CHINA
SEMICONDUCTOR
CORPORATION

Spec. No.	PS-ND-0710
Rev.	A

PRODUCT SPECIFICATION

Model No：CSS-2318SG/2319SG

Descriptions:

- 2.3 Inch Single Digit Display
- Emitting Color：Super-Bright Red & Yellow-Green

CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY

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Model No：CSS-2318SG/2319SG

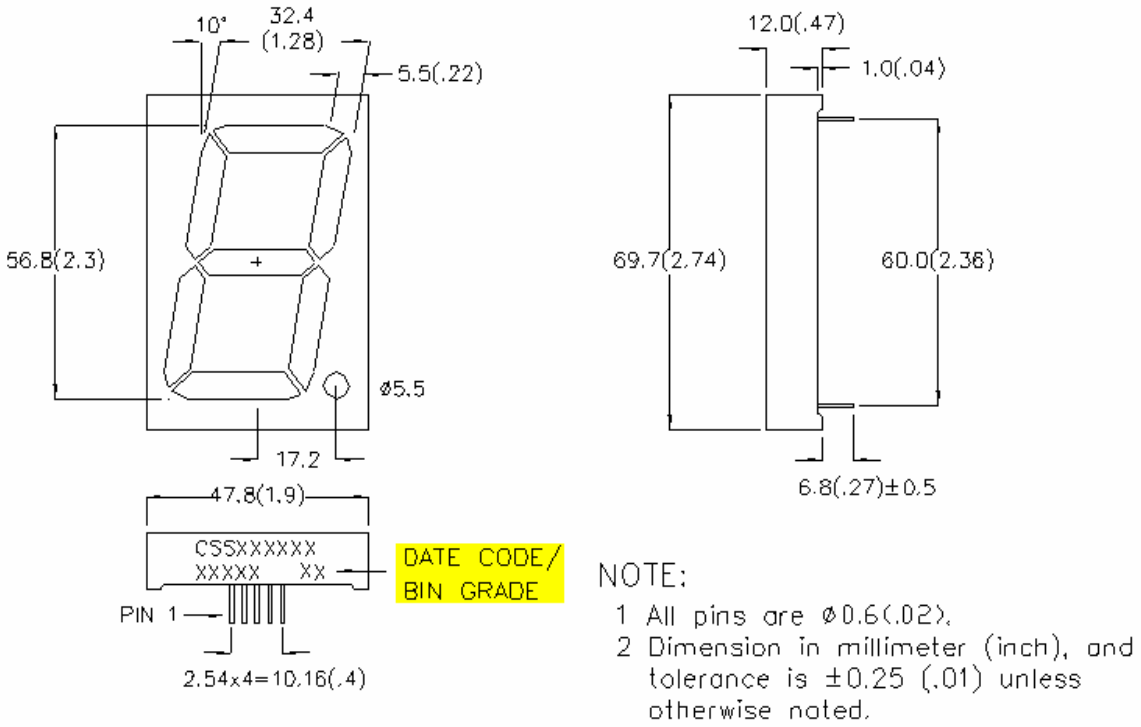
■ Features -

1. 2.3 inch (56.8mm) 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	
CSS-2318SG	AlGaAs	Super-Bright Red	Common Anode
	GaP	Yellow-Green	
CSS-2319SG	AlGaAs	Super-Bright Red	Common Cathode
	GaP	Yellow-Green	

■ Mechanical Dimensions -



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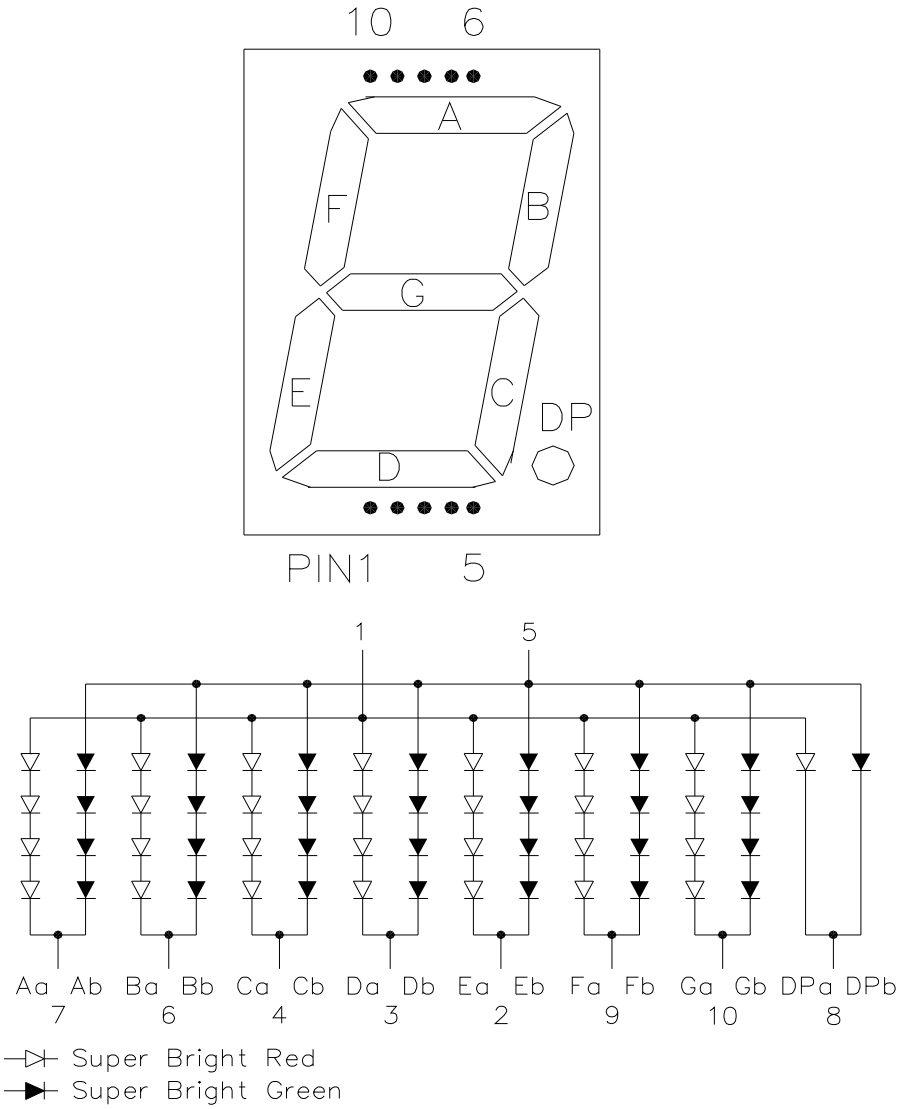
■ Internal Circuit Diagrams -



CSS-2318 Common Anode
(CSS-2319 Common Cathode.)

Model No：CSS-2318SG/2319SG

■ Absolute Maximum Rating -

(Ta=25℃)

Parameter	Symbol	Super-Bright Red	Unit
Power Dissipation Per Dice	Pd	75	mW
Continuous Forward Current Per Dice	IAF	30	mA
Peak Current Per Dice	IPF	200	mA
Reverse Voltage Per Dice	VR	5	V
Operating Temperature	Topr	-35 ~ +85	℃
Storage Temperature	Tstg	-35 ~ +85	℃
Solder emperature 1/16 inch below seating plane for 3 seconds at 260℃			

■ Electro-optical Characteristics -

(Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment (DP)	VF	-	7.2(1.8)	10(2.5)	V	IF=20mA
Luminous Intensity Per Dot	Iv	-	35	-	mcd	IF=10mA
Peak Emission Wavelength	λP	-	660	-	nm	IF=20mA
Spectrum Radiation Bandwidth	Δλ	-	20	-	nm	IF=20mA
Reverse Current	IR	-	-	100	μA	VR=16V
Luminous Intensity Matching Ratio	IV-m	-	-	2:1	-	IF=20mA

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■ Absolute Maximum Rating -

(Ta=25℃)

Parameter	Symbol	Yellow-Green	Unit
Power Dissipation Per Dice	Pd	70	mW
Continuous Forward Current Per Dice	IAF	25	mA
Peak Current Per Dice	IPF	90	mA
Reverse Voltage Per Dice	VR	5	V
Operating Temperature	Topr	-35 ~ +85	℃
Storage Temperature	Tstg	-35 ~ +85	℃
Solder emperature 1/16 inch below seating plane for 3 seconds at 260℃			

■ Electro-optical Characteristics -

(Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment	VF	-	8.4(2.1)	11.2(2.8)	V	IF=20mA
Luminous Intensity Per Dot	Iv	-	25	-	mcd	IF=10mA
Peak Emission Wavelength	λP	-	570	-	nm	IF=20mA
Spectrum Radiation Bandwidth	Δλ	-	30	-	nm	IF=20mA
Reverse Current	IR	-	-	100	μA	VR=16V
Luminous Intensity Matching Ratio	IV-m	-	-	2:1	-	IF=20mA

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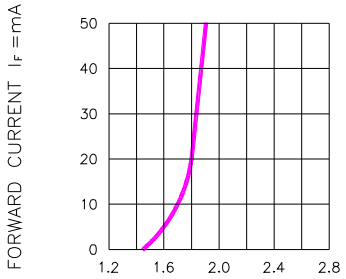
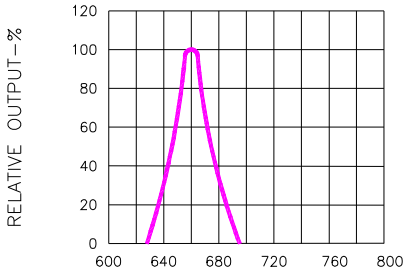
■ Typical Electrical / Optical Charateristics Curves -Orange

(Ta = 25℃ Unless Otherwise Noted)



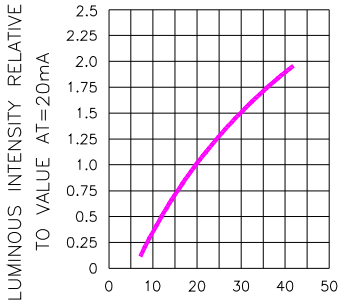
FORWARD VOLTAGE (VF)–VOLTS

Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE



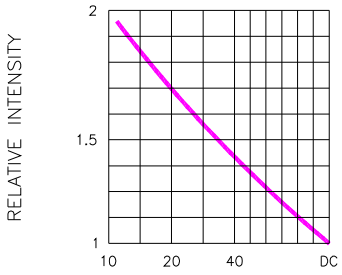
WAVELENGTH (λ)–nm

Fig.2 SPECTRAL RESPONSE



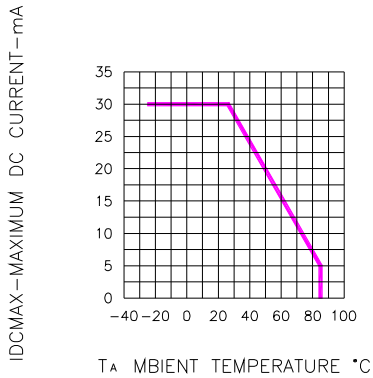
IF–FORWARD CURRENT–mA

Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



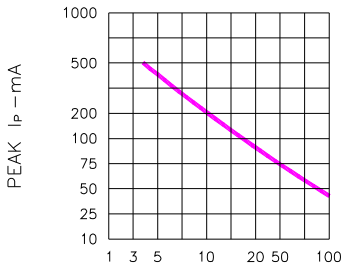
DUTY CYCLE % PER SEGMENT
(AVERAGE IF=10mA)

Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE



TA MBIENT TEMPERATURE °C

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



DUTY CYCLE %

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

Model No：CSS-2318SG/2319SG

■ Typical Electrical / Optical Charateristics Curves -Yellow-Green

(Ta = 25℃ Unless Otherwise Noted)

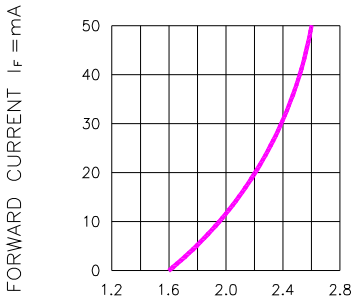


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

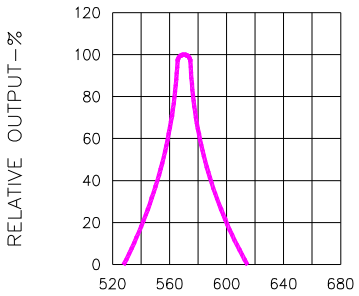


Fig.2 SPECTRAL RESPONSE

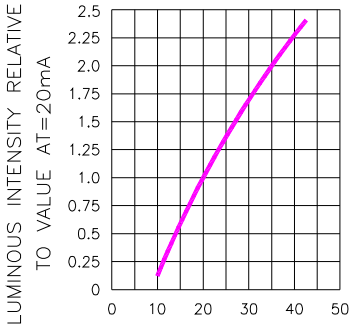


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

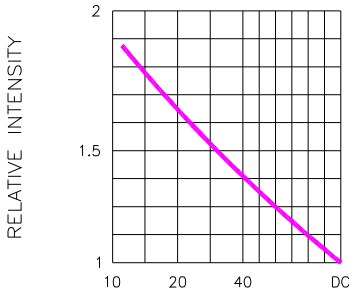


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

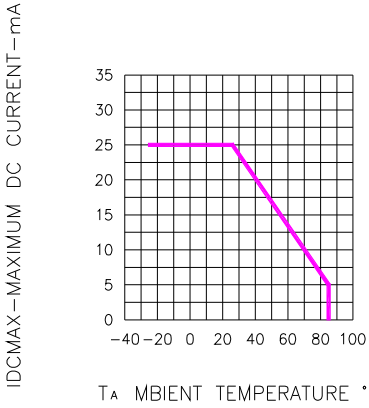


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

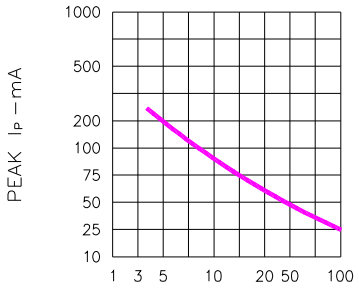
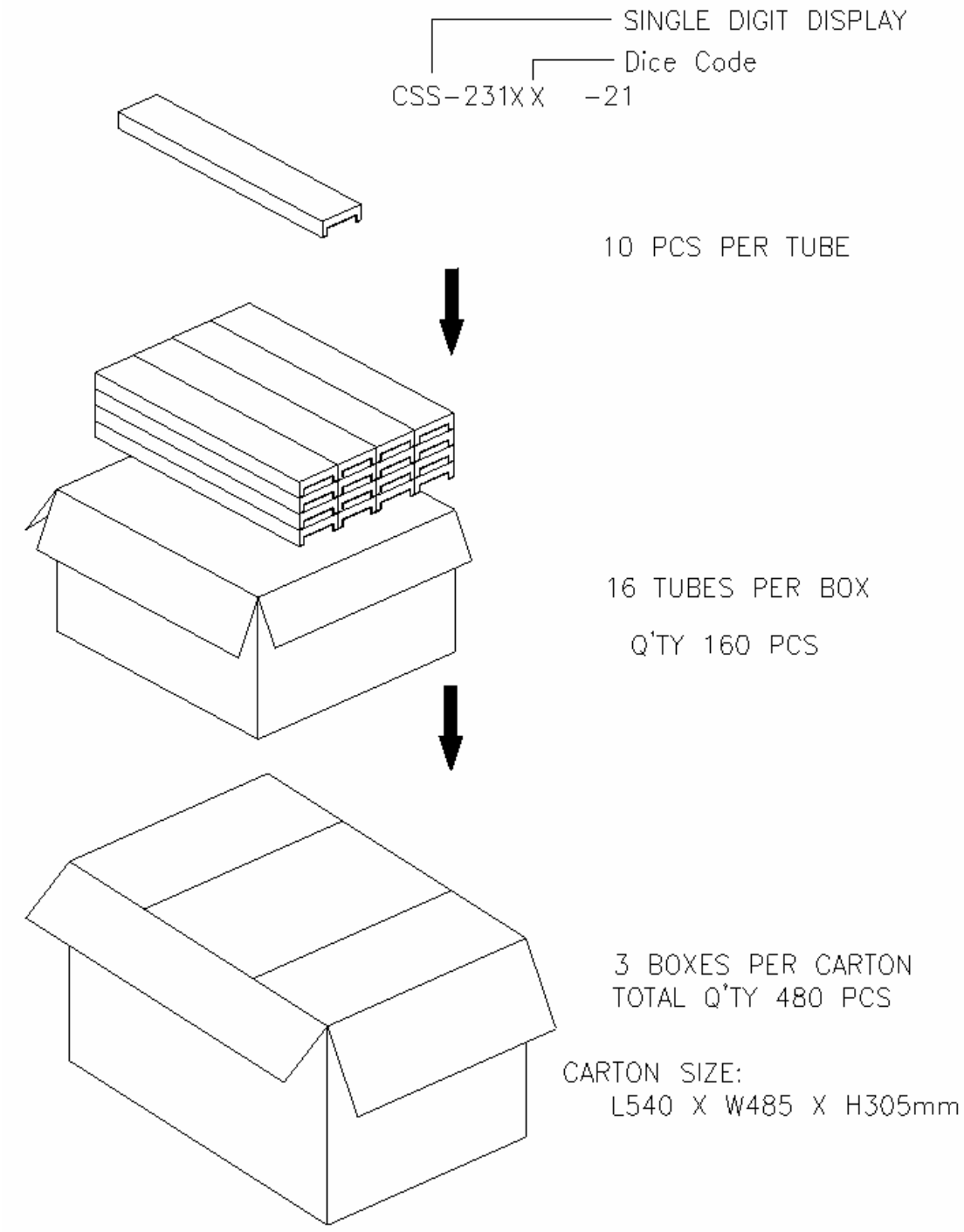


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE f=1 KHz)

Model No：CSS-2318SG/2319SG

■ Package Dimensions



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