



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

PRODUCT SPECIFICATION

Model No : CSS-4012S/4013S

Descriptions:

- 4.0 Inch Single Digit Display
- Emitting Color : Super Bright Red



CUSTOMER APPROVED	APPROVED BY	CHECKED BY	PREPARED BY
SIGNATURES			陳新強

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Model No : CSS-4012S/4013S

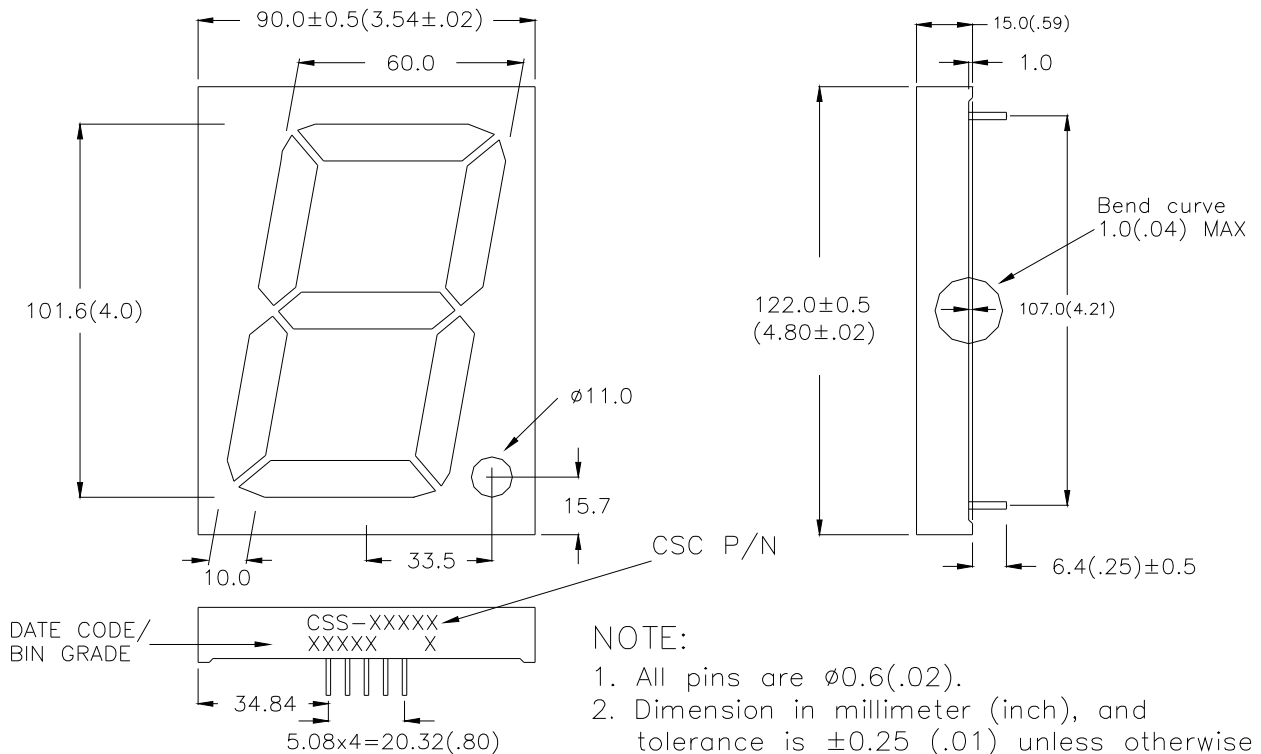
Features -

1. 4.0 inch (4.0mm) 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	
CSS-4012S	AlGaAs	Super Bright Red	Common Anode
CSS-4013S	AlGaAs	Super Bright Red	Common Cathode

Mechanical Dimensions -



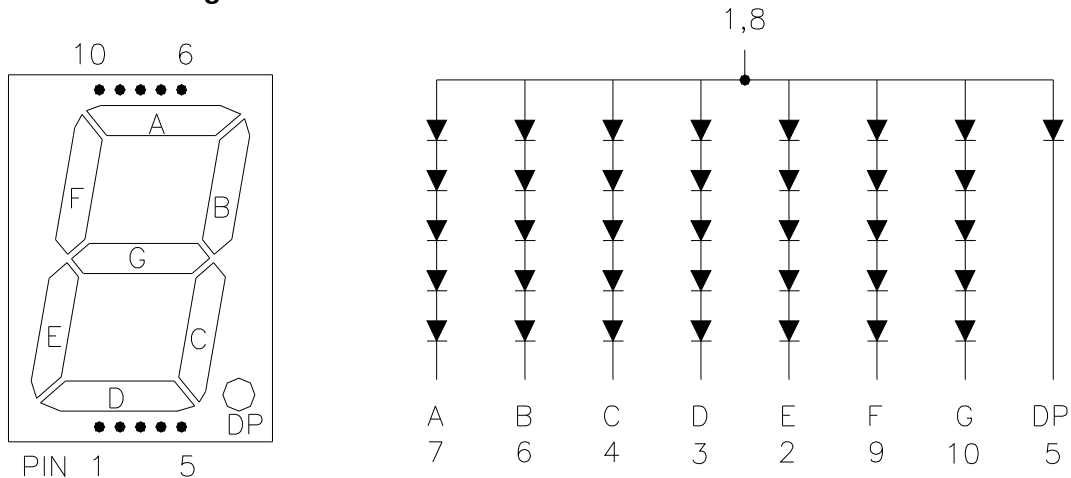
NOTE:

1. All pins are $\phi 0.6$ (.02).
2. Dimension in millimeter (inch), and tolerance is ± 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	75	mW
Continuous Forward Current Per Dice	IAF	30	mA
Peak Current Per Dice(Duty cycle 1/10, 1KHz)	IPF	120	mA
Continuous Forward Current Per Dice	-	0.42	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	-	9.0(1.8)	12.5(2.5)	V	IF=20mA
Luminous Intensity Per Segment	Iv	-	35	-	mcd	IF=10mA
Peak Emission Wavelength	λP	-	660	-	nm	IF=20mA
Dominant Wavelength	λd	-	644	-	nm	IF=20mA
Spectrum Radiation Bandwidth	$\Delta \lambda$	-	20	-	nm	IF=20mA
Reverse Current	IR	-	-	100	μA	VR=25V
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)

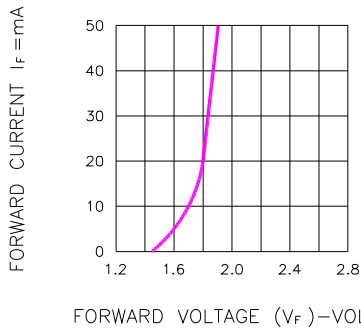


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

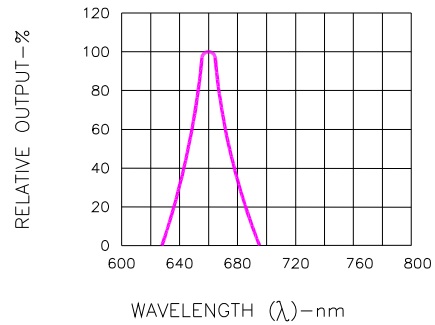


Fig.2 SPECTRAL RESPONSE

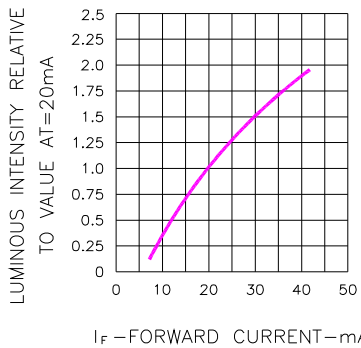


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

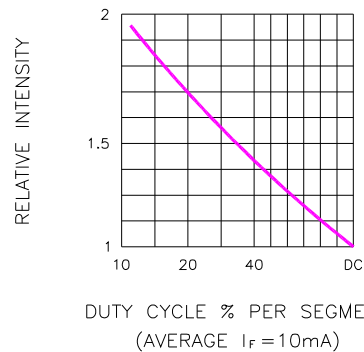


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

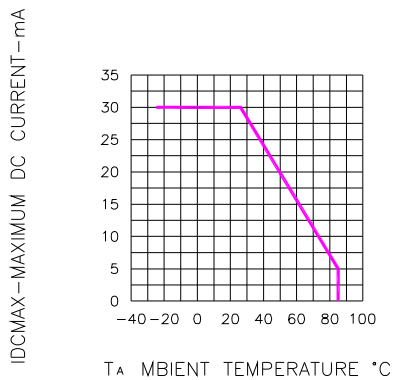


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

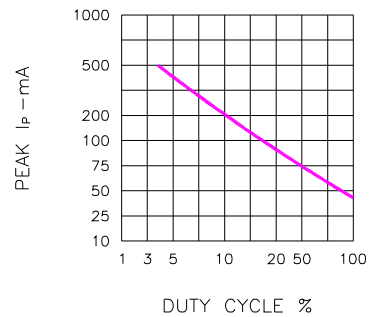


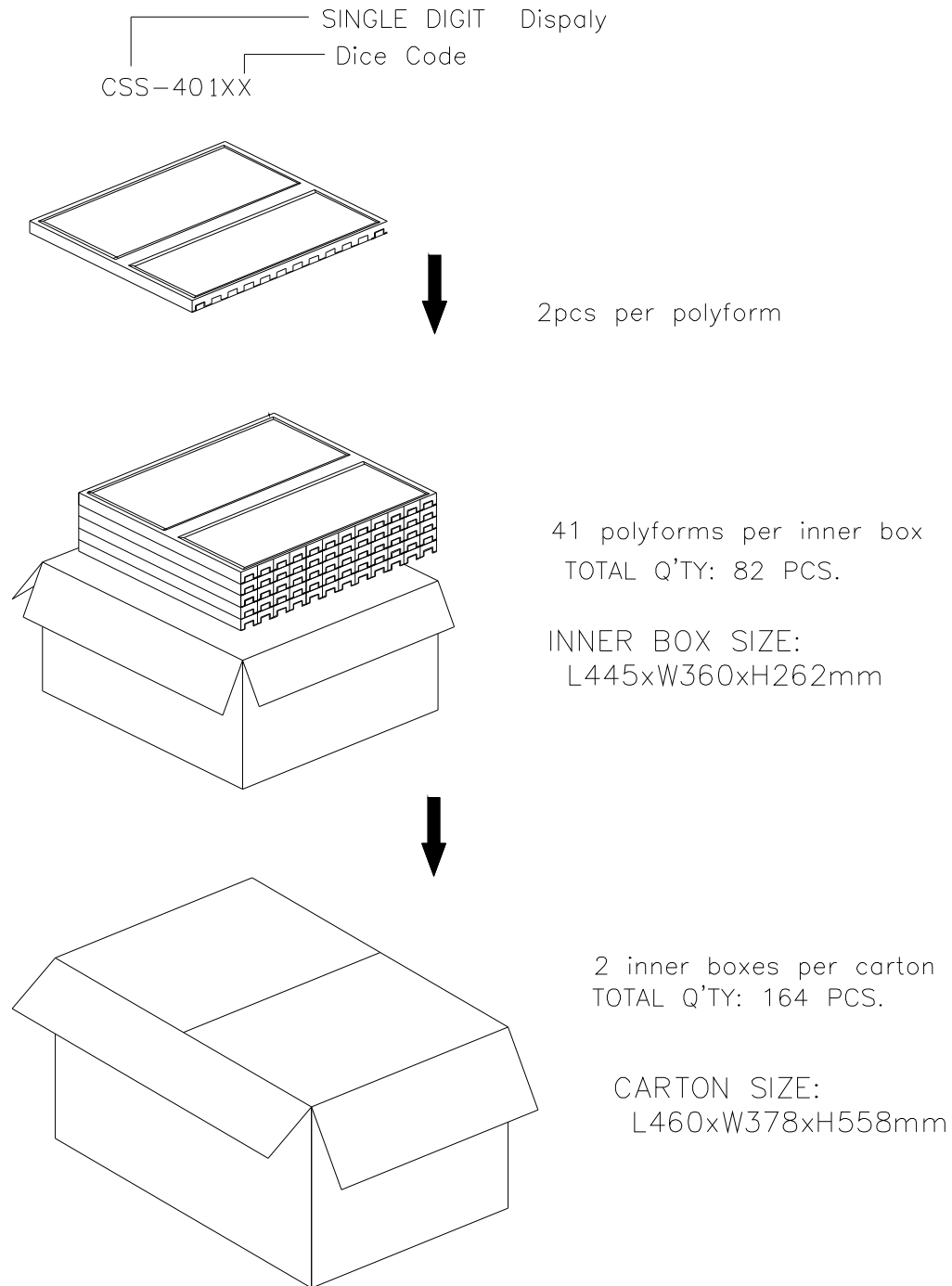
Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE f = 1 KHz)



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■ Package Dimensions



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

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