



Spec. No.	PS-ND-0711
Rev.	A

# PRODUCT SPECIFICATION

**Model No : CSS-1018E/1019E**

## Descriptions:

- 1.0 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:86-0575-8623888

Fax:86-0575-8623112

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



<b>Spec. No.</b>	PS-ND-0711
<b>Rev.</b>	A

**Model No : CSS-1018E/1019E**

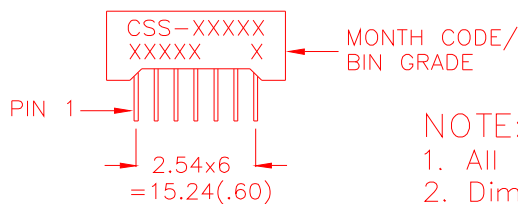
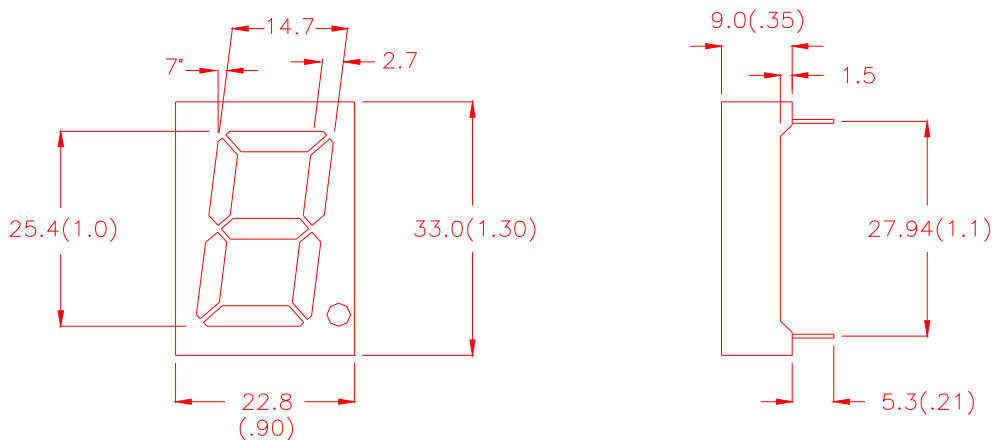
**■ Features -**

1. 1.0 inch (25.4mm) digit height.
2. Case mold type.
3. RoHs compliant.
4. Low power consumption.
5. ESD>1KV(HBM)
6. Easy mounting on P.C. board or socket.

**■ Device Selection Guide -**

Part No.	Chip		Description
	Material	Emitted Color	
<b>CSS-1018E</b>	<b>GaAsP</b>	<b>Orange</b>	<b>Common Anode</b>
<b>CSS-1019E</b>	<b>GaAsP</b>	<b>Orange</b>	<b>Common Cathode</b>

**■ Mechanical Dimensions -**



**NOTE:**

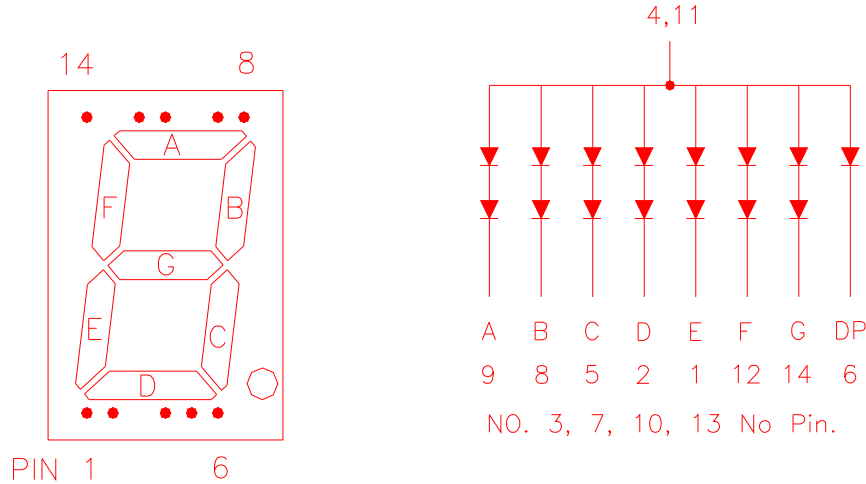
1. All pins are  $\phi 0.5(.02)$ .
2. Dimension in millimeter (inch), and tolerance is  $\pm 0.25 (.01)$  unless otherwise noted.



<b>Spec. No.</b>	PS-ND-0711
<b>Rev.</b>	A

**Model No : CSS-1018E/1019E**

**Internal Circuit Diagrams -**



CSS-1018 Common Anode.  
( CSS-1019 Common Cathode.)

**Absolute Maximum Rating -**

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Power Dissipation Per Dice	<b>Pd</b>	75	mW
Continuous Forward Current Per Dice	<b>IAF</b>	25	mA
Peak Current Per Dice(DUTY CYCLE 1/10,1K)	<b>IPF</b>	90	mA
Derating Linear From 25°C Per Dice	-	0.33	mA/°C
Reverse Voltage Per Dice	<b>VR</b>	5	V
Operating Temp.	<b>Topr</b>	-35 ~ +85	°C
Storage Temp.	<b>Tstg</b>	-35 ~ +85	°C
Solder temperature 1/16 inch below seating plane for 3 seconds at 260°C			



Spec. No.	PS-ND-0711
Rev.	A

**Model No : CSS-1018E/1019E**
**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	-	8	-	mcd	IF=20mA
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=10V
Luminous Intensity Matching Ratio	IV-m	-	-	2:1	-	IF=20mA



Spec. No.	PS-ND-0711
Rev.	A

**Model No : CSS-1018E/1019E**

**Typical Electrical / Optical Characteristics Curves -**

(Ta = 25°C Unless Otherwise Noted)

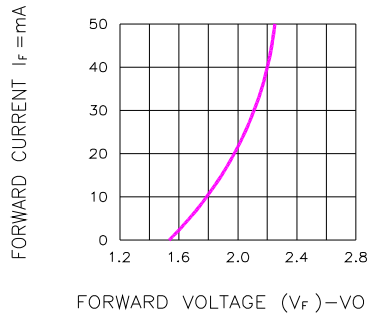


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

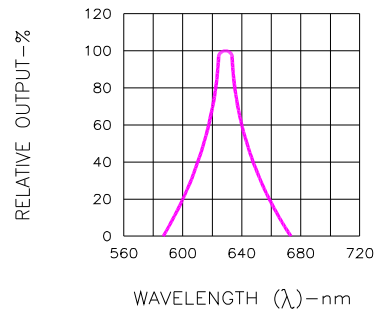


Fig.2 SPECTRAL RESPONSE

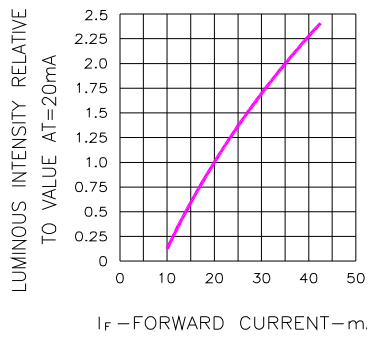


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

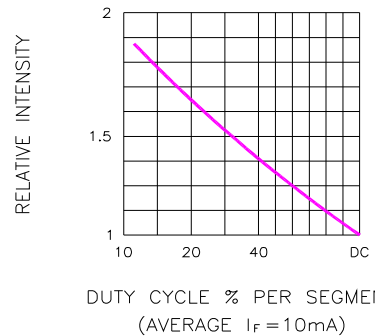


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

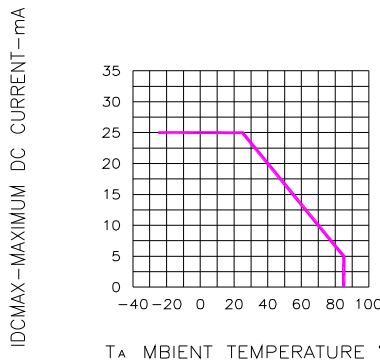


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

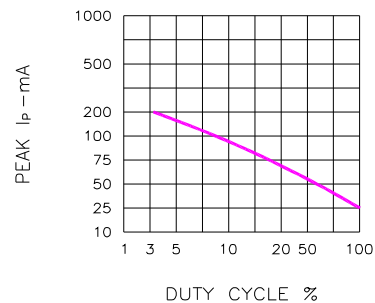


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE f=1 KHz)

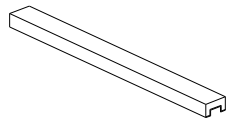


Spec. No.	PS-ND-0711
Rev.	A

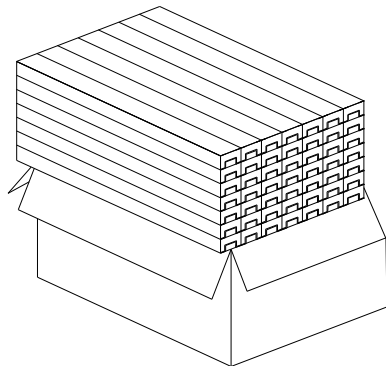
**Model No: CSS-1018E/1019E**

**Package Dimensions**

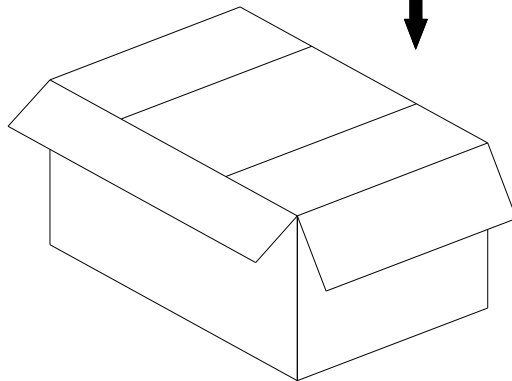
Single Digit Display  
Dice Code  
CSS-101XX



20 PCS per tube



49 Tubes per inner box  
Total Q'TY: 980 pcs



3 Inner boxes per carton.  
Total Q'TY: 2940 pcs

Box size:  
L54xW48.5xH30.5cm

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