



# PRODUCT SPECIFICATION

**Model No:CSD-S40228T9/S40229T9**

## Descriptions:

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



CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY

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**Model No : CSD-S40228/S40229T9**

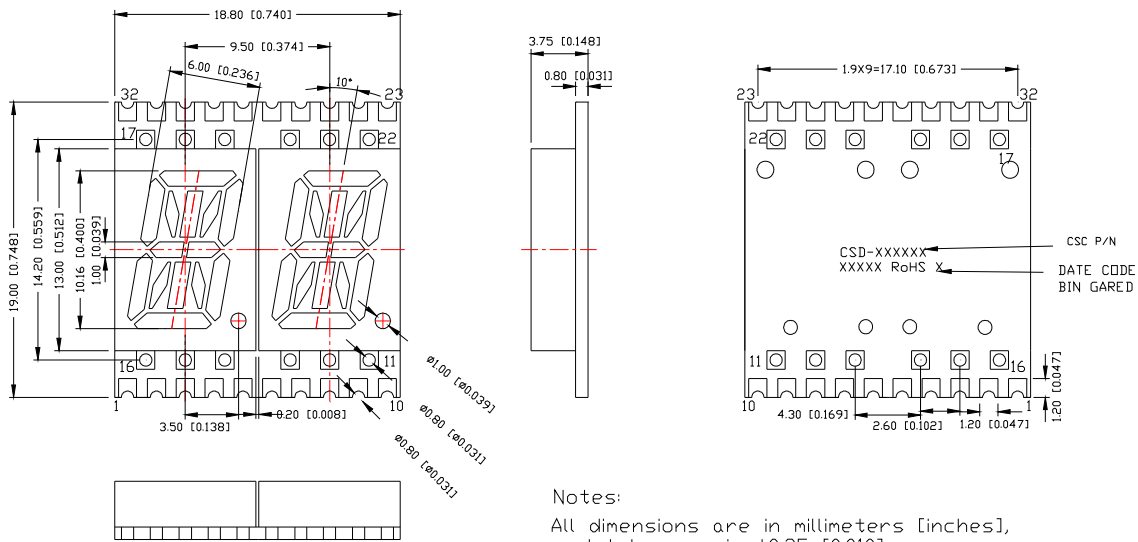
**Features -**

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. Easy mounting on P.C. board.

**Device Selection Guide -**

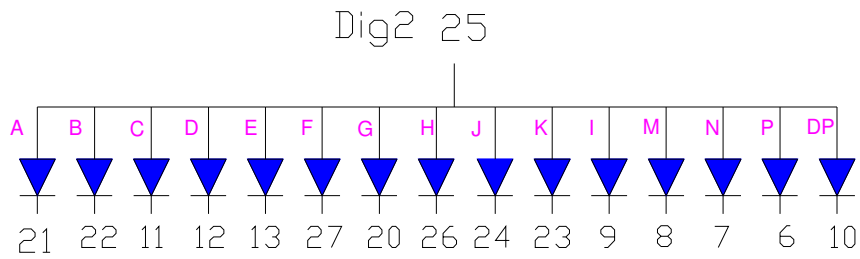
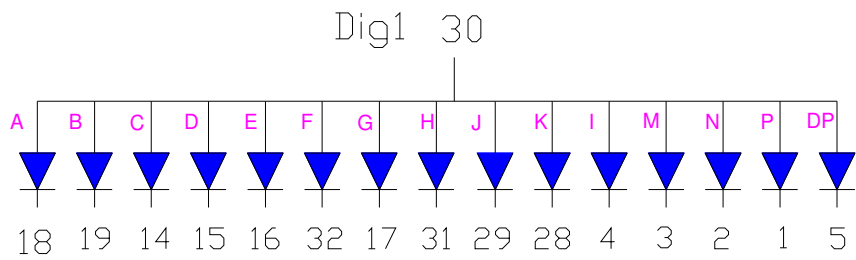
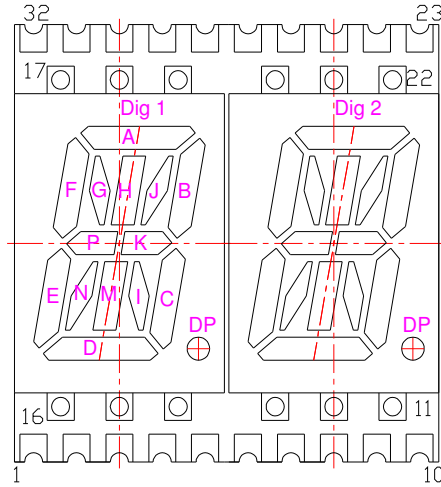
Model No.	Chip		Description
	Material	Emitting Color	
CSD-S40228T9	AlGaInP	Super Bright Yellow	Common Anode
CSD-S40229T9	AlGaInP	Super Bright Yellow	Common Cathode

**Mechanical Dimensions -**



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Internal Circuit Diagrams -




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**■ Absolute Maximum Rating -**

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Power Dissipation Per Dice	<b>P<sub>AD</sub></b>	70	mW
Continuous Forward Current Per Dice	<b>I<sub>AF</sub></b>	25	mA
Peak Current Per Dice(duty cycle 1/10,1KHz)	<b>I<sub>PF</sub></b>	90	mA
Derating Linear From 25°C Per Dice	-	0.33	mA/°C
Reverse Voltage Per Dice	<b>V<sub>R</sub></b>	5	V
Operating Temp.	<b>Topr</b>	-40 ~ +105	°C
Storage Temp.	<b>Tstg</b>	-40 ~ +105	°C

**■ Electro-optical Characteristics -**

(Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment	<b>V<sub>F</sub></b>	-	2.1	2.8	V	I <sub>F</sub> =20mA
Luminous Intensity Per Segment	<b>I<sub>v</sub></b>	5	13	-	mcd	I <sub>F</sub> =10mA
Peak Emission Wavelength	<b>λ<sub>P</sub></b>	-	592	-	nm	I <sub>F</sub> =20mA
Spectrum Radiation Bandwidth	<b>Δλ</b>	-	20	-	nm	I <sub>F</sub> =20mA
Reverse Current	<b>I<sub>R</sub></b>	-	-	100	μA	V <sub>R</sub> =5V
Luminous Intensity Matching Ratio	<b>I<sub>V-m</sub></b>	-	-	2:1	-	I <sub>F</sub> =10mA



<b>Spec. No.</b>	PS-DD-S40228/S40229T9
<b>Rev.</b>	A

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**Typical Electrical / Optical Characteristics Curves -**

(Ta = 25°C Unless Otherwise Noted)

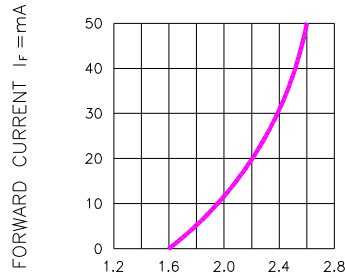


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

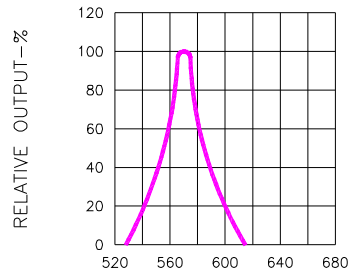


Fig.2 SPECTRAL RESPONSE

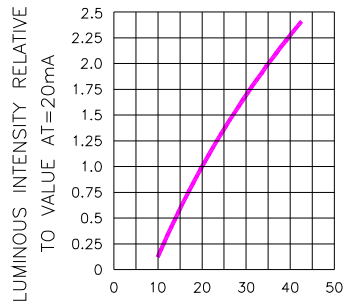


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

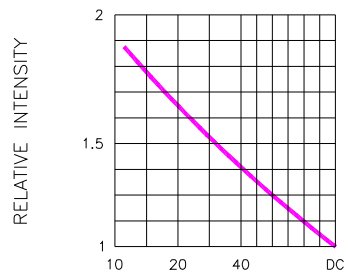


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE  
(AVERAGE  $I_f = 10\text{mA}$ )

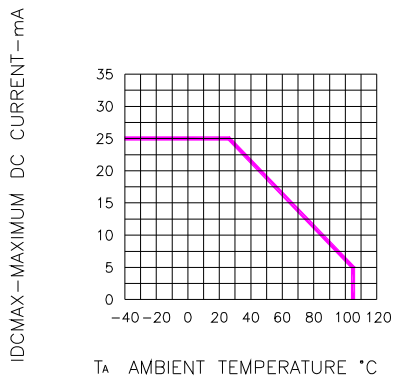


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

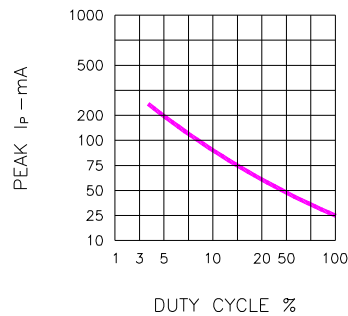
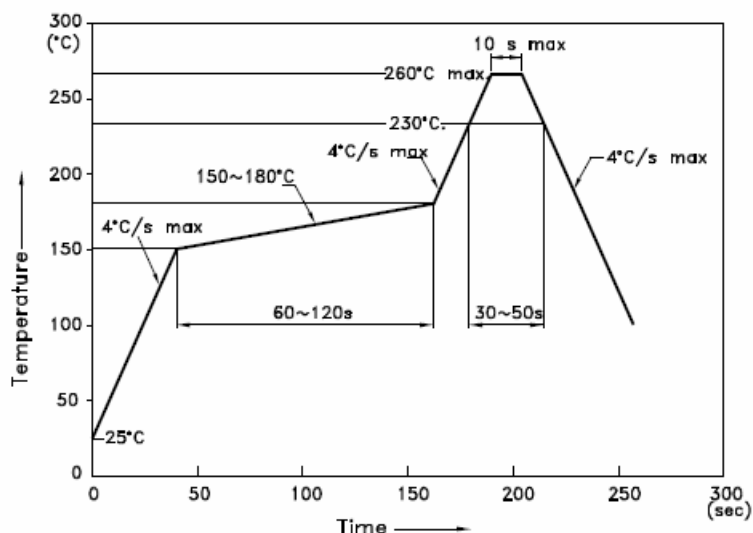


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE %  
(REFRESH RATE  $f = 1\text{ KHz}$ )


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## SMT REFLOW SOLDERING INSTRUCTIONS

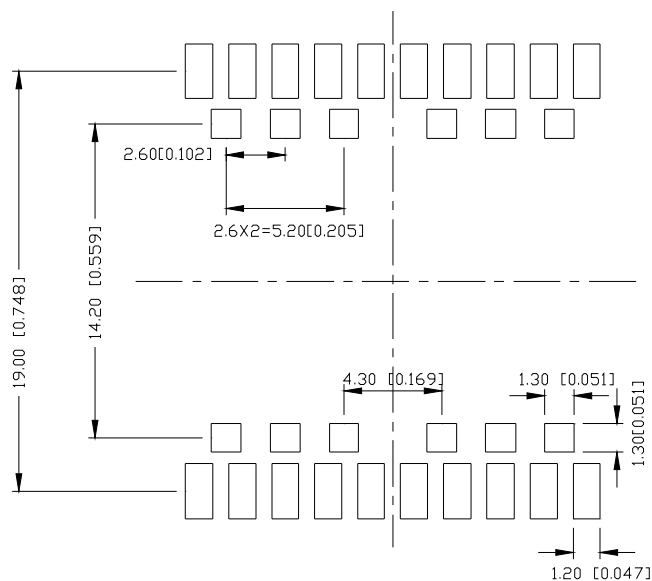
### IR Reflow Temperature / Time :



#### 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

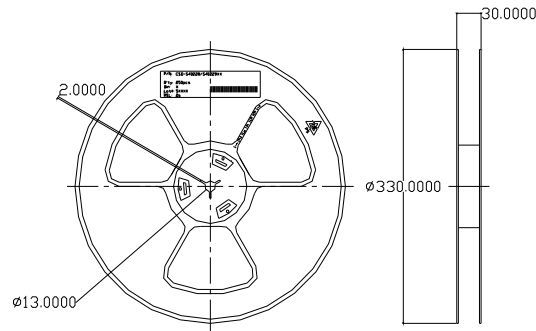




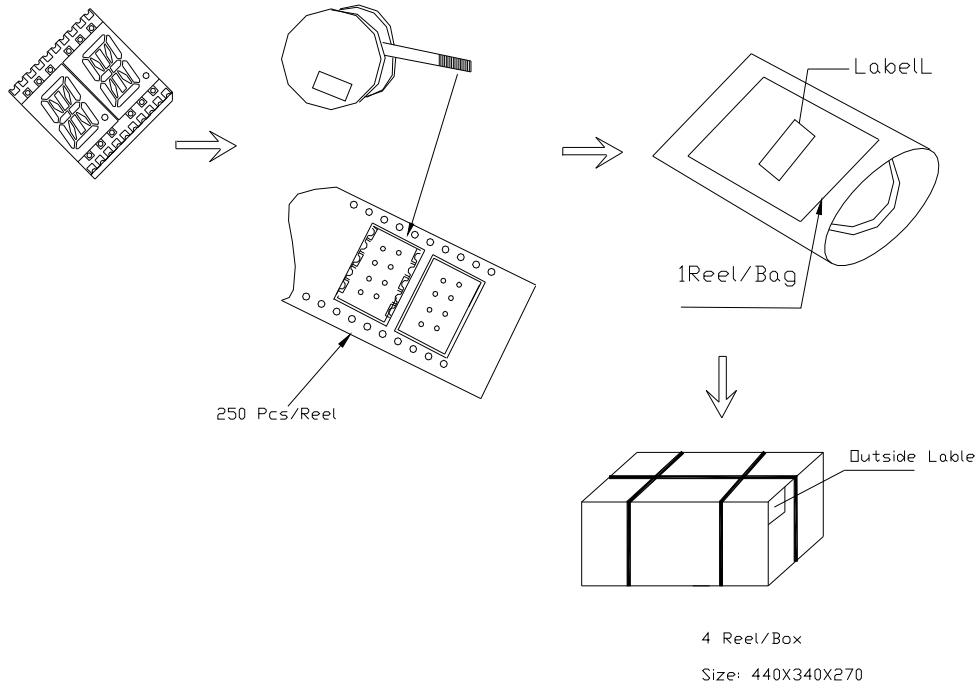
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REEL DIMENSIONS



PACKING & LABEL SPECIFICATIONS



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