

# Model No.: CSDE-15152X-01

Description:	
■ Product Type	: Touch Display with drive IC
■ Icon Size	: 15.0*15.0mm
■ Emitting Color	: Pure Green ; Yellow ; Amber ; Orange ; Red ; Deep Red
■ Feature	: White face With Touch PCB White Segment



CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY

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**Model No.: CSDE-15152X-01**

■ **Features -**

1. Case mold type.
2. RoHS compliant.
3. Low power consumption.
4. Easy mounting on P.C. board or socket.

■ **Device Selection Guide -**

Model No.	Chip Material	Color	
		Emitter	Segment Resin
CSDE-15152T-01	AlGaInP	Yellow	White
CSDE-15152A-01		Amber	
CSDE-15152V-01		Orange	
CSDE-15152L-01		Red	
CSDE-15152U-01		Deep Red	
CSDE-151522-01	InGaN	Pure Green	

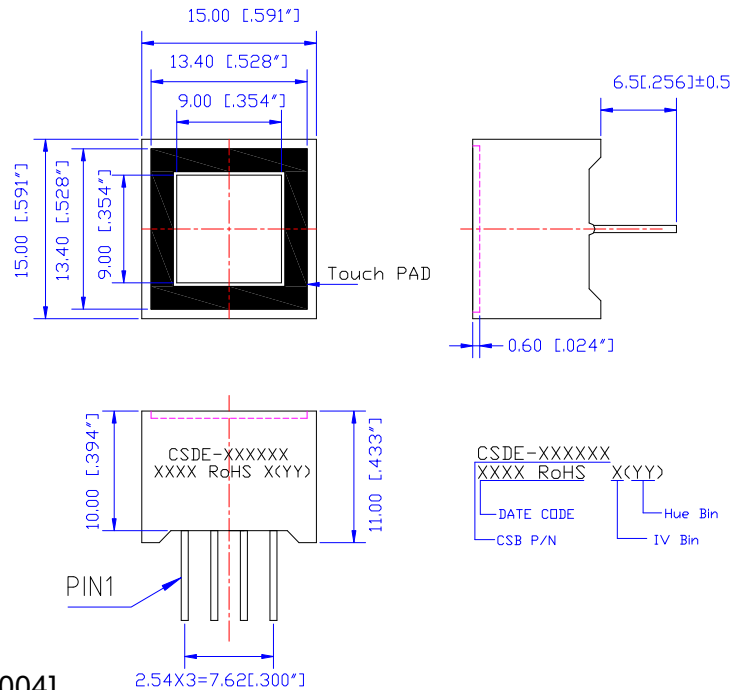
■ **LED Numeric/Alphanumeric Display**

**CSDE - 15152X - 01**

Model No. code  
Dice color code

Resin color code  
Silk Screen ink color code

■ **Mechanical Dimensions -**

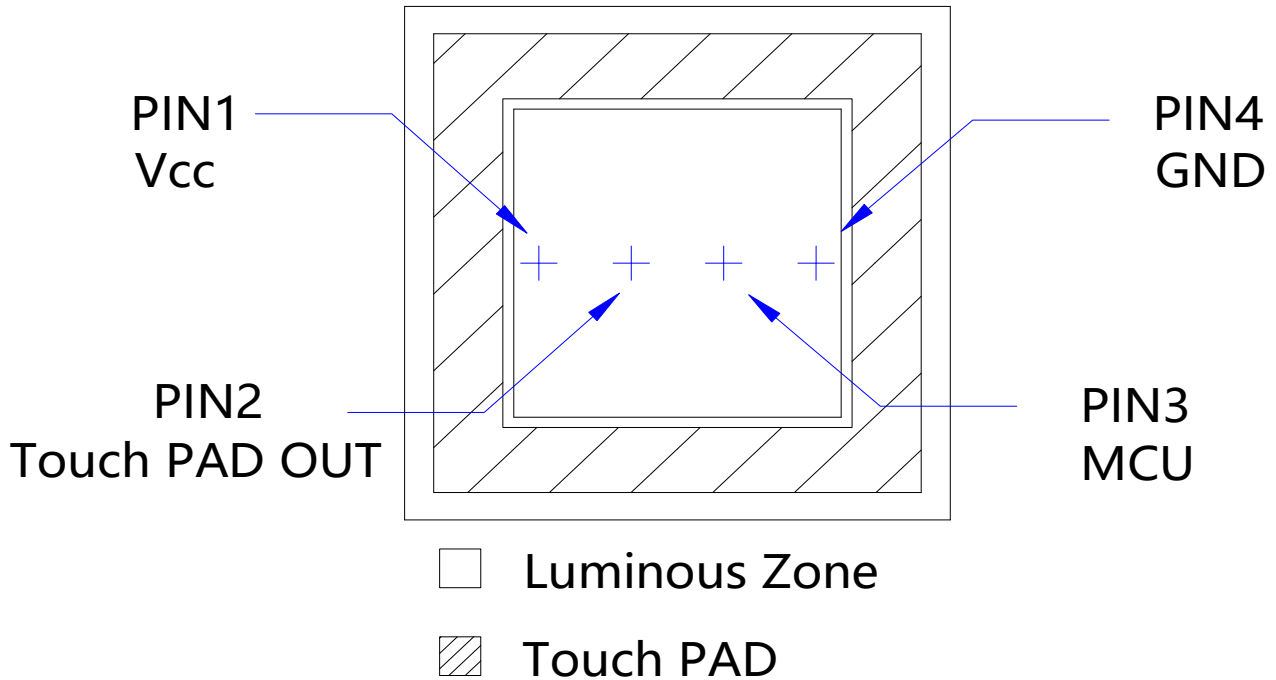


Notes:

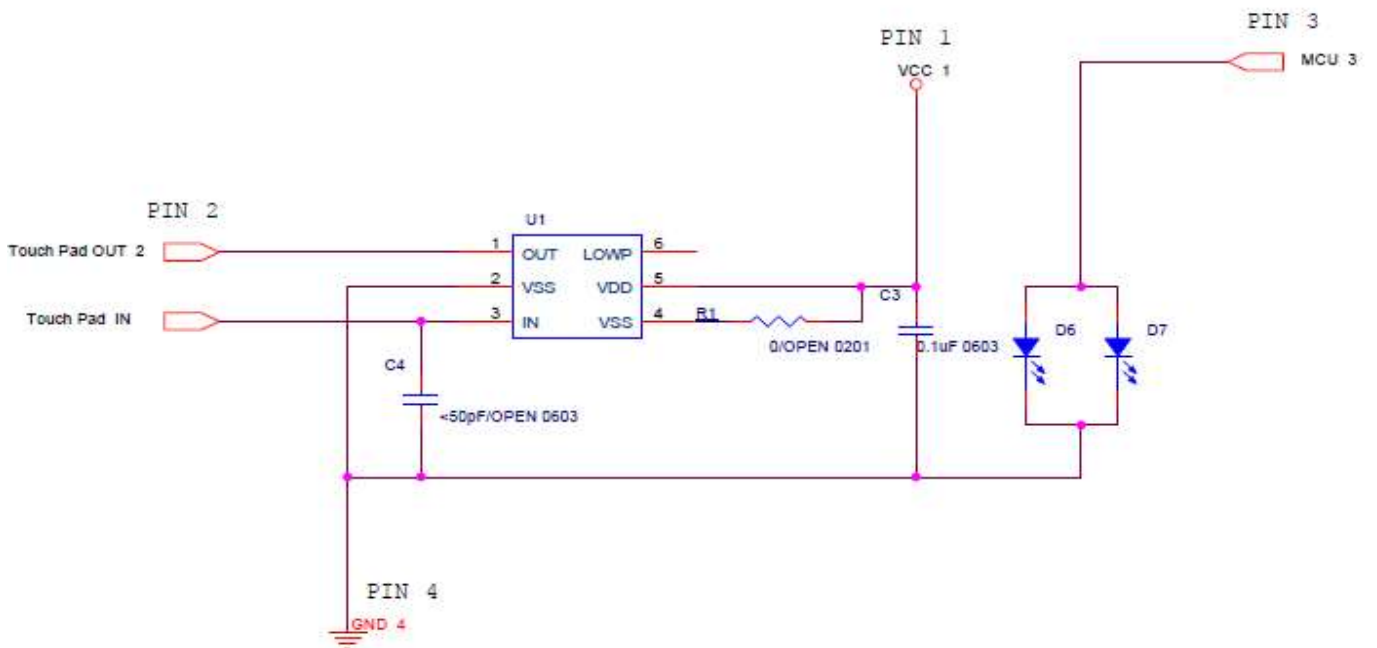
1. All pins are  $\Phi 0.6 [0.024] \pm 0.1 [0.004]$
2. Dimension in millimeter [inch], tolerance is  $\pm 0.25 [0.010]$  unless otherwise noted.

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**■ All Light On Segments Feature**



**■ Internal Circuit Diagrams -**



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■ Absolute Maximum Rating -

(Ta=25°C)

Parameter	Symbol	Rating		Unit
		T / A / V / L / U	2	
Power Dissipation Per Dice	$P_d$	70	114	mW
Continuous Forward Current (Per Dice)	$I_f$	25	30	mA
Peak Current (Per Dice, duty cycle 1/10, 1KHz)	$I_{fp}$	90	100	mA
Derating Liner from 25°C(Per Dice)	$\Delta I_f / \Delta T$	0.33	0.42	mA / °C
Reverse Voltage (Per Dice)	$V_r$	5	5	V
Electrostatic discharge(HBM)	ESD	/	1000	V
Operating Temp.	$T_{opr}$	-35 ~ +85		°C
Storage Temp.	$T_{stg}$	-35 ~ +85		°C
Hand Soldering Temp.	$T_{sol}$	350		°C

■ Electro-optical Characteristics -

(Ta=25°C)

Parameter	Symbol	Chip	Min.	Typ.	Max.	Unit	Condition
Forward Voltage	$V_f$	M/T/A/V/L/U	-	2.0	2.8	V	$I_f=20mA$
		2	-	3.2	3.8	V	
Luminous Intensity	$I_v$	2	289	612	-	mcd	$I_f=20mA$
		T	113	220	-	mcd	
		A	44	91	-	mcd	
		V	44	91	-	mcd	
		L	17	31	-	mcd	
		U	17	31	-	mcd	
Peak Emission Wavelength / Dominant Wavelength	$\lambda_p / \lambda_d$	2	-	*/525	-	nm	$I_f=20mA$
		T	-	592/590	-	nm	
		A	-	612/605	-	nm	
		V	-	632/625	-	nm	
		L	-	644/630	-	nm	
		U	-	660/645	-	nm	
Reverse Current	$I_r$		-	-	100	$\mu A$	$V_r=5V$

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**Electrical / Optical Characteristics Curves -Per Dice**

(Ta = 25°C Unless Otherwise Noted)

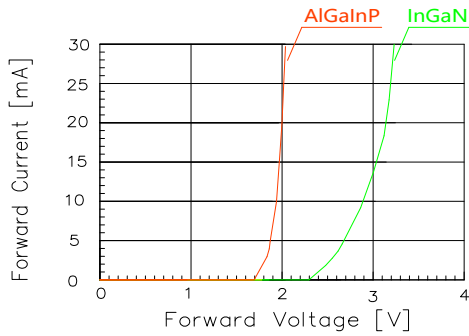


Fig 1. Forward Current vs. Forward Voltage

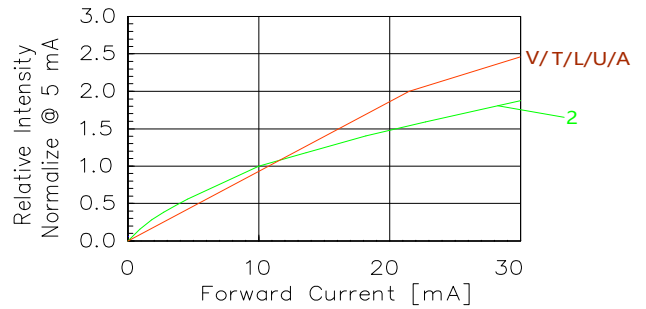


Fig 2. Relative Intensity vs. Forward Current

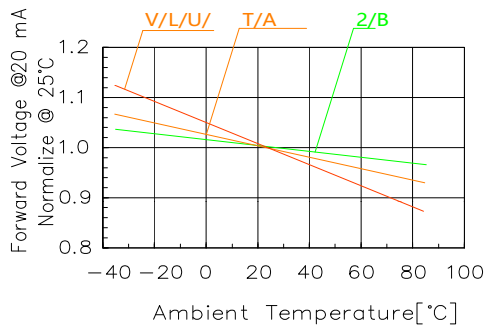


Fig 3. Forward Voltage vs. Temperature

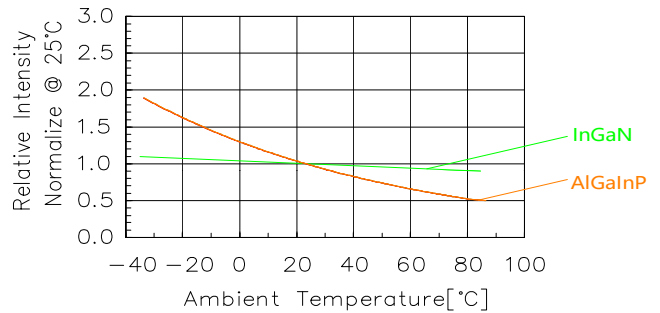


Fig 4. Relative Intensity vs. Temperature

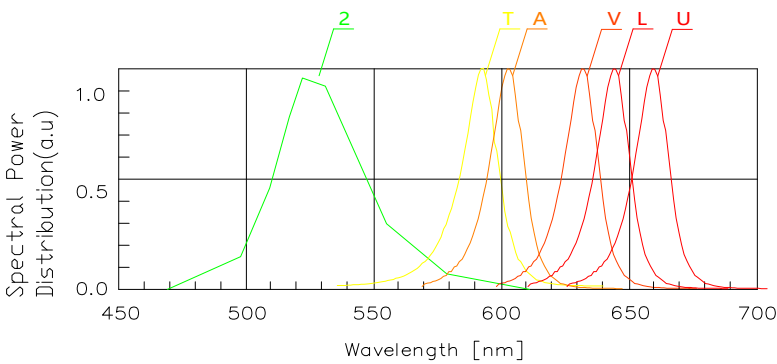


Fig 5. Spectral Power Distribution vs. Wavelength

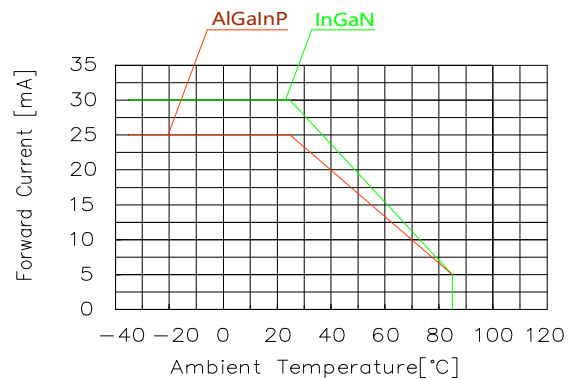


Fig 6. Forward current vs. Temperature

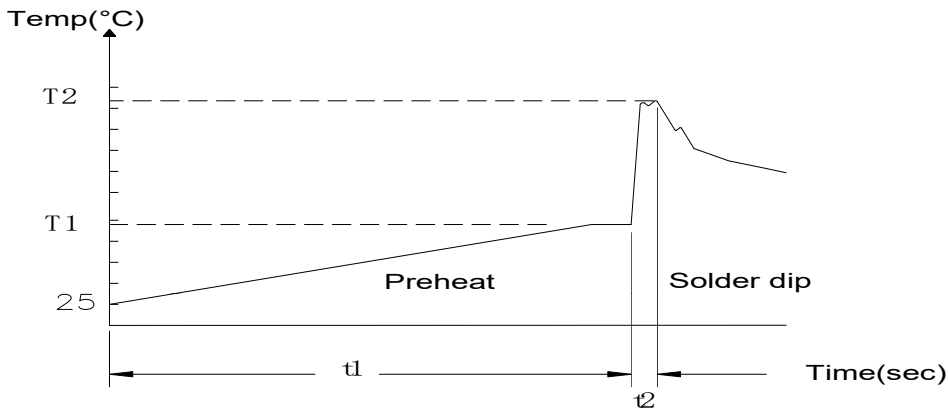
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**■ Soldering Characteristics -**

**1.Wave Soldering Profile**

Distance:1.6mm min(From seating plane)

Item	Condition		Note
Preheat	Temperature T1	80 – 120°C	PWB temperature (Soldering side surface)
	Time t1	60 – 180sec	
Solder Dip	Temperature T2	230 – 260°C	Bath temperature
	Time t2	2 – 4sec	Solder tank passage time



**2.Hand Soldering (Iron Condition)**

Soldering Iron:30W Max

Temperature 350°C Max

Soldering Time:3 Seconds Max(One Time)

Distance:1.6mm min(From seating plane)

**3.Recommended PCB layout**

