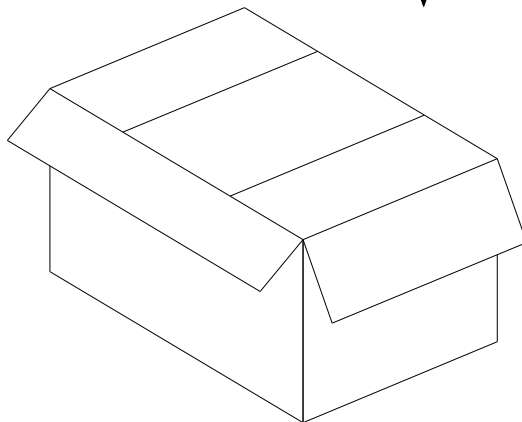
S = Single Digit Display  
 Dice Code  
 CSS-1116X-21  
 Segment Resin Color Code. 1=White Segment.  
 Surface silk Screen Ink Code. 2=Black (1=Gray).



1 TUBE From Box = 15 PCS



1 BOX= 50 TUBE From Box  
Q'TY: 750 PCS.



1 CARTON = 3 BOX.  
Q'TY: 2250 PCS.

**CARTON SIZE:**  
L540xW485xH305mm

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