

PRODUCT SPECIFICATION

Model No.: CSDD-S20240 CSDD-S20241

Descriptions:
<ul style="list-style-type: none"> ■ 0.20 Inch Dual Digit SMD Display ■ CSDD-S20240 is Common Anode ■ CSDD-S20241 is Common Cathode ■ Emitting Color: Pure Green; Yellow Green; Yellow; Amber; Orange; Red; Deep Red ■ Standard: -11: Gray face, white segment. -21: Black face, white segment.



CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY

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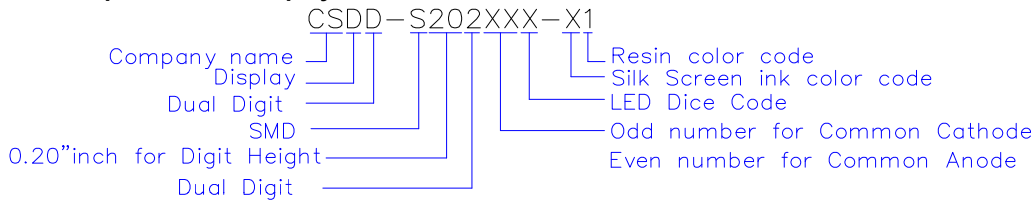
■ **Features -**

1. 0.20 inch (5.08mm) 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 .

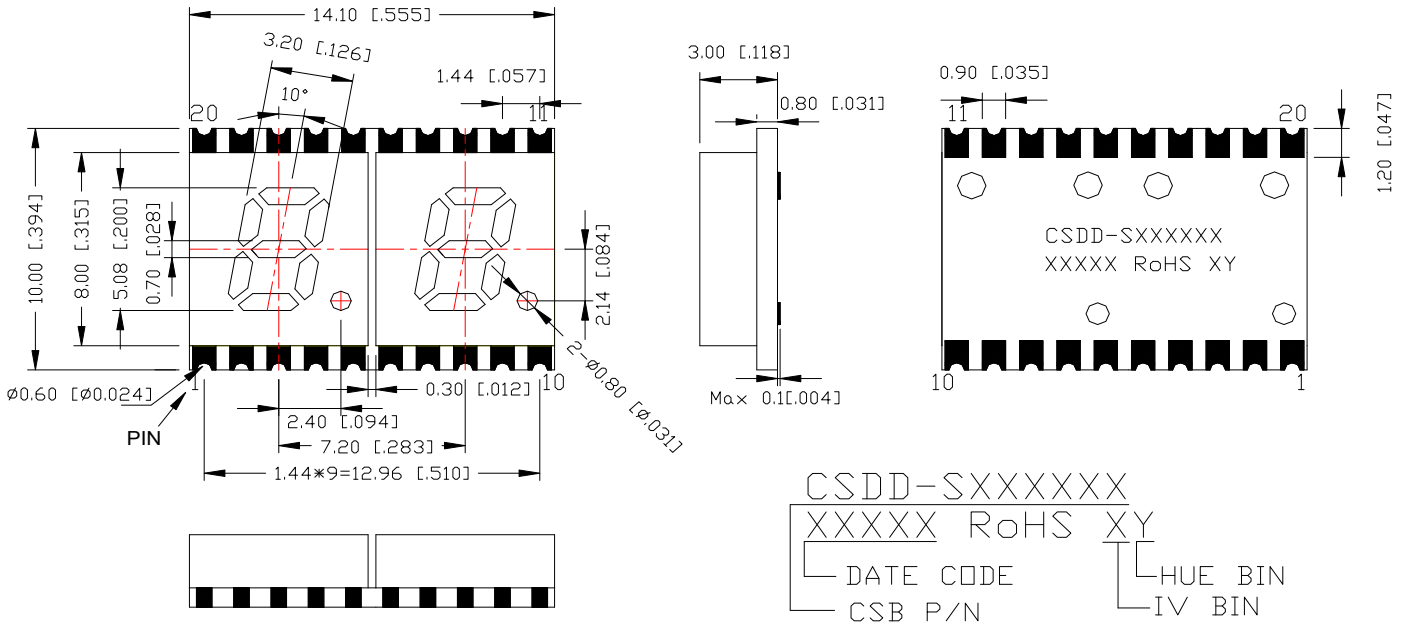
■ **Device Selection Guide -**

Model No.	Chip	
	Material	Emitting Color
CSDD-S2024x2	InGaN	Pure Green
CSDD-S2024xM	AlGaInP	Yellow Green
CSDD-S2024xT		Yellow
CSDD-S2024xA		Amber
CSDD-S2024xV		Orange
CSDD-S2024xL		Red
CSDD-S2024xU		Deep Red

■ **LED Numeric/Alphanumeric Display**



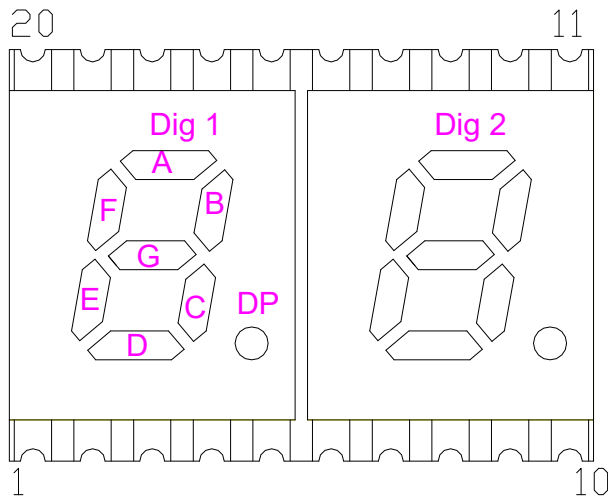
■ **Mechanical Dimensions -**



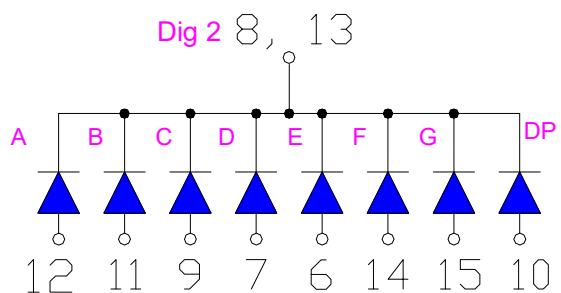
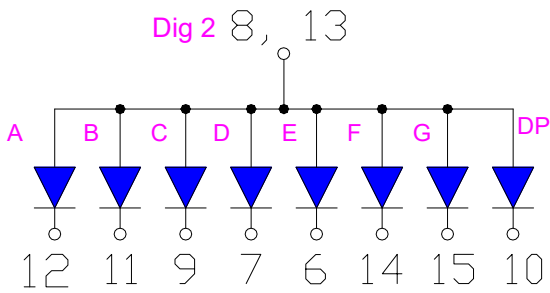
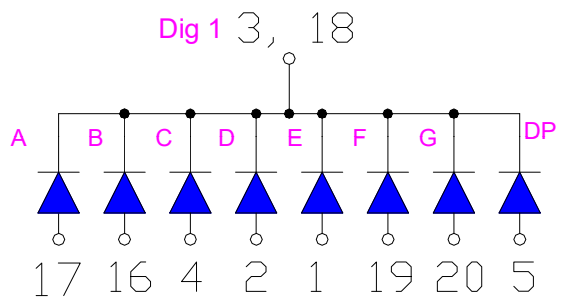
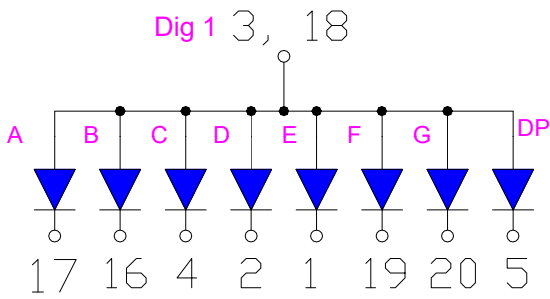
Notes:

1. Dimension in millimeter [inch], tolerance is ± 0.25 [.010] and angle is $\pm 1^\circ$ unless otherwise noted.
2. Bending \leq Length*1%.

■ All Light On Segments Feature & Pin Position



■ Internal Circuit Diagrams -



CSDD-S20240 is Common Anode

CSDD-S20241 is Common Cathode

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■ Absolute Maximum Rating -

(Ta=25°C)

Parameter	Symbol	Rating		Unit
		2	M/T/A/V/L/U	
Power Dissipation Per Dice	PAD	114	70	mW
Derating Liner from 25°C per Dice	-	0.4	0.33	mA/°C
Continuous Forward Current Per Dice	IAF	30	25	mA
Peak Current Per Dice(duty cycle 1/10,1KHz)	IPF	100	90	mA
Reverse Voltage Per Dice	VR	5	5	V
Electrostatic discharge(HBM)	ESD	1000	/	V
Operating Temp.	Topr	-40 ~ +105		°C
Storage Temp.	Tstg	-40 ~ +105		°C
Hand Soldering Temp.	Tsol	350		°C

■ Electro-optical Characteristics -

(Ta=25°C)

Parameter	Symbol	Chip	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity Per Segment	Iv	2	-	75	-	mcd	If=10mA
		M	-	2	-		
		T	-	12	-		
		A	-	13	-		
		V	-	8	-		
		L	-	5	-		
		U	-	4	-		
Forward Voltage Per Segment	VF	2	-	3.2	3.8	V	If=20mA
		M/T/A/V/L/U	-	2	2.8		
Peak Emission Wavelength / Dominant Wavelength	λP/λd	2	-	*525	-	nm	If=10mA
		M	-	572/570	-		
		T	-	592/590	-		
		A	-	612/605	-		
		V	-	632/625	-		
		L	-	644/630	-		
		U	-	660/645	-		
Reverse Current	I _r		-	-	100	μA	VR=5V
Luminous Intensity Matching Ratio	IV-m		-	-	2:1	-	If=10mA

■ Typical Electrical / Optical Characteristics Curves -

(Ta = 25°C Unless Otherwise Noted)

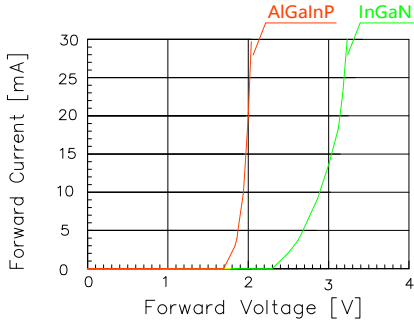


Fig 1. Forward Current vs. Forward Voltage

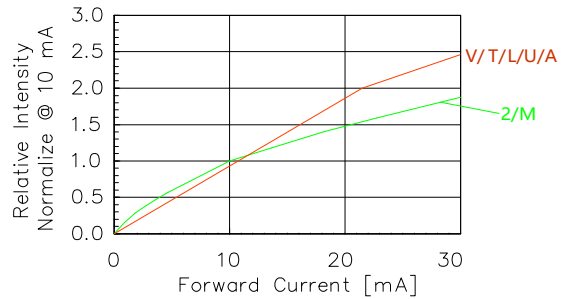


Fig 2. Relative Intensity vs. Forward Current

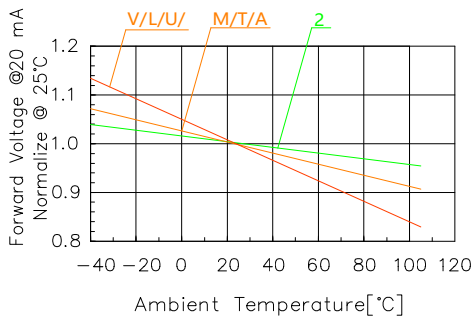


Fig 3. Forward Voltage vs. Temperature

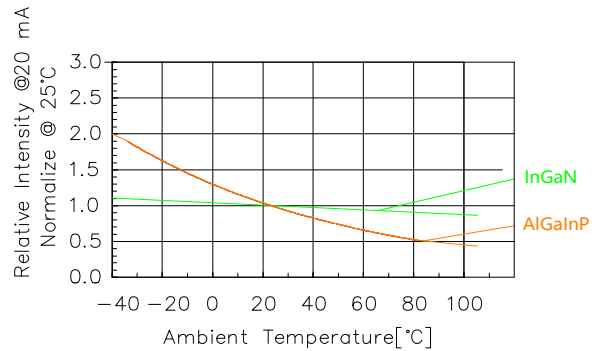


Fig 4. Relative Intensity vs. Temperature

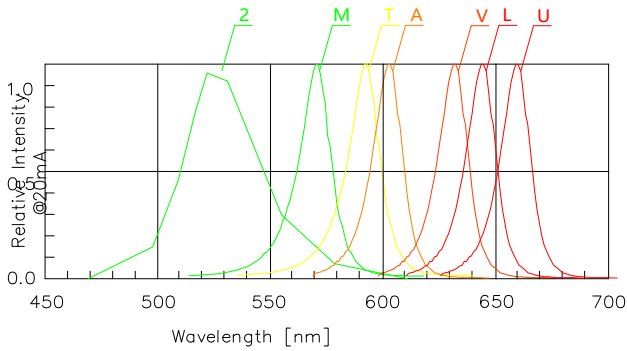


Fig 5. Relative Intensity vs. Wavelength

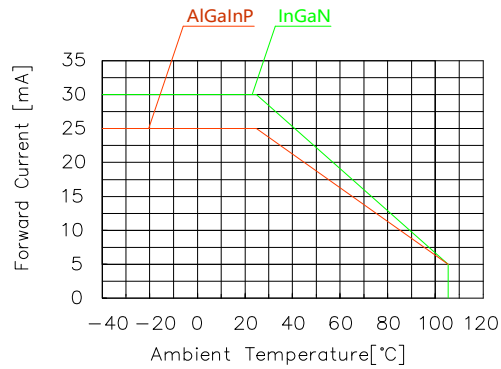
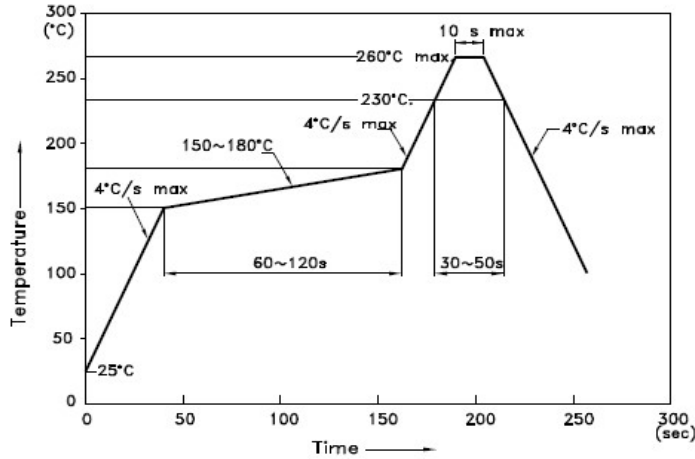


Fig 6. Forward current vs. Temperature

SMT REFLOW SOLDERING INSTRUCTIONS

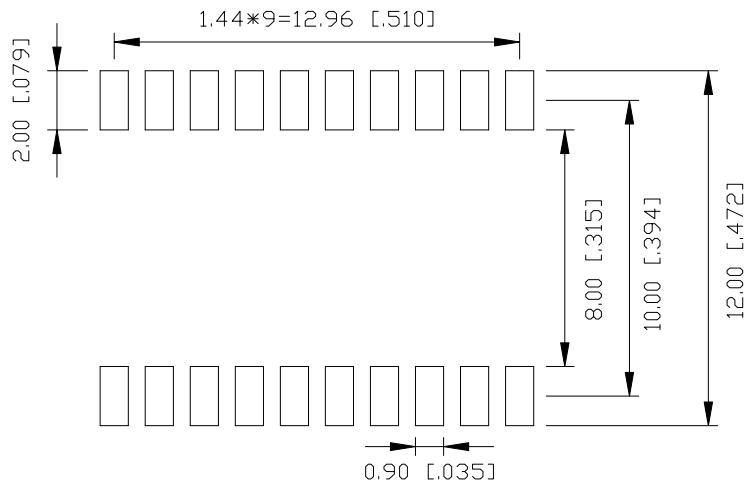
■ IR Reflow Temperature / Time :



NOTES:

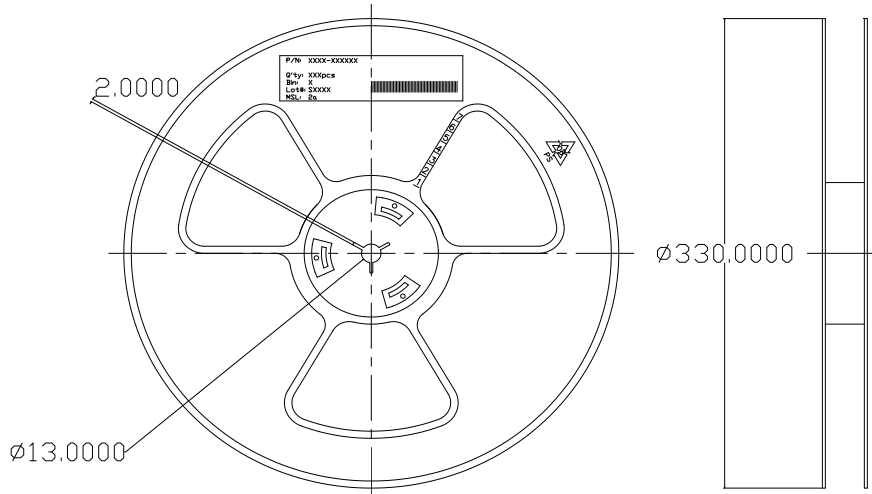
1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

■ Soldering Pad Size

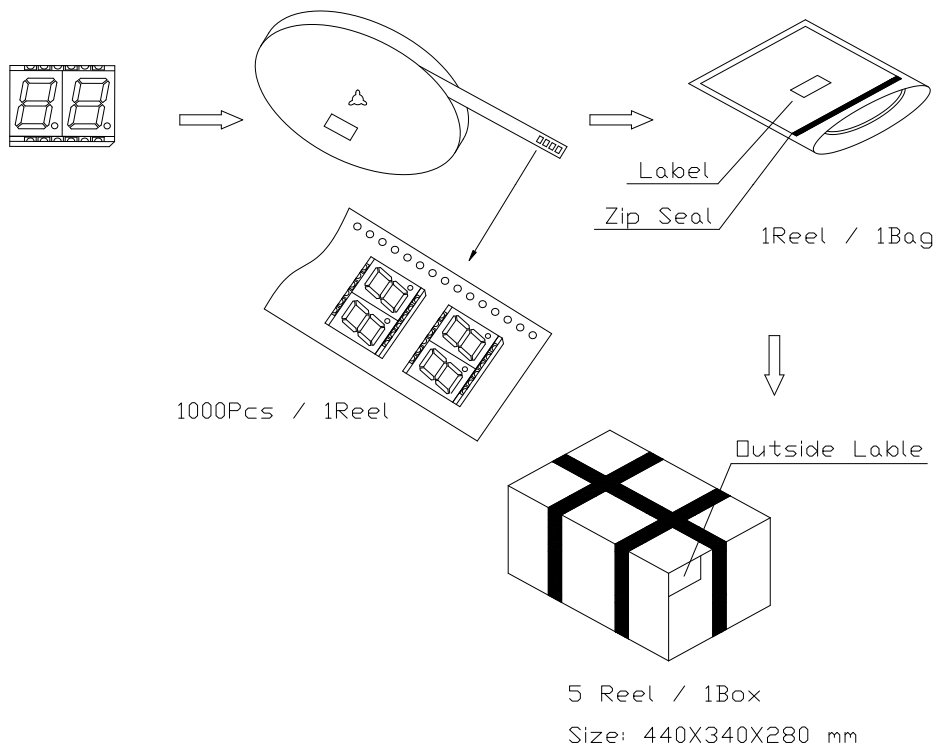


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■ REEL DIMENSIONS



■ PACKING & LABEL SPECIFICATIONS



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