

PRODUCT SPECIFICATION

Model No.: CSOD-S56223W-11

Descriptions:

- 0.56 Inch Dual Digit SMD Display
- Common Cathode
- Emitting Color: Super Bright White



CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY

CS BRIGHT CORPORATION

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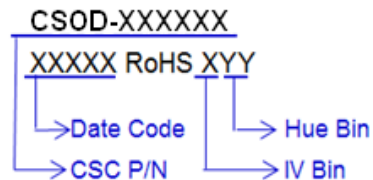
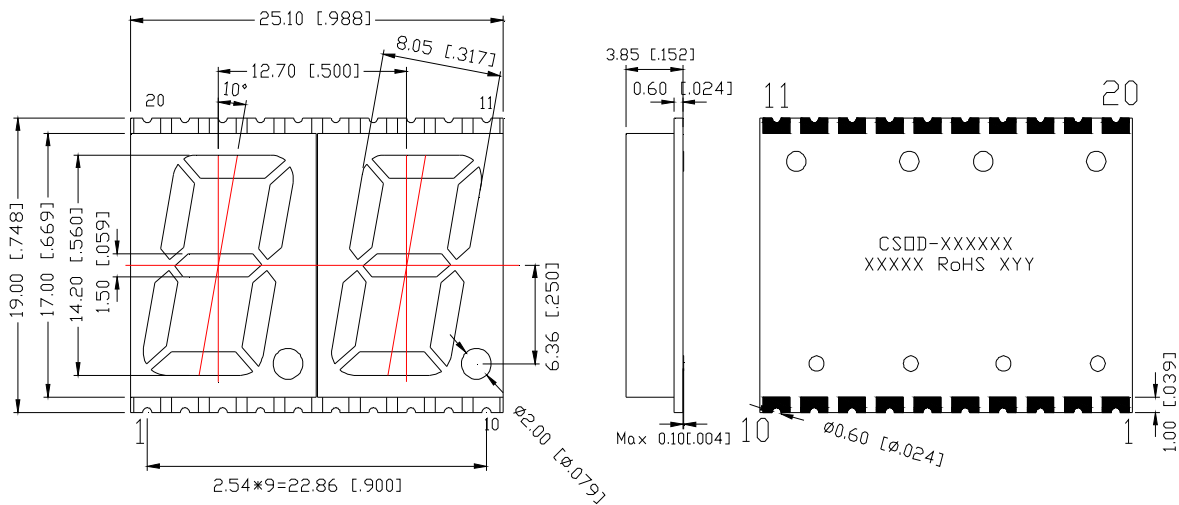
Features -

1. 0.56 inch (14.20mm) digit height.
2. Qualified according to JEDEC moisture sensitivity Level 2a.
3. RoHS compliant.
4. Low power consumption.
5. Standard: gray face, white segment.
6. Easy mounting on P.C. board.

Device Selection Guide -

Model No.	Chip		Description
	Material	Emitting Color	
CSOD-S56223W-11	InGaN	Super Bright White	Common Cathode

Mechanical Dimensions -

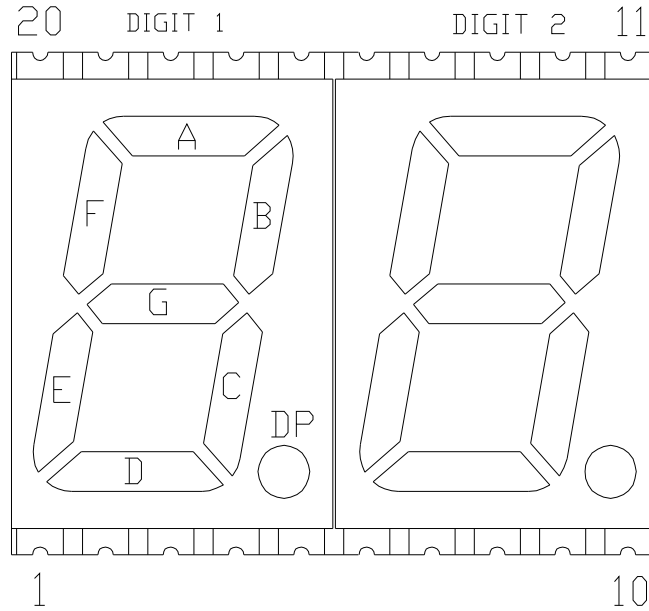


Notes:

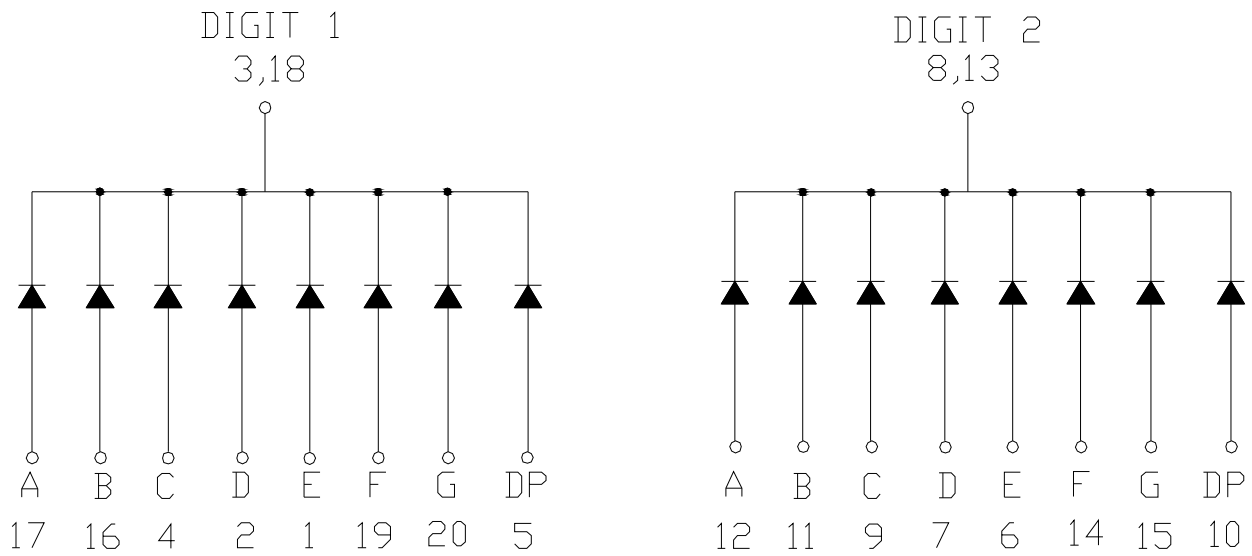
1. Dimension in millimeter [inch], tolerance is ± 0.25 [0.010] and angle is $\pm 1^\circ$ unless otherwise noted.
2. Bending \leq Length*1%.

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■ All Light On Segments Feature & Pad Position



■ Internal Circuit Diagrams -



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■ Absolute Maximum Rating -

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Power Dissipation Per Dice	P_{AD}	114	mW
Derating Liner from 25°C per Dice	-	0.4	mA/°C
Continuous Forward Current Per Dice	I_{AF}	30	mA
Peak Current Per Dice(duty cycle 1/10,1KHz)	I_{PF}	100	mA
Reverse Voltage Per Dice	VR	5	V
Electrostatic discharge(HBM)	ESD	1500	V
Operating Temp.	Topr	-45 ~ +105	°C
Storage Temp.	Tstg	-45 ~ +105	°C

Solder Conditions:1/16 inch below seating plane for 3 seconds at 260°C. Or temperature of unit (during assembly) not over max. temperature rating above

■ Electro-optical Characteristics -

(Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment	V_F	-	3.2	3.8	V	I _F =20mA
Luminous Intensity Per Segment	I_v	42	85	-	mcd	I _F =10mA
Chromaticity Coordinates (Tolerance: ±0.01)	X	-	0.27	-	-	I _F =10mA
	Y	-	0.25	-	-	
Reverse Current	I_R	-	-	100	μA	VR=5V
Luminous Intensity Matching Ratio	I_{v-m}	-	-	2:1	-	I _F =10mA

■ Luminous General I_v Bin Grade (I_F = 10mA)

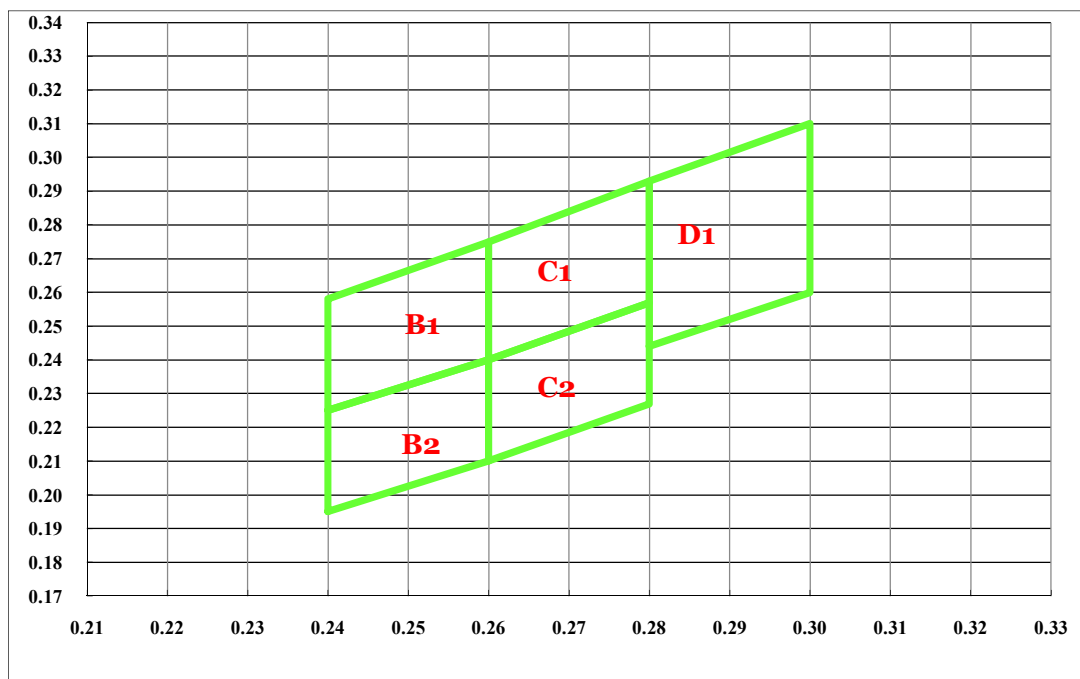
S	T	U	V	W
41.940	54.523	70.881	92.146	119.791
I	I	I	I	I
54.522	70.880	92.145	119.790	155.728

Remark: Unit=mcd

*Tolerance: ±20%

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■ Color Rank Limits ($I_f = 10\text{mA}$)



B1				
X	0.240	0.240	0.260	0.260
Y	0.225	0.258	0.275	0.240

B2				
X	0.240	0.240	0.260	0.260
Y	0.195	0.225	0.240	0.210

C1				
X	0.260	0.260	0.280	0.280
Y	0.240	0.275	0.293	0.257

C2				
X	0.260	0.260	0.280	0.280
Y	0.210	0.240	0.257	0.227

D1				
X	0.280	0.280	0.300	0.300
Y	0.244	0.293	0.310	0.260

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■ Typical Electrical / Optical Characteristics Curves -

(Ta = 25°C Unless Otherwise Noted)

Fig 1. Forward Current Vs. Ambient Temperature

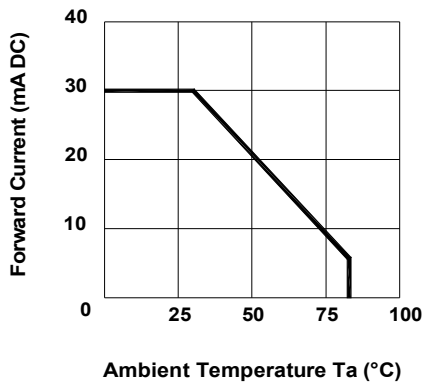


Fig 2. Forward Current Vs. Forward Voltage

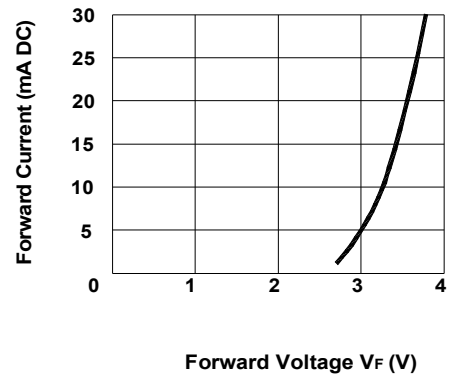


Fig 3. Relative Intensity Vs. Forward Current

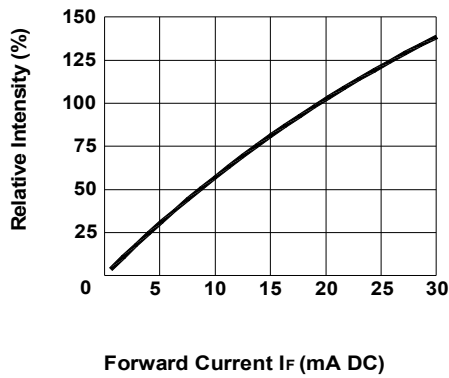


Fig 4. Peak Forward Voltage Vs. Forward Current (100us test pulse, 1% duty cycle)

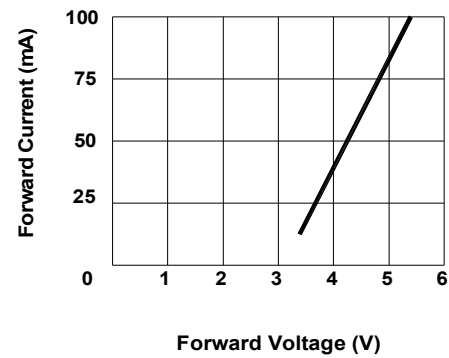
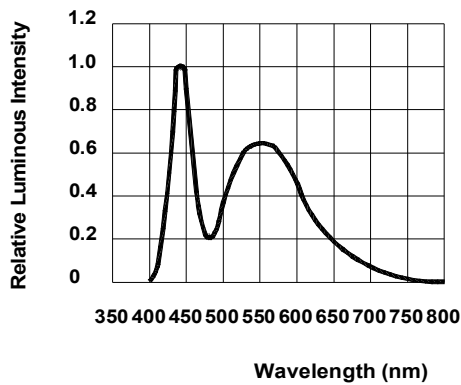


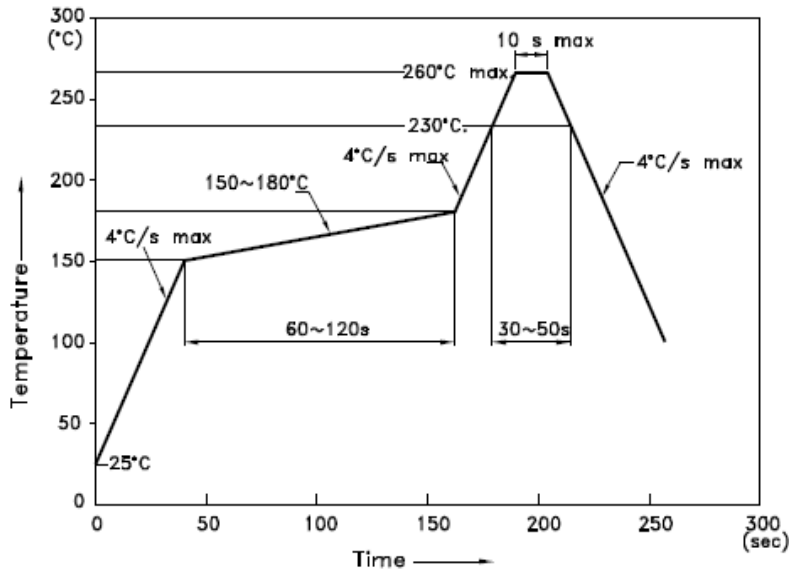
Fig 5. Relative Intensity Vs. Wavelength



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SMT REFLOW SOLDERING INSTRUCTIONS

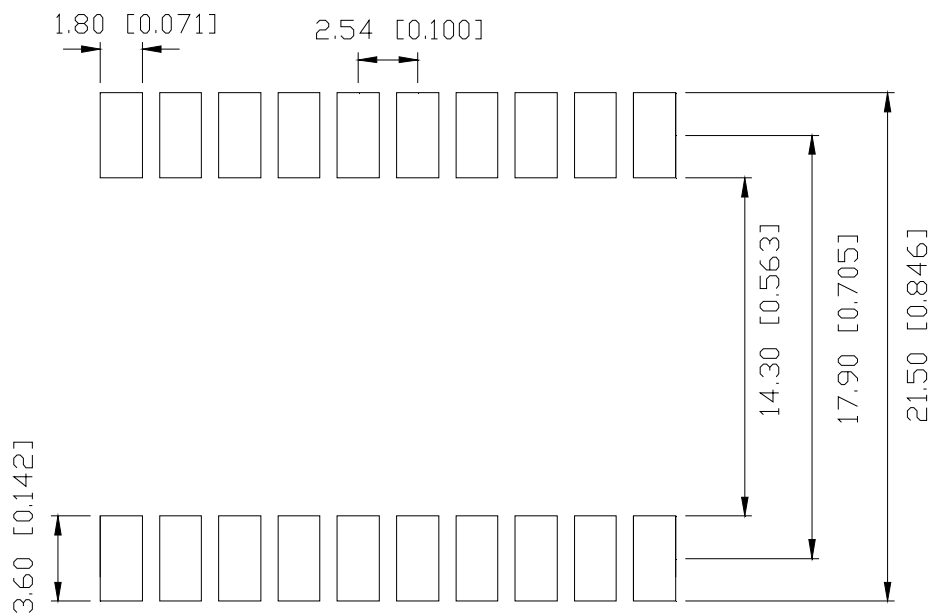
■ IR Reflow Temperature / Time :



NOTES:

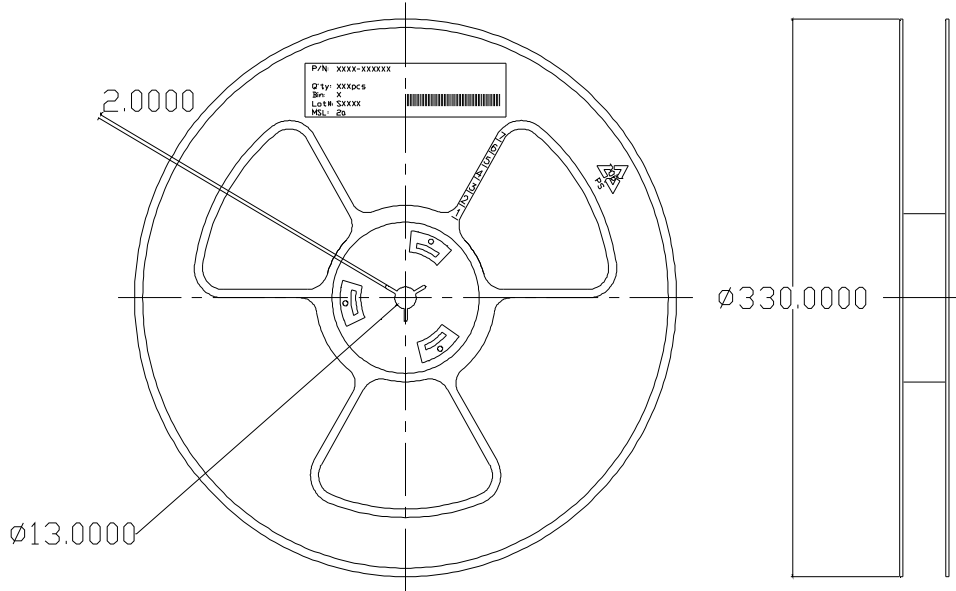
1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

■ Soldering Pad Size

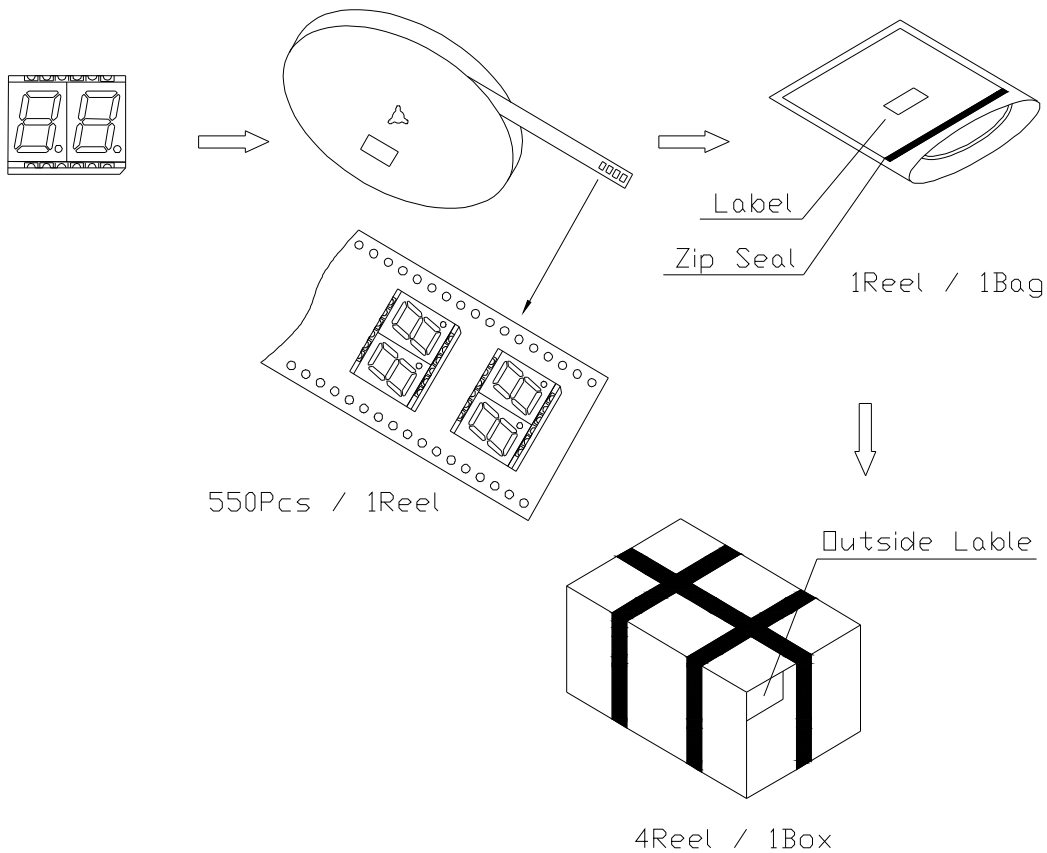


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REEL DIMENSIONS



PACKING & LABEL SPECIFICATIONS



Size: 440X340X280 mm

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