



CHINA
SEMICONDUCTOR
CORPORATION

Spec. No.	PS-DS-S20122/S20123B7
Rev.	A

PRODUCT SPECIFICATION

Model No:CSS-S20122B7/S20123B7

Descriptions:

- 0.2 Inch Single Digit SMD Display
- Emitting Color : Super Bright Blue



CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY

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Model No : CSS-S20122/S20123B7

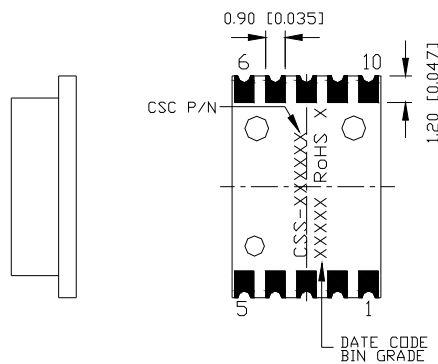
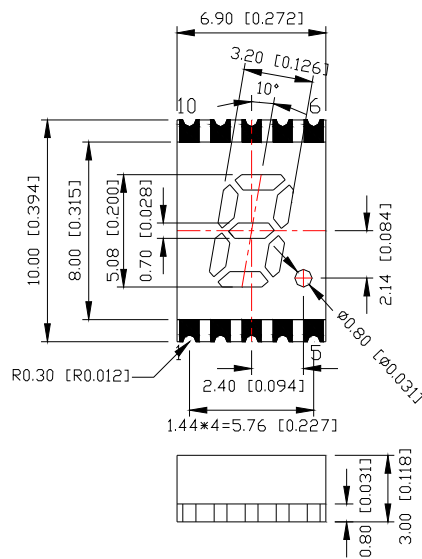
Features -

1. 0.2 inch (5.08mm) digit height.
2. Qualified according to JEDEC moisture sensitivity Level 2a.
3. RoHS compliant.
4. Low power consumption.
5. ESD>1KV(HBM).
6. Easy mounting on P.C. board.

Device Selection Guide -

Model No.	Chip		Description
	Material	Emitting Color	
CSS-S20122B7	InGaN	Super Bright Blue	Common Anode
CSS-S20123B7	InGaN	Super Bright Blue	Common Cathode

Mechanical Dimensions -



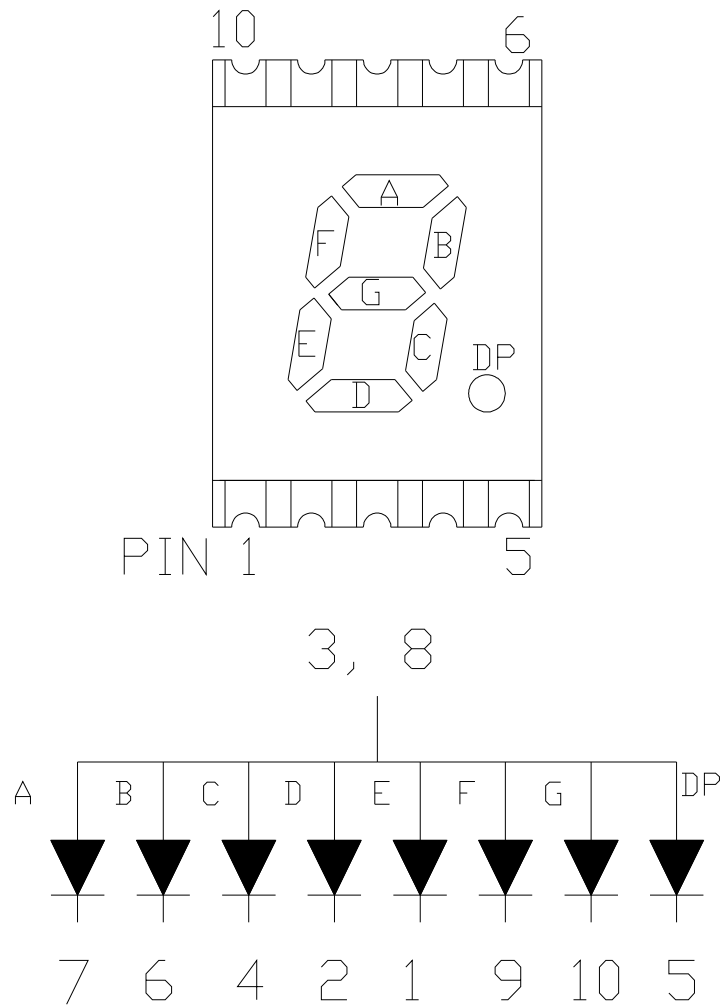
Notes:

All dimensions are in millimeters [inches],
and tolerance is ± 0.25 [0.010]
unless otherwise noted.



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■ Internal Circuit Diagrams -



CSS-S20122 Common Anode
(CSS-S20123 Common Cathode)



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■ Absolute Maximum Rating -

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Power Dissipation Per Dice	P _{AD}	120	mW
Continuous Forward Current Per Dice	I _{AF}	30	mA
Peak Current Per Dice(duty cycle 1/10,1KHz)	I _{PF}	100	mA
Derating Linear From 25°C Per Dice	-	0.4	mA/°C
Reverse Voltage Per Dice	V _R	5	V
Operating Temp.	T _{opr}	-40 ~ +105	°C
Storage Temp.	T _{stg}	-40 ~ +105	°C

Note:Solder temperature 1/16 inch below seating plane for 3 seconds at 260°C

■ Electro-optical Characteristics -

(Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment	V _F	-	3.5	4	V	I _F =20mA
Luminous Intensity Per Segment	I _v	2500	6000	-	ucd	I _F =10mA
Dominant Wavelength	λ _d	-	470	-	nm	I _F =20mA
Spectrum Radiation Bandwidth	Δλ	-	30	-	nm	I _F =20mA
Reverse Current	I _R	-	-	50	μA	V _R =5V
Luminous Intensity Matching Ratio	I _{V-m}	-	-	2:1	-	I _F =10mA



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■ Typical Electrical / Optical Characteristics Curves -

(Ta = 25°C Unless Otherwise Noted)

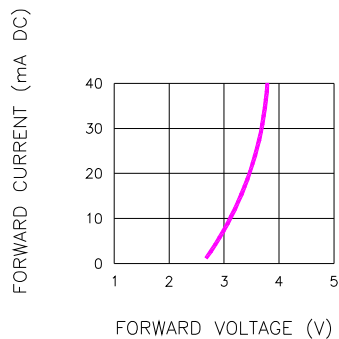


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

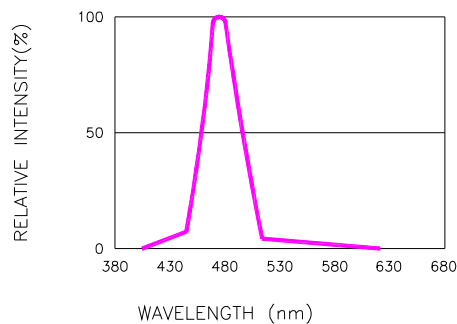


Fig.2 RELATIVE INTENSITY VS. WAVELENGTH

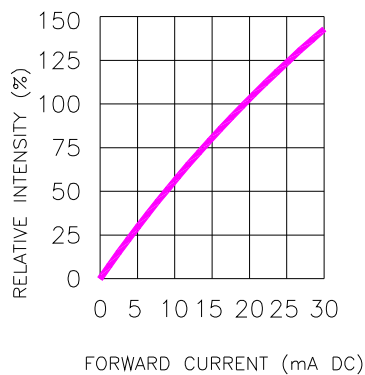


Fig.3 RELATIVE INTENSITY
VS. FORWARD CURRENT

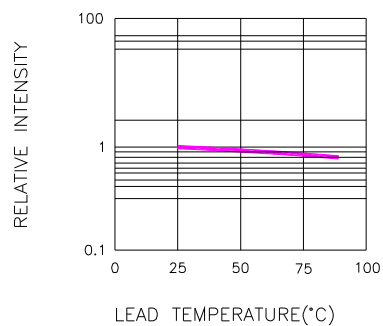


Fig.4 RELATIVE INTENSITY VS. LEAD TEMPERATURE
(PULSED 20 mA; 300us
PULSE, 10ms PERIOD)

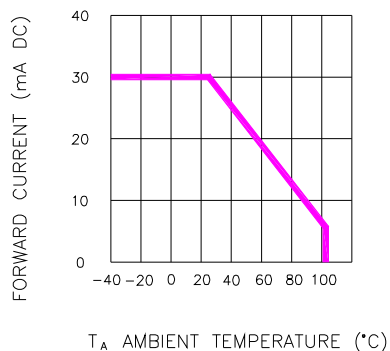


Fig.5 FORWARD CURRENT
VS. AMBIENT TEMPERATURE

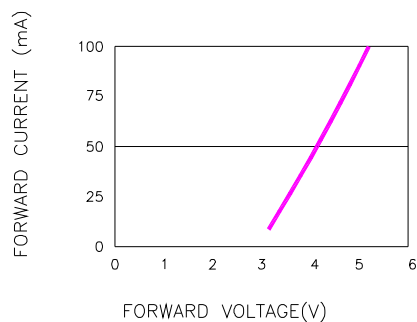


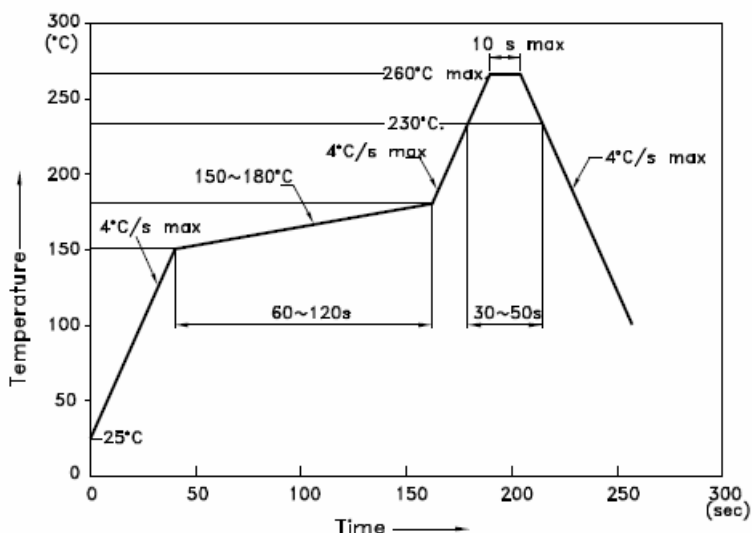
Fig.6 PEAK FORWARD VOLTAGE
VS. FORWARD(100us TEST PULSE,
1% DUTY CYCLE)



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SMT REFLOW SOLDERING INSTRUCTIONS

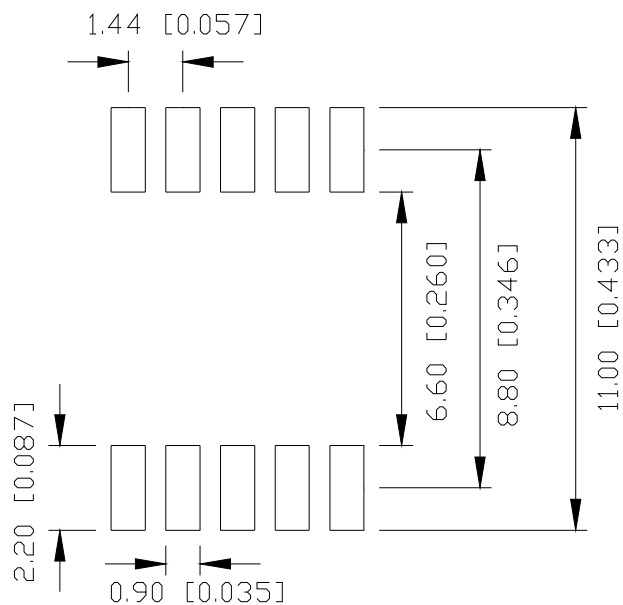
■ IR Reflow Temperature / Time :



NOTES:

1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

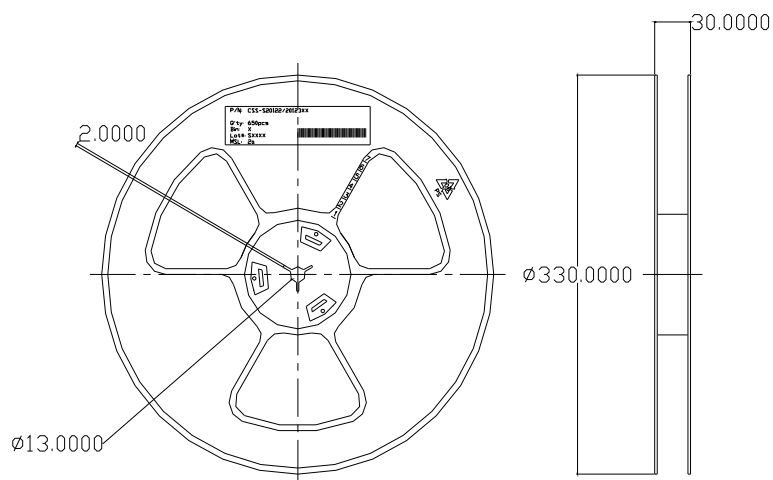
■ Soldering Pad Size





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REEL DIMENSIONS



PACKING & LABEL SPECIFICATIONS

