



# PRODUCT SPECIFICATION

**Model No:CSD-S40224G/S40225G**

## Descriptions:

- 0.4 Inch Dual Digit SMD Display
- Emitting Color : Yellow Green



CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY

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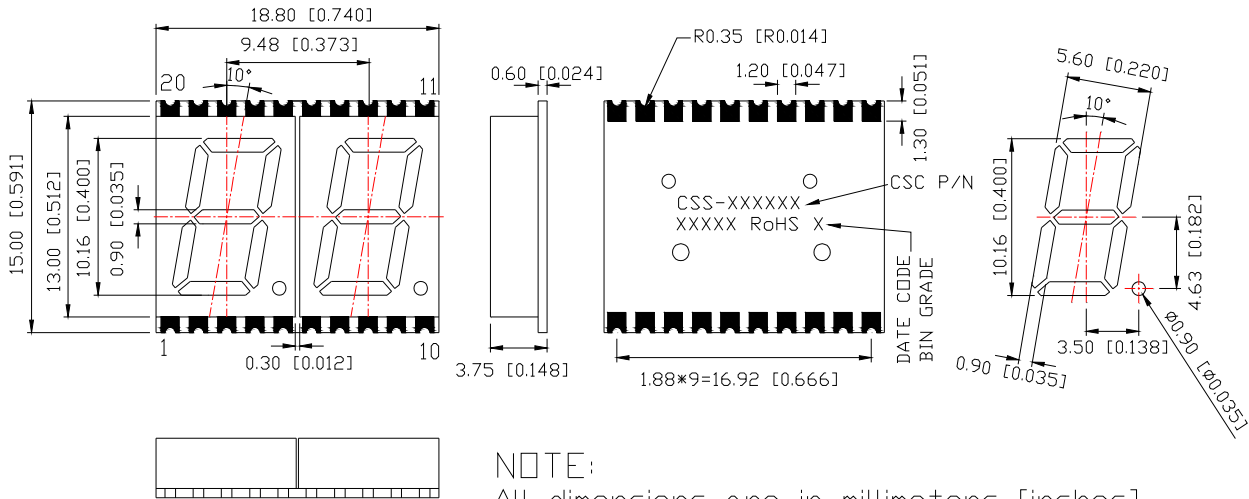
**Features -**

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. Easy mounting on P.C. board.

**Device Selection Guide -**

Model No.	Chip		Description
	Material	Emitting Color	
CSD-S40224G	GaP	Yellow Green	Common Anode
CSD-S40225G	GaP	Yellow Green	Common Cathode

**Mechanical Dimensions -**



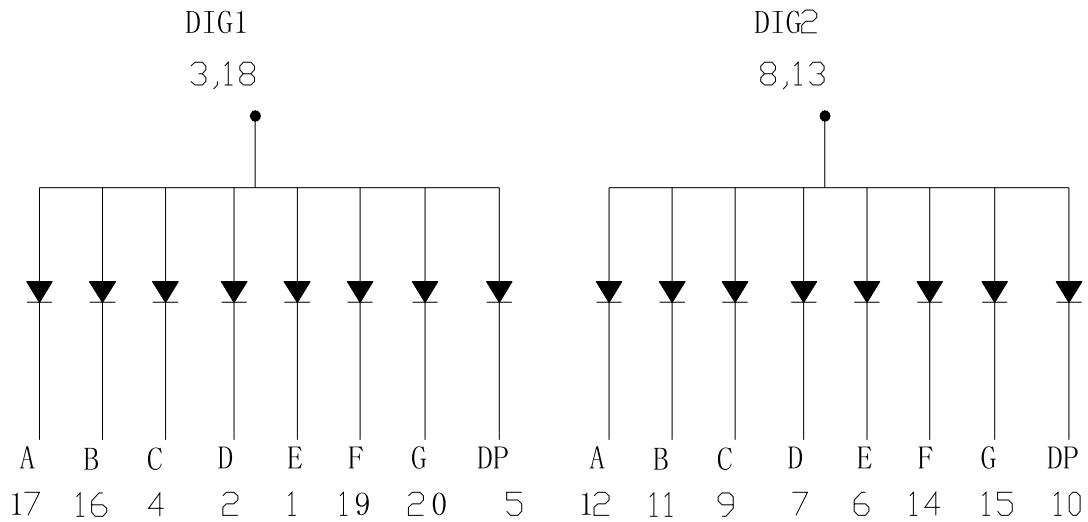
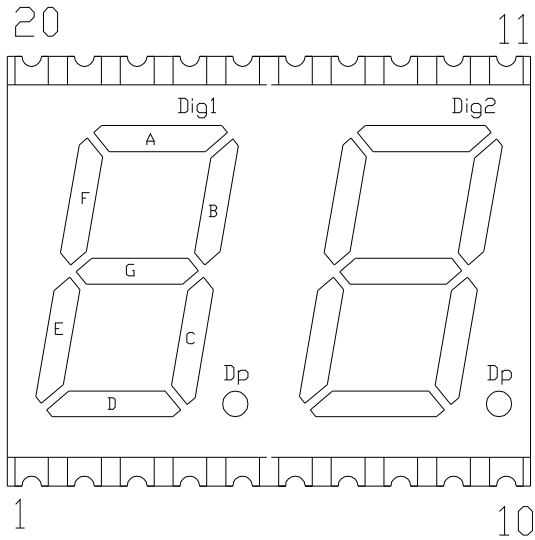
**NOTE:**

All dimensions are in millimeters [inches], and tolerance is ±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	P <sub>AD</sub>	70	mW
Continuous Forward Current Per Dice	I <sub>AF</sub>	25	mA
Peak Current Per Dice(duty cycle 1/10,1KHz)	I <sub>PF</sub>	90	mA
Derating Linear From 25°C Per Dice	-	0.33	mA/°C
Reverse Voltage Per Dice	V <sub>R</sub>	5	V
Operating Temp.	T <sub>opr</sub>	-40 ~ +105	°C
Storage Temp.	T <sub>stg</sub>	-40 ~ +105	°C

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

■ Electro-optical Characteristics -

(Ta=25°C)

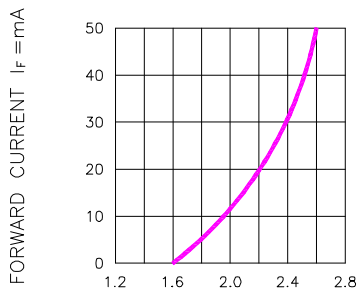
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment	V <sub>F</sub>	-	2.1	2.8	V	IF=20mA
Luminous Intensity Per Segment	I <sub>v</sub>	2	4.5	-	mcd	IF=10mA
Peak Emission Wavelength	λ <sub>P</sub>	-	570	-	nm	IF=20mA
Spectrum Radiation Bandwidth	Δλ	-	30	-	nm	IF=20mA
Reverse Current	I <sub>R</sub>	-	-	100	μA	V <sub>R</sub> =5V
Luminous Intensity Matching Ratio	I <sub>V-m</sub>	-	-	2:1	-	IF=10mA



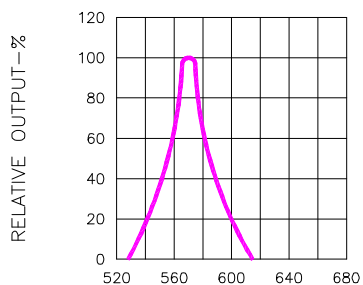
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**Typical Electrical / Optical Characteristics Curves -**

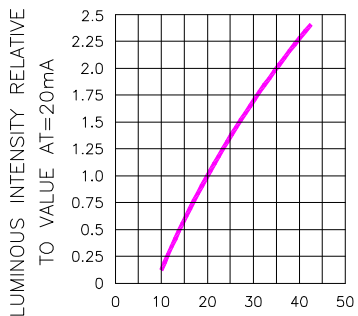
**(Ta = 25°C Unless Otherwise Noted)**



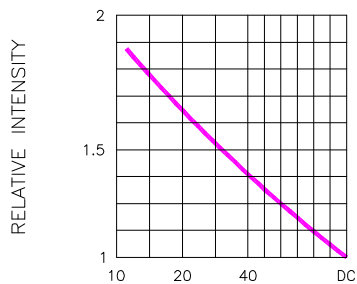
FORWARD VOLTAGE (V<sub>F</sub>)—VOLTS  
Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE



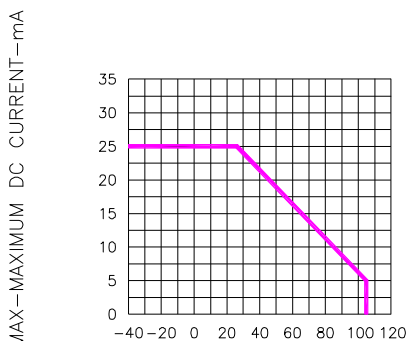
WAVELENGTH (λ)—nm  
Fig.2 SPECTRAL RESPONSE



I<sub>F</sub>—FORWARD CURRENT—mA  
Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



DUTY CYCLE % PER SEGMENT  
(AVERAGE I<sub>F</sub>=10mA)  
Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE



T<sub>A</sub> AMBIENT TEMPERATURE °C  
Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

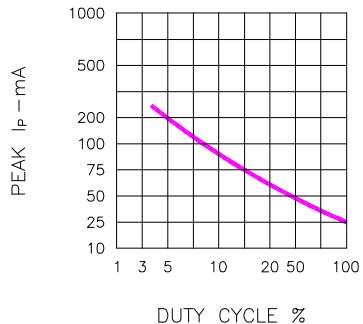


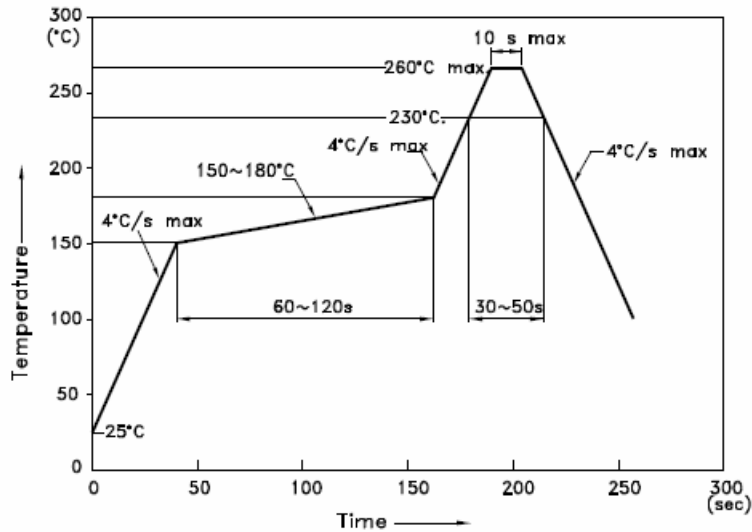
Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE %  
(REFRESH RATE f=1 KHz)



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## SMT REFLOW SOLDERING INSTRUCTIONS

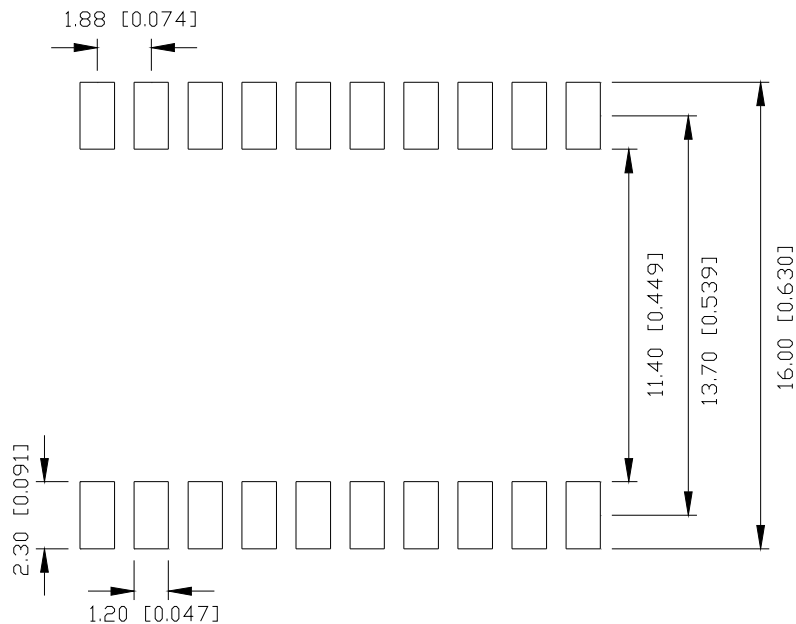
### IR Reflow Temperature / Time :



#### 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.

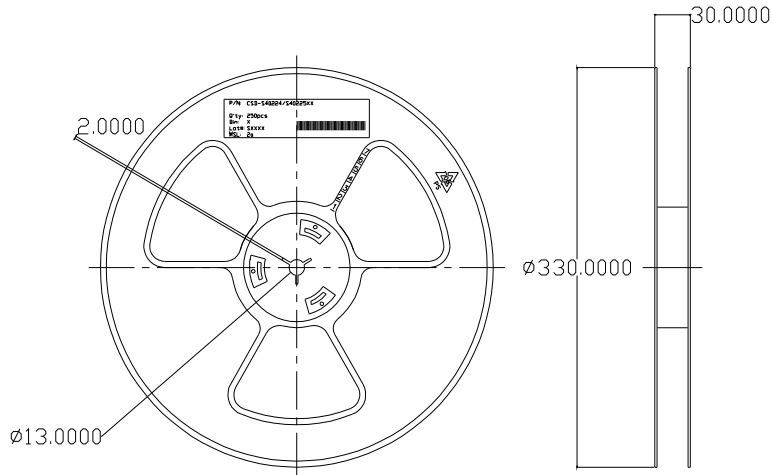
### Soldering Pad Size



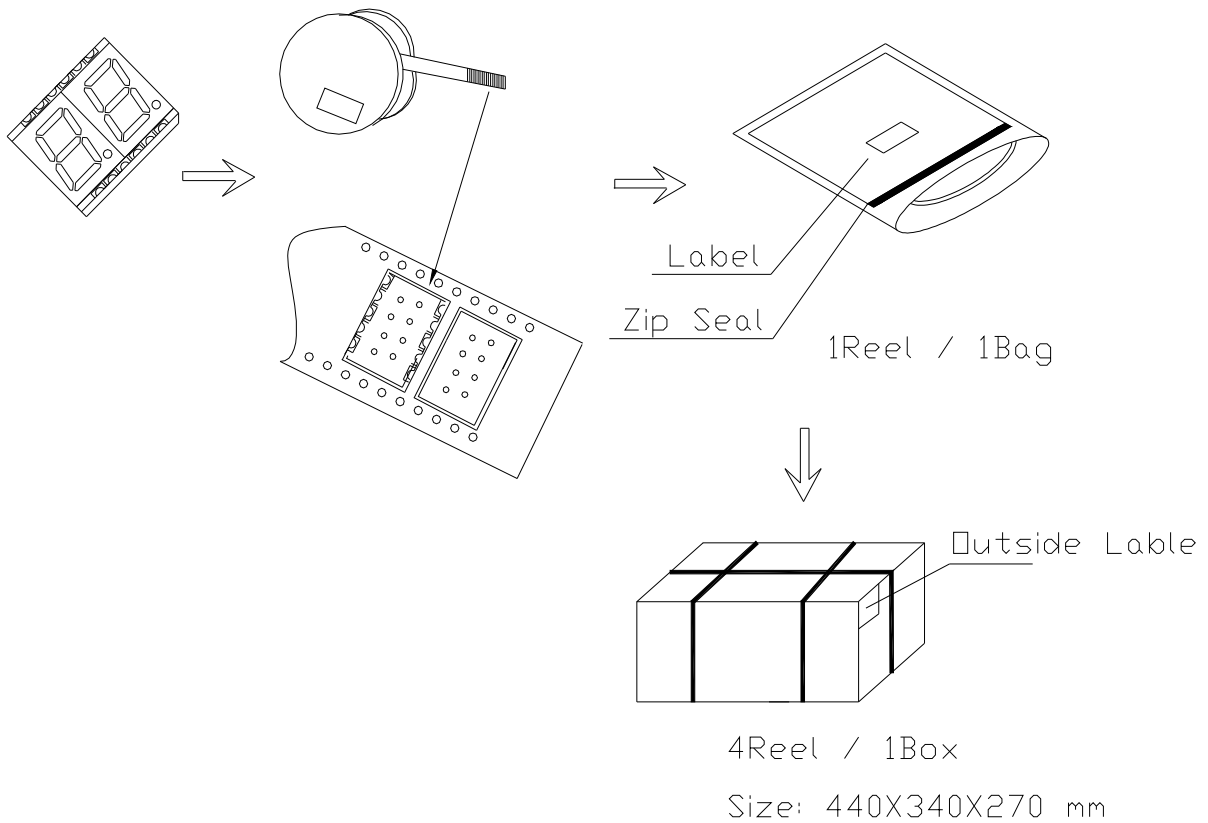


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### REEL DIMENSIONS



### PACKING & LABEL SPECIFICATIONS



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