



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

# PRODUCT SPECIFICATION

**Model No : CSS-3108M9/3109M9**

## Descriptions:

- 0.31 Inch Single Digit Display
- Emitting Color : Super Bright Green



CUSTOMER APPROVED	APPROVED BY	CHECKED BY	PREPARED BY
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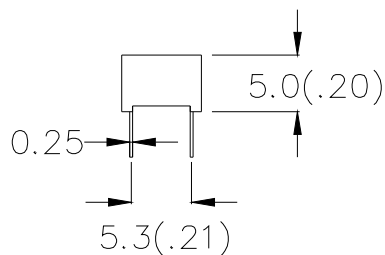
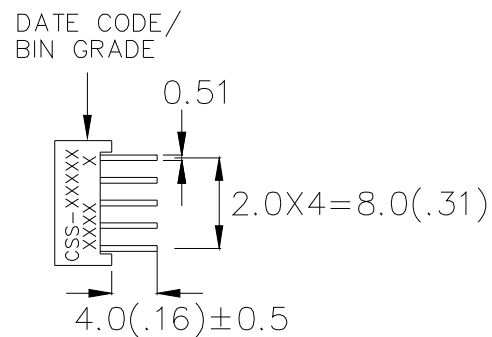
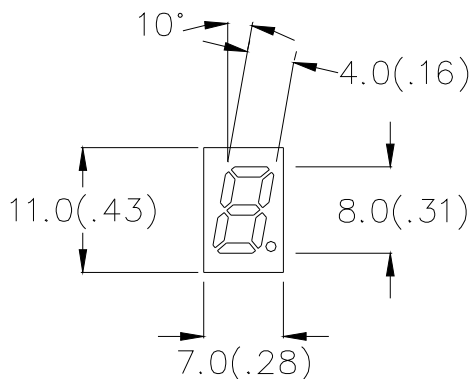
■ **Features -**

1. 0.31 inch (8.0mm) 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-3108M9</b>	<b>AlGaInP</b>	<b>Super Bright Green</b>	<b>Common Anode</b>
<b>CSS-3109M9</b>	<b>AlGaInP</b>	<b>Super Bright Green</b>	<b>Common Cathode</b>

■ **Mechanical Dimensions -**



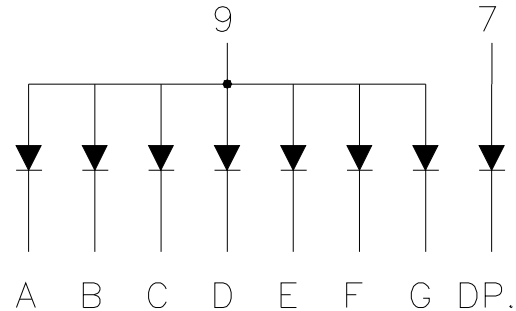
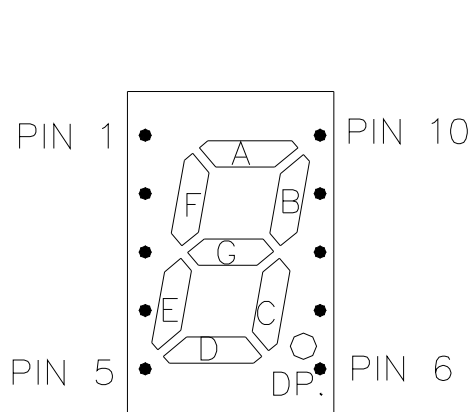
NOTE:

1. Dimension in millimeter (inch), and tolerance is  $\pm 0.25$  (.01) unless otherwise noted.



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Internal Circuit Diagrams -



CSS-3108 Common Anode.  
( CSS-3109 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	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	VF	-	2.1	2.8	V	IF=20mA
Luminous Intensity Per Segment	Iv	4000	10000	-	ucd	IF=10mA
Peak Emission Wavelength	$\lambda P$	-	572	-	nm	IF=20mA
Dominant Wavelength	$\lambda d$	-	570	-	nm	IF=20mA
Spectrum Radiation Bandwidth	$\Delta \lambda$	-	20	-	nm	IF=20mA
Reverse Current	IR	-	-	100	$\mu A$	VR=5V
Luminous Intensity Matching Ratio	IV-m	-	-	2:1	-	IF=10mA



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### Typical Electrical / Optical Characteristics Curves -

(Ta = 25°C Unless Otherwise Noted)

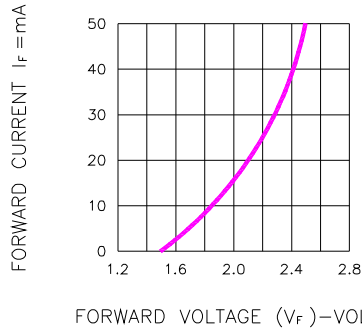


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

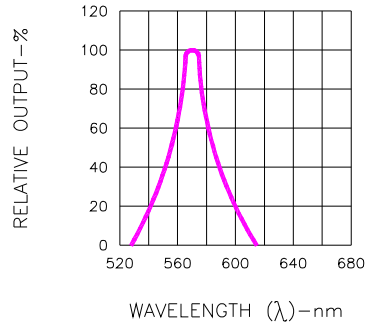


Fig.2 SPECTRAL RESPONSE

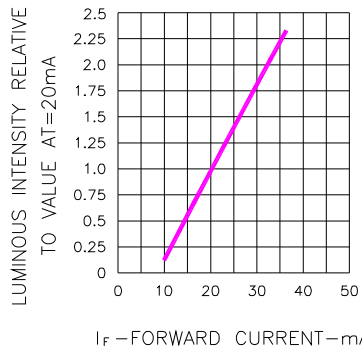


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

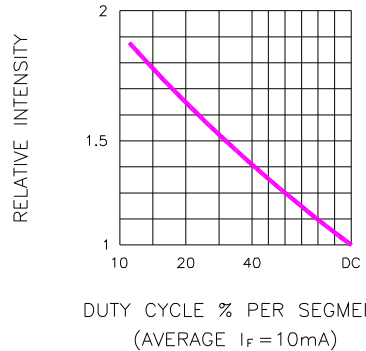


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

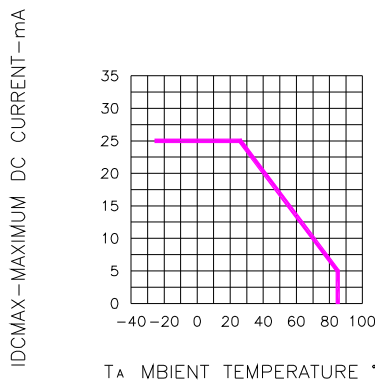


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

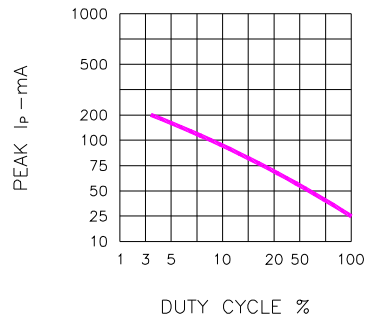


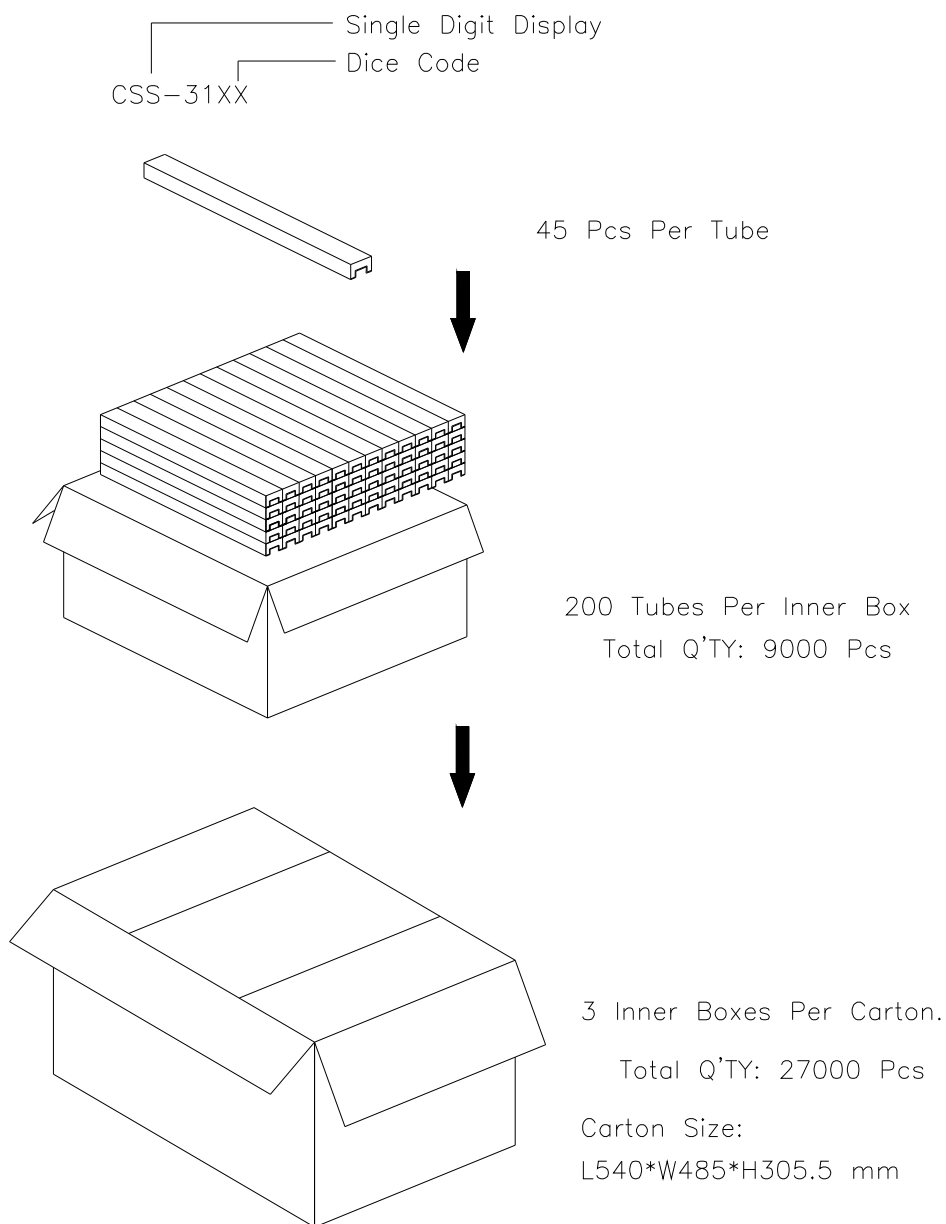
Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE f=1 KHz)



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### ■ Package Dimensions



Note: The specifications are subject to change without notice. Please contact us for updated information.  
<http://www.csctw.com.tw>