



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

# PRODUCT SPECIFICATION

**Model No : CSS-2310G/CSS-2311G**

## Descriptions:

- 2.3 Inch Single Digit Alphanumeric Display
- Emitting Color: 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



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

**Model No : CSS-2310G/2311G**

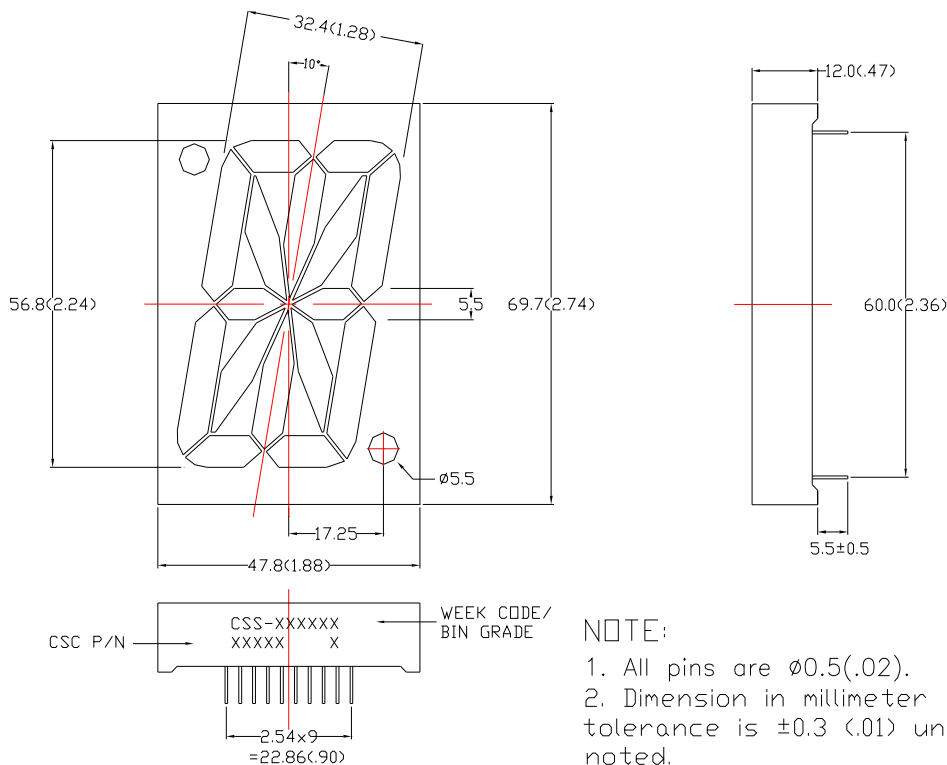
**Features -**

1. 2.24 inch (56.8 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       |                       |
| <b>CSS-2310G</b> | <b>GaP</b> | <b>Yellow Green</b> | <b>Common Anode</b>   |
| <b>CSS-2311G</b> |            |                     | <b>Common Cathode</b> |

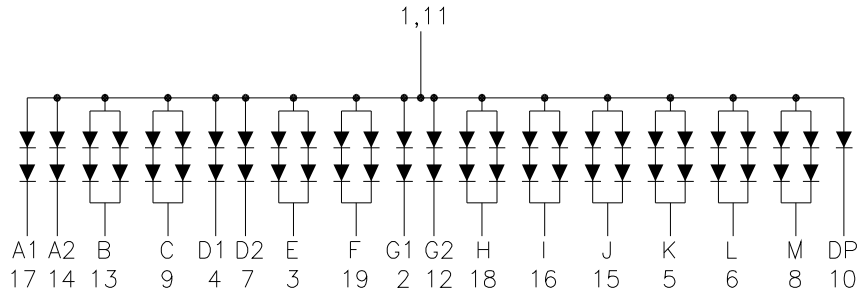
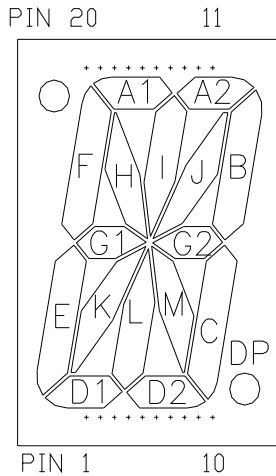
**Package Dimensions -**





Model No : CSS-2310G/2311G

Internal Circuit Diagrams -



NO. 20 No Connection.  
CSS-2310 Common Anode.  
(CSS-2311 is Common Cathode.)

Absolute Maximum Rating -

(Ta=25°C)

| Parameter   | Symbol | Rating    | Unit  |
|---|--------|-----------|-------|
| Power Dissipation Per Dice  | Pd     | 70        | 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 |        |           |       |



Model No : CSS-2310G/2311G

■ Electro-optical Characteristics -

(Ta=25°C)

| Parameter                         | Symbol           | Min. | Typ.     | Max.     | Unit    | Condition |
|-----------------------------------|------------------|------|----------|----------|---------|-----------|
| Forward Voltage Per Segment (DP)  | VF               | -    | 4.2(2.1) | 5.6(2.8) | V       | IF=20mA   |
| Luminous Intensity Per Segment    | Iv               | -    | 10       | -        | mcd     | IF=10mA   |
| Peak Emission Wavelength          | $\lambda_p$      | -    | 570      | -        | nm      | IF=20mA   |
| Spectrum Radiation Bandwidth      | $\Delta \lambda$ | -    | 30       | -        | nm      | IF=20mA   |
| Reverse Current                   | IR               | -    | -        | 100      | $\mu A$ | VR=10V    |
| Luminous Intensity Matching Ratio | IV-m             | -    | -        | 2 : 1    | -       | IF=20mA   |



**Model No : CSS-2310G/2311G**

**Typical Electrical / Optical Characteristics Curves -**

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

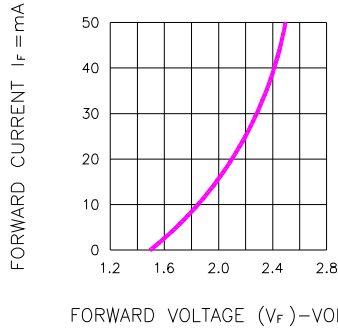


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

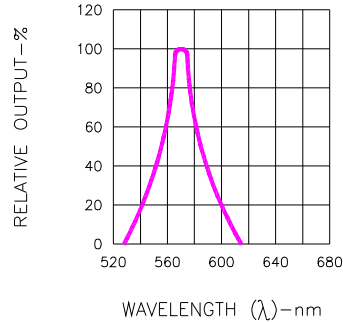


Fig.2 SPECTRAL RESPONSE

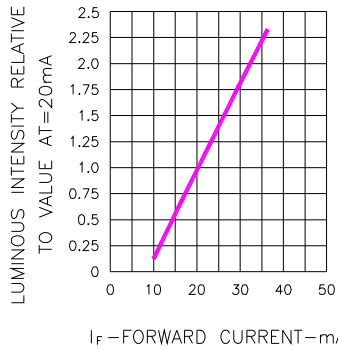


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

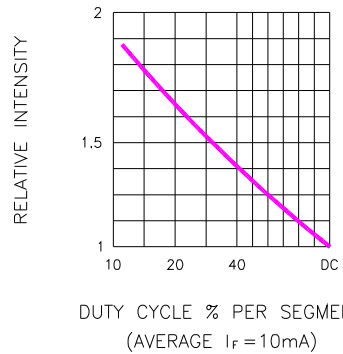


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

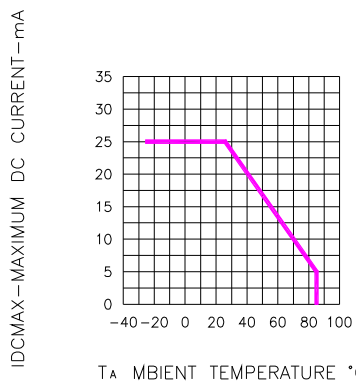


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

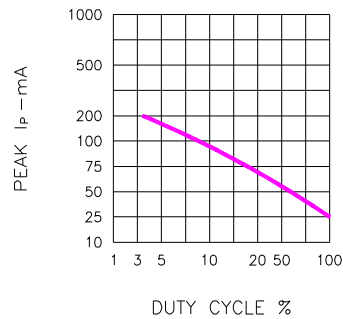


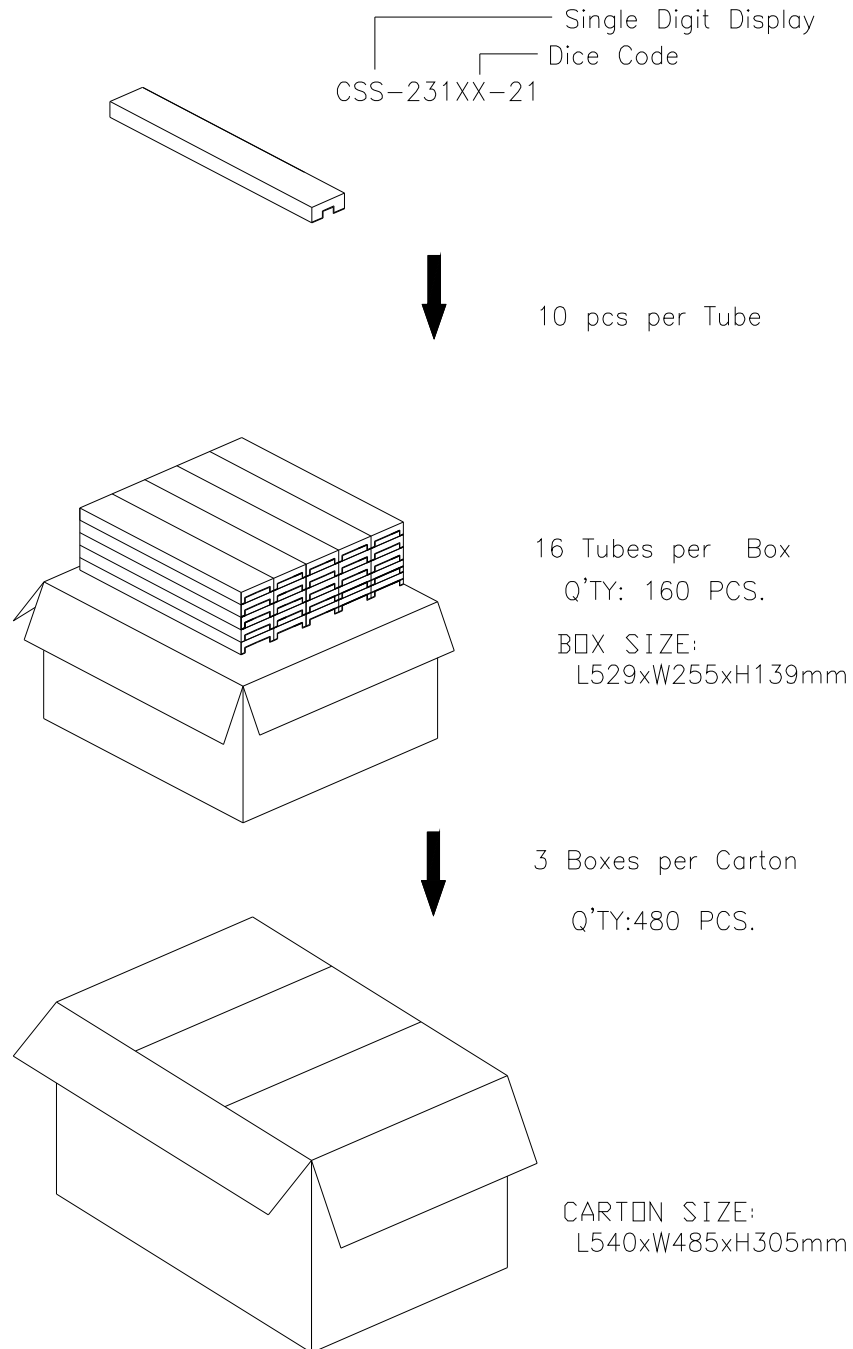
Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE (REFRESH RATE f=1 KHz)



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

Model No : CSS-2310G/2311G

■ Package Dimensions



Note: The specifications may be changed without prior notice. Please contact us for the latest specifications.