



Spec. No.	PS-DD-S40224/S40225B7
Rev.	A

# PRODUCT SPECIFICATION

**Model No:CSD-S40224B7/S40225B7**

## Descriptions:

- 0.4 Inch Dual Digit SMD Display
- Emitting Color : Super Bright Blue



CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY

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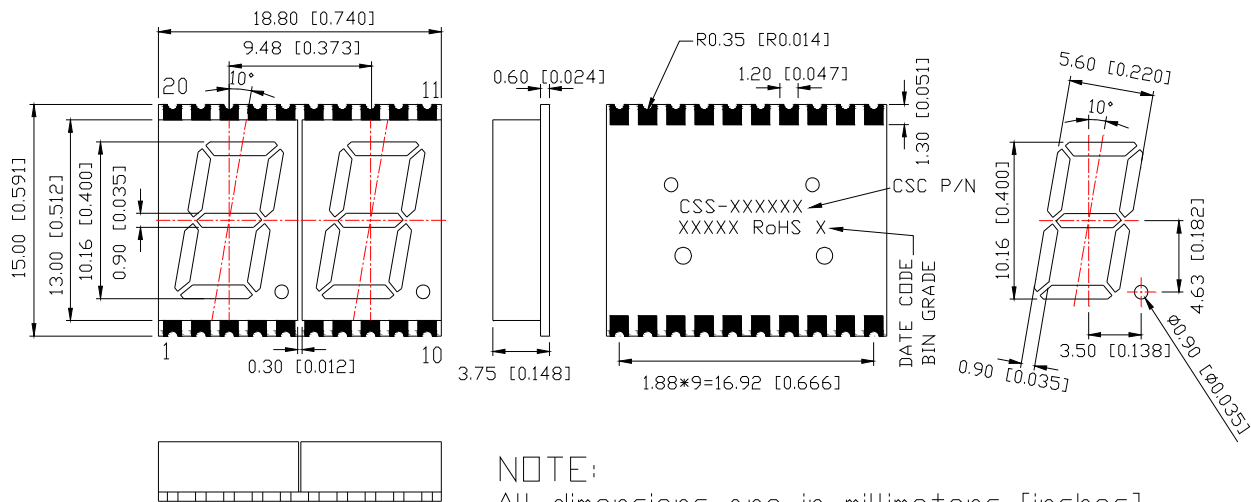
**Features -**

1. 0.4 inch (10.16mm) 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	
<b>CSD-S40224B7</b>	<b>InGaN</b>	<b>Super Bright Blue</b>	<b>Common Anode</b>
<b>CSD-S40225B7</b>	<b>InGaN</b>	<b>Super Bright Blue</b>	<b>Common Cathode</b>

**Mechanical Dimensions -**



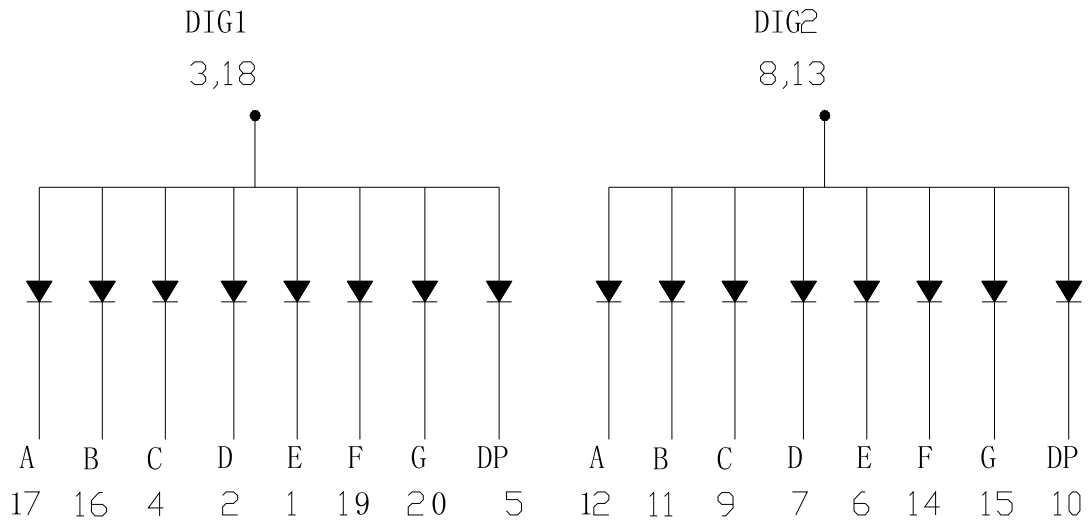
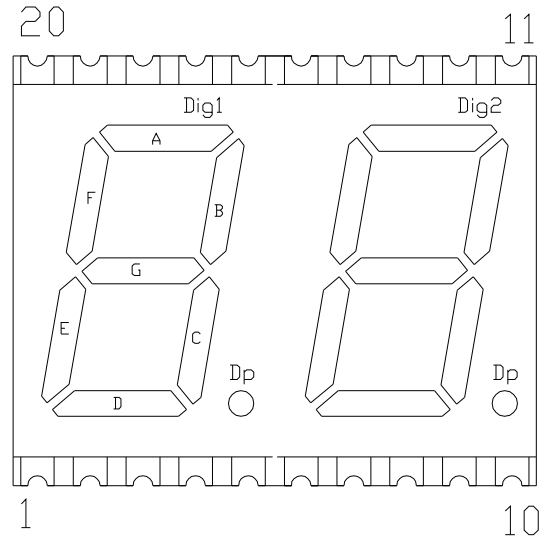
**NOTE:**

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



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Internal Circuit Diagrams -



CSD-S40224 Common Anode.  
( CSD-S40225 Is Common Cathode.)



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■ **Absolute Maximum Rating -**

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Power Dissipation Per Dice	<b>P<sub>AD</sub></b>	120	mW
Continuous Forward Current Per Dice	<b>I<sub>AF</sub></b>	30	mA
Peak Current Per Dice(duty cycle 1/10,1KHz)	<b>I<sub>PF</sub></b>	100	mA
Derating Linear From 25°C Per Dice	-	0.4	mA/°C
Reverse Voltage Per Dice	<b>V<sub>R</sub></b>	5	V
Operating Temp.	<b>T<sub>opr</sub></b>	-40 ~ +105	°C
Storage Temp.	<b>T<sub>stg</sub></b>	-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	<b>V<sub>F</sub></b>	-	3.5	4	V	I <sub>F</sub> =20mA
Luminous Intensity Per Segment	<b>I<sub>v</sub></b>	4	10	-	mcd	I <sub>F</sub> =10mA
Dominant Wavelength	$\lambda_d$	-	470	-	nm	I <sub>F</sub> =20mA
Spectrum Radiation Bandwidth	$\Delta \lambda$	-	30	-	nm	I <sub>F</sub> =20mA
Reverse Current	<b>I<sub>R</sub></b>	-	-	100	$\mu A$	V <sub>R</sub> =5V
Luminous Intensity Matching Ratio	<b>I<sub>V-m</sub></b>	-	-	2:1	-	I <sub>F</sub> =10mA



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■ Typical Electrical / Optical Characteristics Curves -

(Ta = 25°C Unless Otherwise Noted)

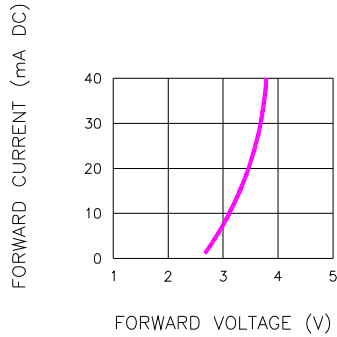


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

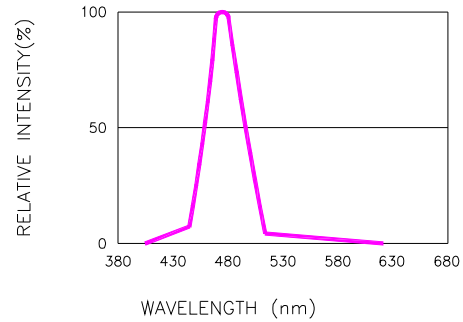


Fig.2 RELATIVE INTENSITY VS. WAVELENGTH

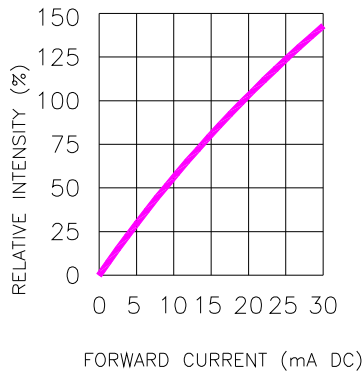


Fig.3 RELATIVE INTENSITY VS. FORWARD CURRENT

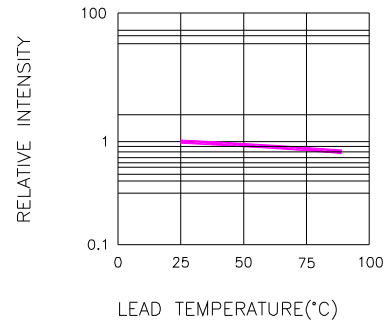


Fig.4 RELATIVE INTENSITY VS. LEAD TEMPERATURE  
(PULSED 20 mA; 300us PULSE, 10ms PERIOD)

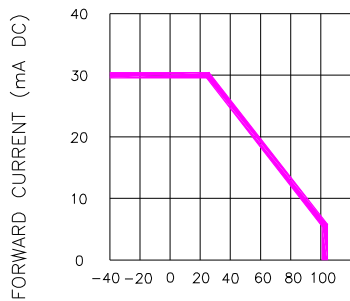


Fig.5 FORWARD CURRENT VS. AMBIENT TEMPERATURE

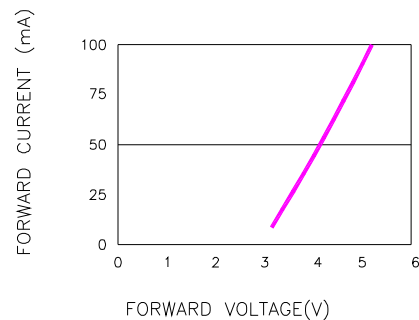


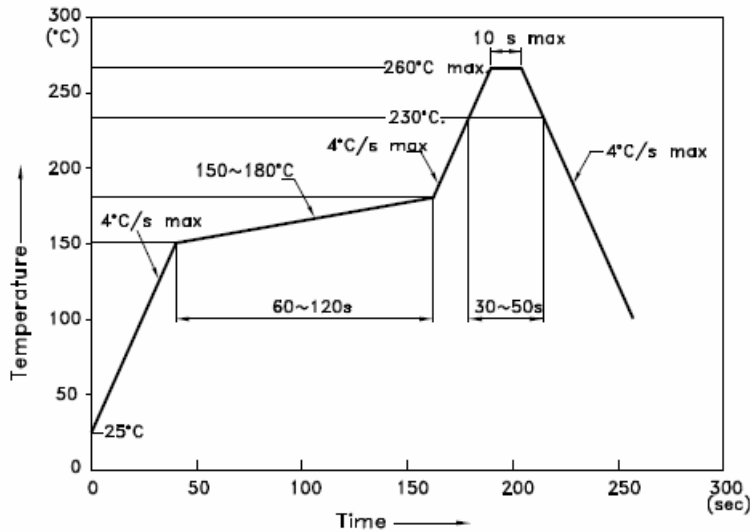
Fig.6 PEAK FORWARD VOLTAGE VS. FORWARD (100us TEST PULSE, 1% DUTY CYCLE)



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## SMT REFLOW SOLDERING INSTRUCTIONS

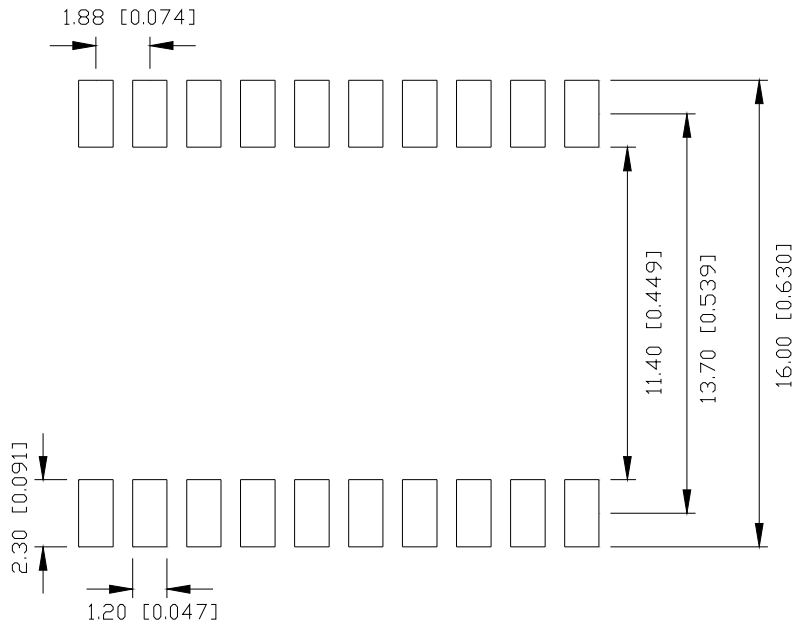
### IR Reflow Temperature / Time :



#### 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.

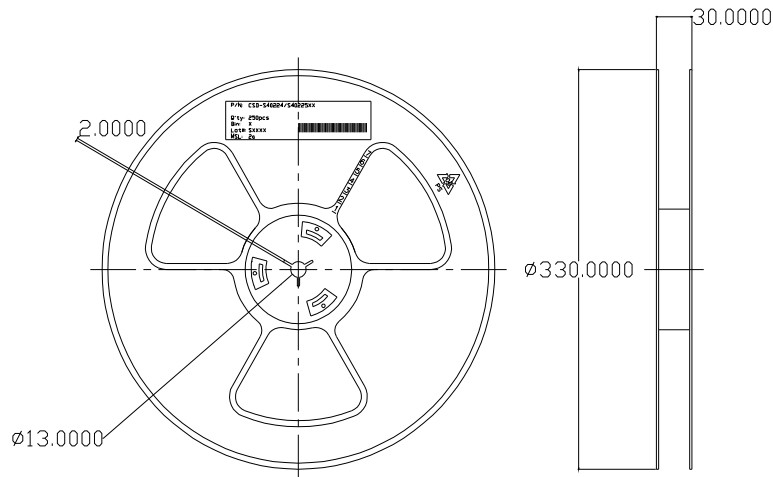
### Soldering Pad Size





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### REEL DIMENSIONS



### PACKING & LABEL SPECIFICATIONS

