



|                  |            |
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| <b>Spec. No.</b> | PS-ND-0712 |
| <b>Rev.</b>      | A          |

# PRODUCT SPECIFICATION

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

### Descriptions:

- 1.0 Inch Single Digit Alphanumeric Display
- Emitting Color: Super-Bright Red



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

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### Model No : CSS-1116S/1117S

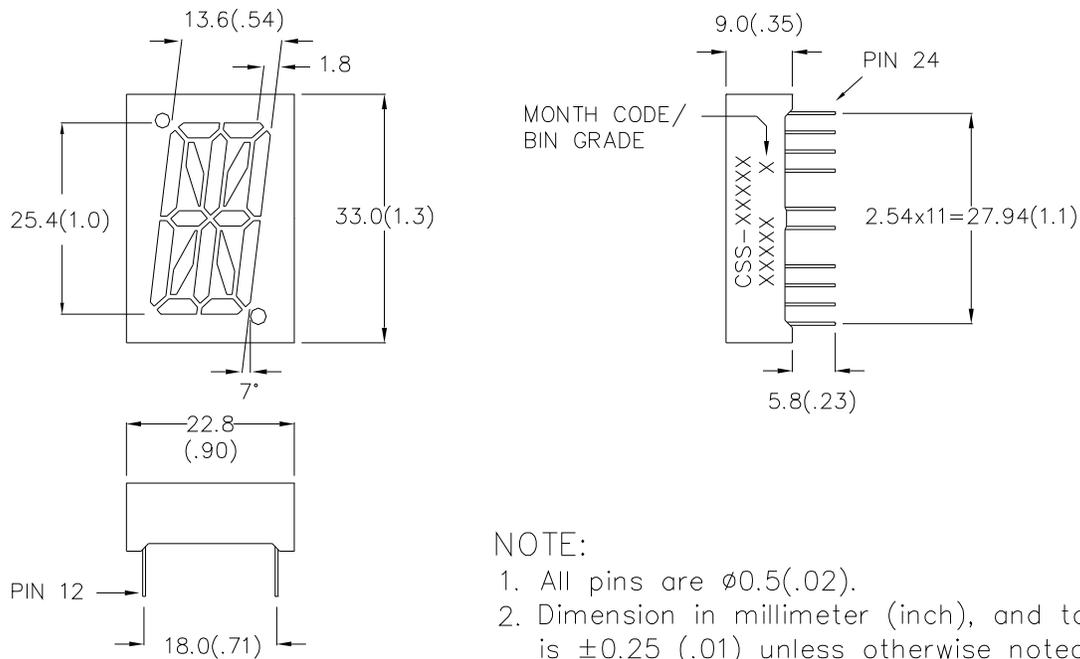
#### ■ Features -

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-1116S | AlGaAs   | Super-Bright Red | Common Anode   |
| CSS-1117S |          |                  | Common Cathode |

#### ■ Package Dimensions -

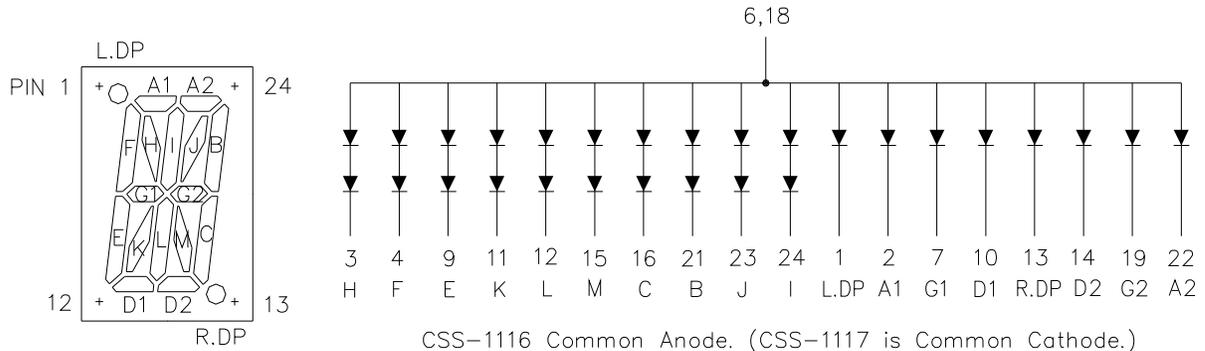




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**Internal Circuit Diagrams -**



CSS-1116 Common Anode. (CSS-1117 is Common Cathode.)  
NO. 5, 8, 17, 20 No Pin.

**Absolute Maximum Rating -**

(Ta=25°C)

| Parameter                                                                | Symbol | Rating    | Unit  |
|--------------------------------------------------------------------------|--------|-----------|-------|
| Power Dissipation Per Dice                                               | Pd     | 75        | mW    |
| Continuous Forward Current Per Dice                                      | IAF    | 30        | mA    |
| Peak Current Per Dice (duty cycle 1/10, 1kHz)                            | IPF    | 125       | mA    |
| Derating Linear From 25°C Per Dice                                       | -      | 0.42      | 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 |        |           |       |


**Model No : CSS-1116S/1117S**
**Electro-optical Characteristics -**

(Ta=25°C)

| Parameter                           | Symbol           | Min. | Typ.     | Max.     | Unit    | Condition |
|-------------------------------------|------------------|------|----------|----------|---------|-----------|
| Forward Voltage Two Dice (One Dice) | VF               | -    | 3.6(1.8) | 5.0(2.5) | V       | IF=20mA   |
| Luminous Intensity Per Segment      | Iv               | -    | 10       | -        | mcd     | IF=10mA   |
| Peak Emission Wavelength            | $\lambda_p$      | -    | 660      | -        | 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   |



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**Typical Electrical / Optical Characteristics Curves -**

**(Ta = 25°C Unless Otherwise Noted)**

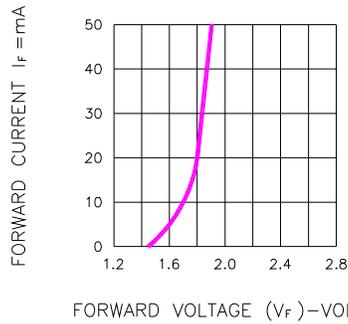


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

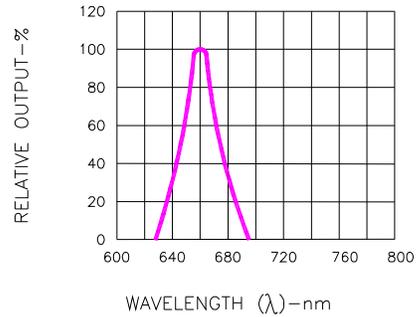


Fig.2 SPECTRAL RESPONSE

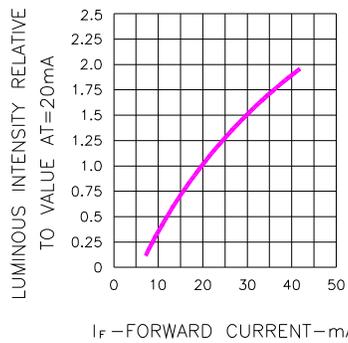


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

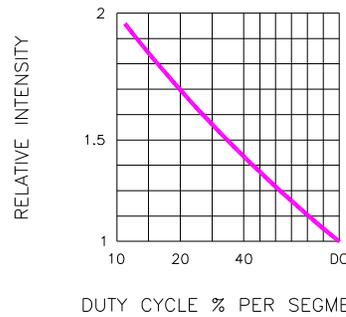


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

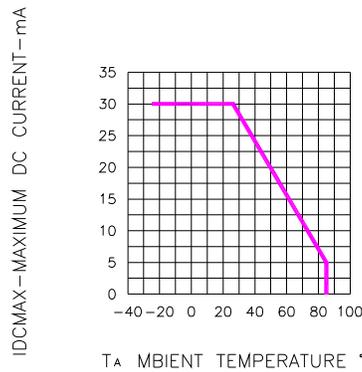


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. AMBIENT TEMPERATURE

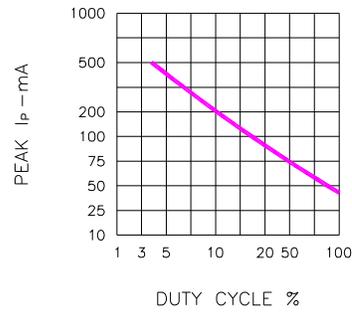


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE f=1 KHz)



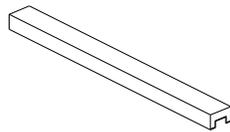
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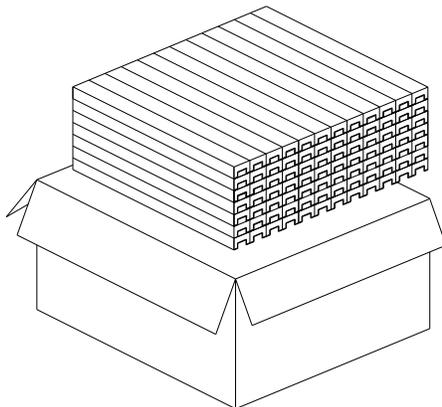
**Model No : CSS-1116S/1117S**

**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

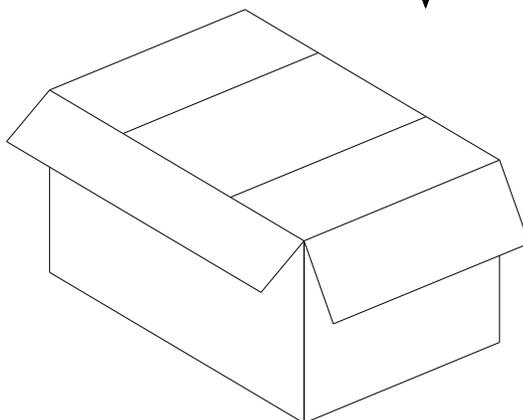


1 BOX= 50 TUBE From Box  
Q'TY: 750 PCS.



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.

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