



Spec. No.	PS-ND-0807
Rev.	A

# PRODUCT SPECIFICATION

**Model No : CSS-4012E/4013E**

## Descriptions:

- 4.0 Inch Single Digit Display
- Emitting Color : Orange



CUSTOMER APPROVED	APPROVED BY	CHECKED BY	PREPARED BY
SIGNATURES			陳新強

**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:86-0575-88623888  
Fax:86-0575-88623112



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**Model No : CSS-4012E/4013E**

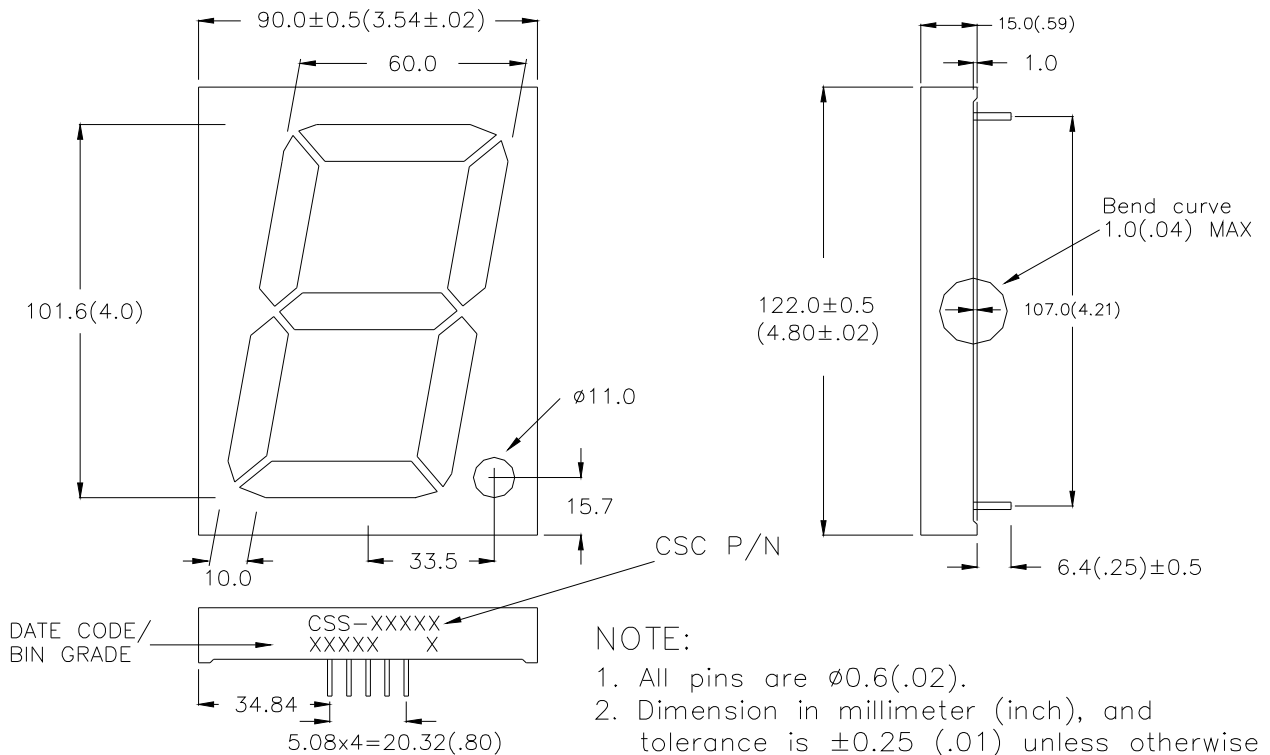
**■ Features -**

1. 4.0 inch (101.6mm) 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 -**

Model No.	Chip		Description
	Material	Emitted Color	
<b>CSS-4012E</b>	<b>GaAsP</b>	<b>Orange</b>	<b>Common Anode</b>
<b>CSS-4013E</b>	<b>GaAsP</b>	<b>Orange</b>	<b>Common Cathode</b>

**■ Mechanical Dimensions -**



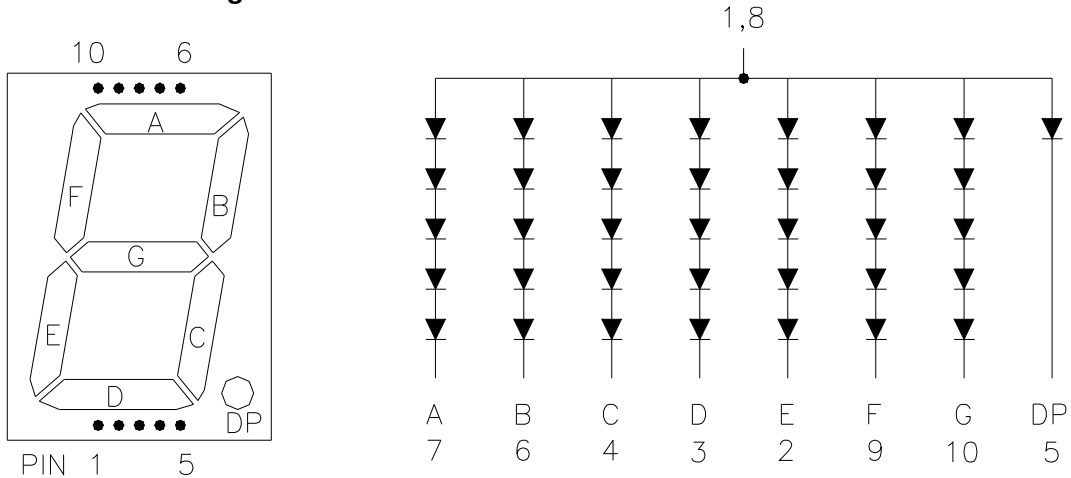
**NOTE:**

1. All pins are  $\phi 0.6$  (.02).
2. Dimension in millimeter (inch), and tolerance is  $\pm 0.25$  (.01) unless otherwise noted.



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**Internal Circuit Diagrams -**



CSS-4012 Common Anode  
(CSS-4013 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	IPF	90	mA
Continuous Forward Current Per Dice	-	0.33	mA/°C
Reverse Voltage Per Dice	VR	5	V
Operating Temperature	Topr	-35 ~ +85	°C
Storage Temperature	Tstg	-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(DP)	VF	-	10(2.0)	14(2.8)	V	IF=20mA
Luminous Intensity Per Segment	Iv	-	20	-	mcd	IF=10mA
Peak Emission Wavelength	$\lambda P$	-	632	-	nm	IF=20mA
Dominant Wavelength	$\lambda d$	-	624	-	nm	IF=20mA
Spectrum Radiation Bandwidth	$\Delta \lambda$	-	35	-	nm	IF=20mA
Reverse Current	IR	-	-	100	$\mu A$	VR=25V
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)**

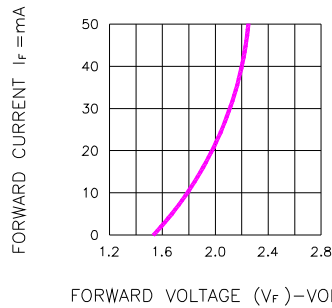


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

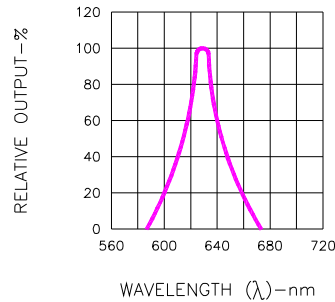


Fig.2 SPECTRAL RESPONSE

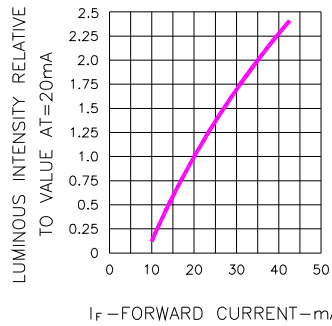


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

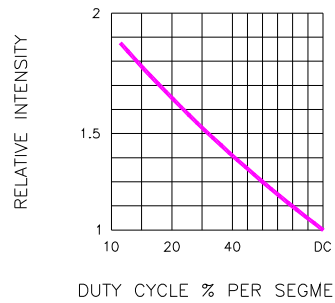


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

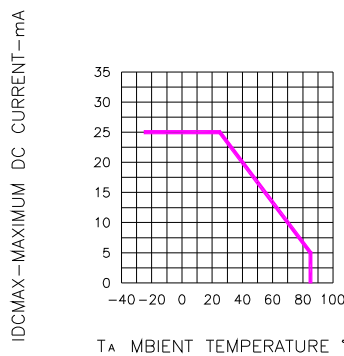


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

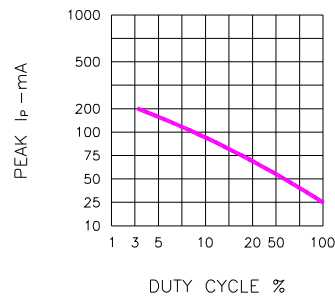


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE f=1 KHz)

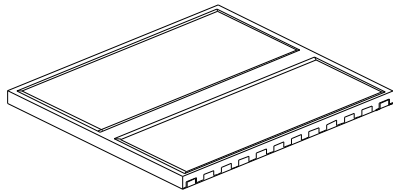


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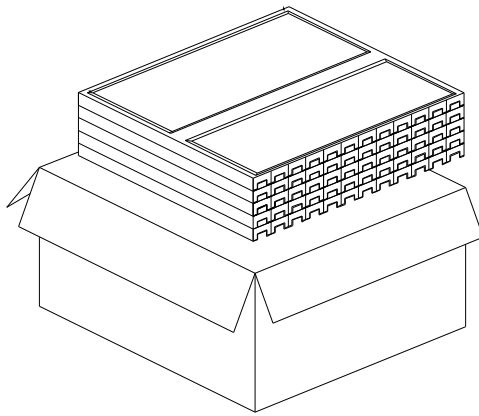
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■ Package Dimensions

SINGLE DIGIT Display  
Dice Code  
CSS-401XX

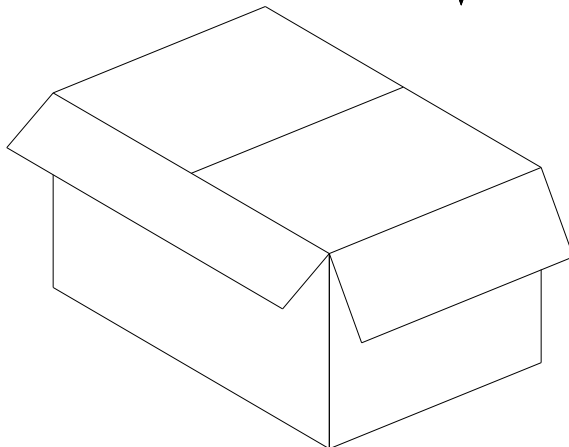


2pcs per polyform



41 polyforms per inner box  
TOTAL Q'TY: 82 PCS.

INNER BOX SIZE:  
L445xW360xH262mm



2 inner boxes per carton  
TOTAL Q'TY: 164 PCS.

CARTON SIZE:  
L460xW378xH558mm

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

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