



# PRODUCT SPECIFICATION

**Model No : CSD-322T9/323T9**

## Descriptions:

- 0.3 Inch Dual Digits Display
- CSD-322: Common Anode
- CSD-323: Common Cathode
- Emitting Color: Super Bright Yellow



CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY

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**Model No : CSD-322/323T9**

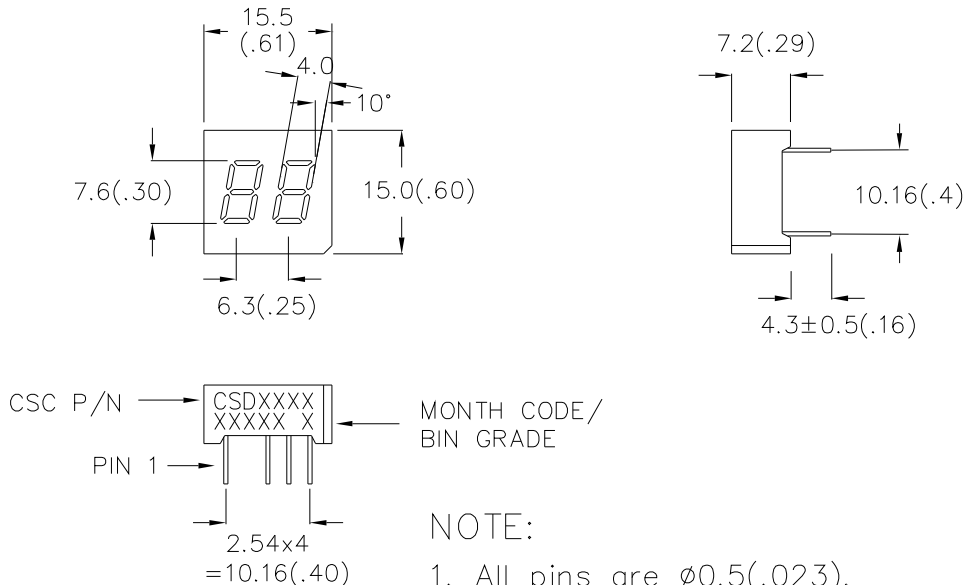
**Features -**

1. 0.3 inch (7.2mm) dight 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	
<b>CSD-322T9</b>	<b>AlGaInP</b>	<b>Super Bright Yellow</b>	<b>Common Anode</b>
<b>CSD-323T9</b>	<b>AlGaInP</b>	<b>Super Bright Yellow</b>	<b>Common Cathode</b>

**Package Dimensions -**



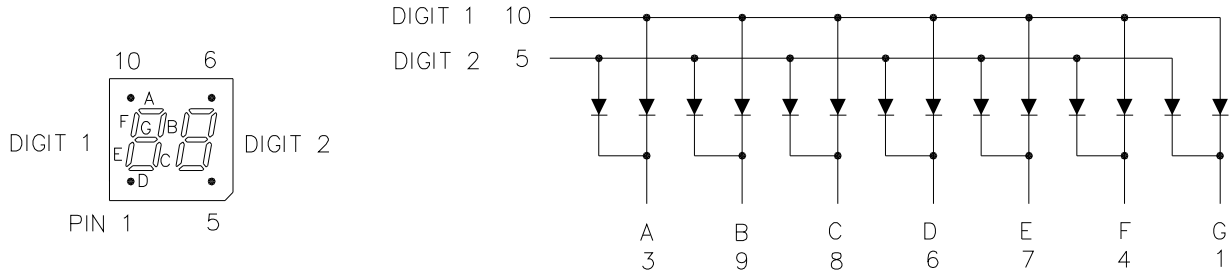
**NOTE:**

1. All pins are  $\phi 0.5(.023)$ .
2. Dimension in millimeter (inch), and tolerance is  $\pm 0.25 (.01)$  unless otherwise noted.



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Internal Circuit Diagrams -



CSD-322 Common Anode.(CSD-323 is Common Cathode.)  
No. 2 No Pin.

Absolute Maximum Rating -

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Power Dissipation Per Dice	<b>Pd</b>	75	mW
Continuous Forward Current Per Dice	<b>IAF</b>	25	mA
Peak Current Per Dice	<b>IPF</b>	90	mA
Derating Linear From 25°C Per Dice	-	0.33	mA/°C
Reverse Voltage Per Dice	<b>VR</b>	5	V
Operating Temp.	<b>Topr</b>	-35 ~ +85	°C
Storage Temp.	<b>Tstg</b>	-35 ~ +85	°C
Solder temperature 1/16 inch below seating plane for 3 seconds at 260°C			



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■ Electro-optical Characteristics -

(Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment	$V_F$	-	2.1	2.8	V	$I_F=20mA$
Luminous Intensity Per Segment	$I_v$	-	12000	-	ucd	$I_F=10mA$
Peak Emission Wavelength	$\lambda_p$	-	593	-	nm	$I_F=20mA$
Dominant Wavelength	$\lambda_d$	-	590	-	nm	$I_F=20mA$
Spectrum Radiation Bandwidth	$\Delta \lambda$	-	20	-	nm	$I_F=20mA$
Reverse Current	$I_R$	-	-	100	$\mu A$	$V_R=5V$
Luminous Intensity Matching Ratio	$I_V-m$	-	-	2:1	-	$I_F=10mA$



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**Typical Electrical / Optical Characteristics Curves -**

( $T_a = 25^\circ\text{C}$  Unless Otherwise Noted)

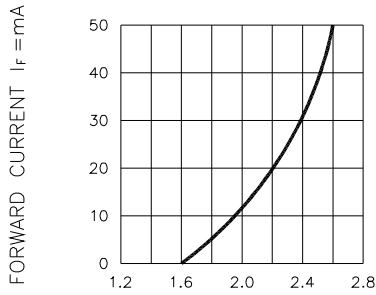


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

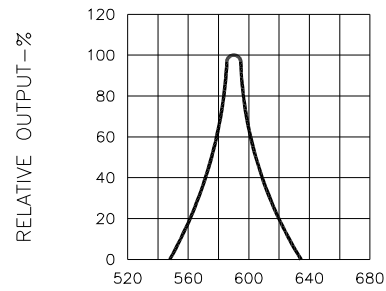


Fig.2 SPECTRAL RESPONSE

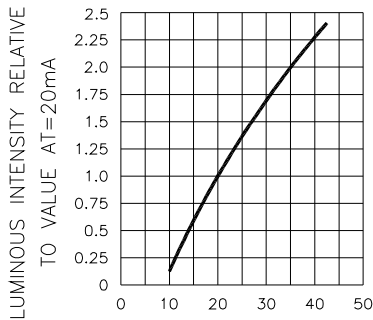


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

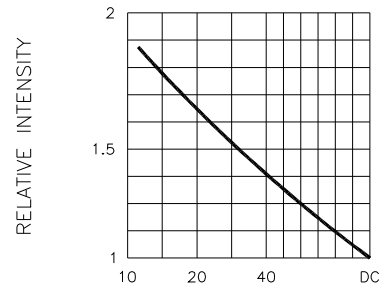


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

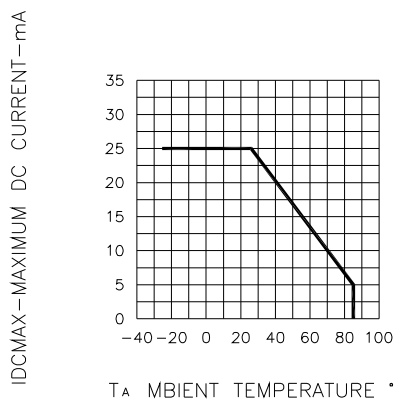


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

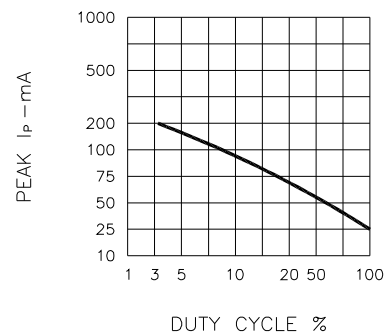


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE  $f=1\text{ kHz}$ )