



# PRODUCT SPECIFICATION

**Model No : CSM-58231V9/58241V9**

Descriptions:
<ul style="list-style-type: none"> <li>• 2.3 Inch 5X8 Dot-Matrix Display</li> <li>• Dot Pitch 7.62mm</li> <li>• CSM-58231: Column Anode, Row Cathode</li> <li>• CSM-58241: Column Cathode, Row Anode</li> <li>• Emitting Color: Super Bright Orange</li> </ul>



CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY

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**Model No : CSM-58231/58241V9**

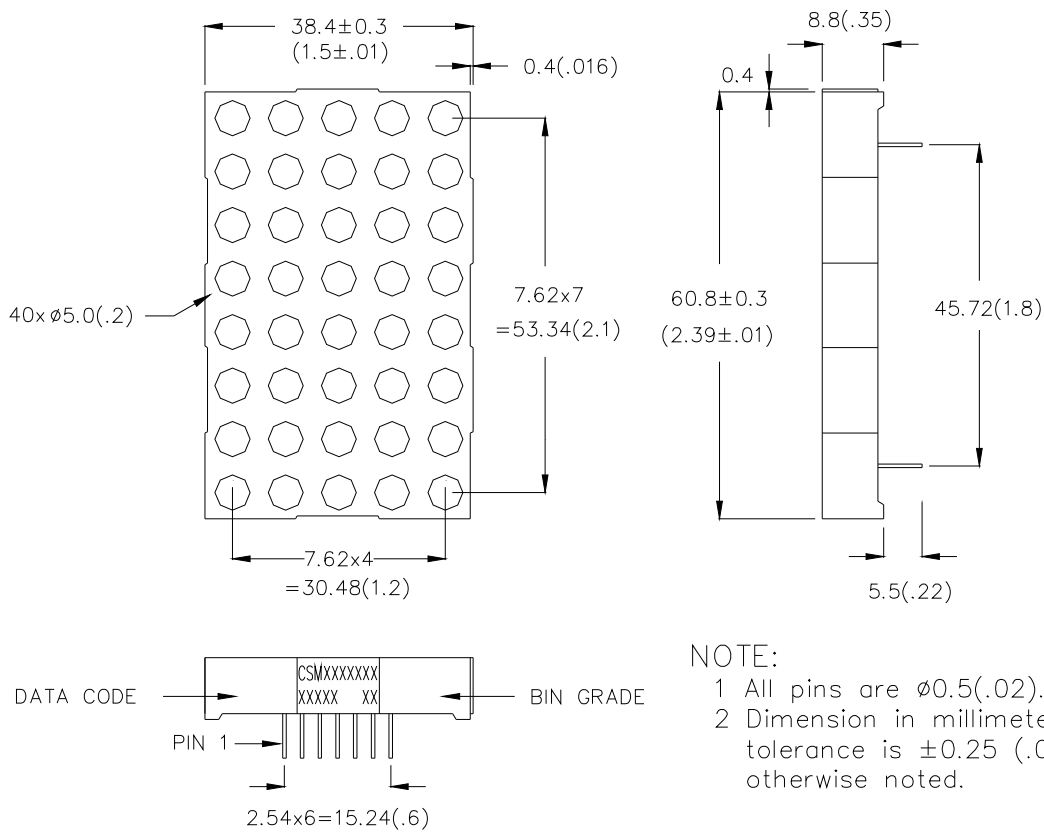
**Features -**

1. 2.3 inch (58.0mm) Matrix 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	Column	Row
<b>CSM-58231V9</b>	<b>AlGaInP</b>	<b>Super Bright Orange</b>	<b>Anode</b>	<b>Cathode</b>
<b>CSM-58241V9</b>	<b>AlGaInP</b>	<b>Super Bright Orange</b>	<b>Cathode</b>	<b>Anode</b>

**Package Dimensions -**



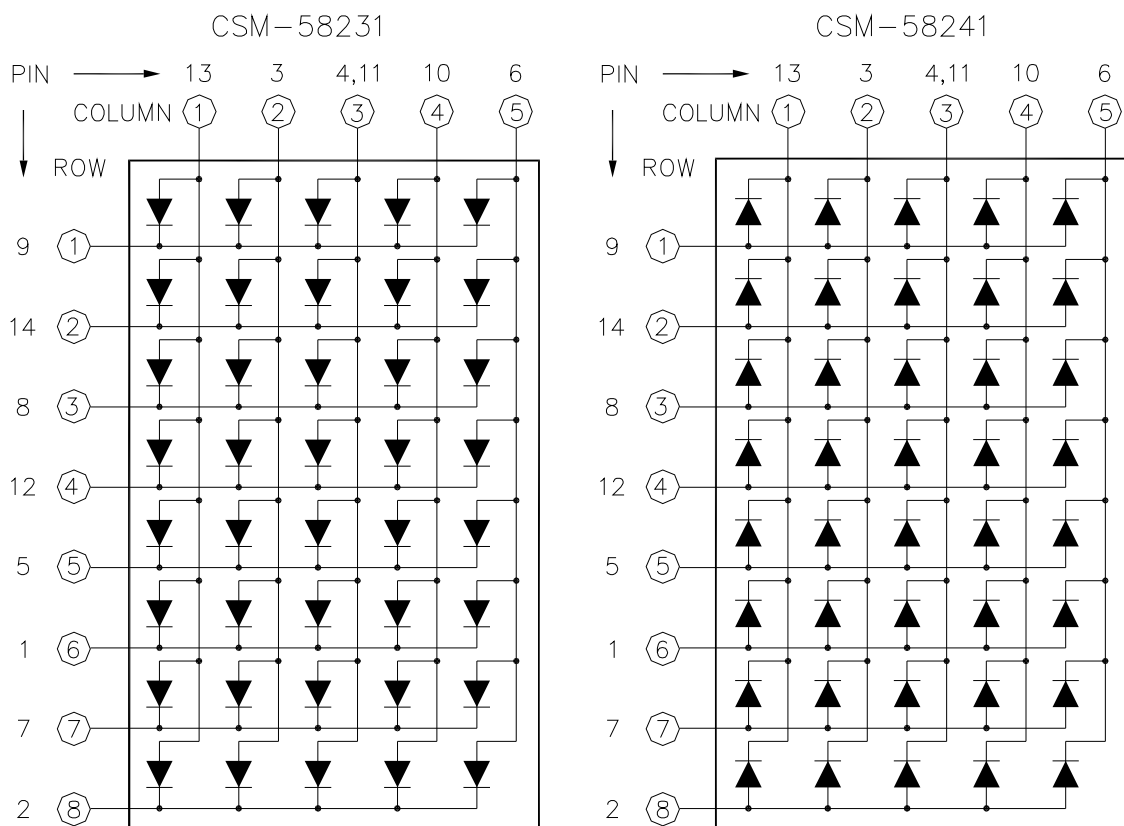
**NOTE:**

- 1 All pins are  $\phi 0.5$  (.02).
- 2 Dimension in millimeters (inch), tolerance is  $\pm 0.25$  (.01) unless otherwise noted.



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Internal Circuit Diagrams -



CSM-58231			
PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	Cathode Row 6	8	Cathode Row 3
2	Cathode Row 9	9	Cathode Row 1
3	Anode Column 2	10	Anode Column 4
4	Anode Column 3	11	Anode Column 3
5	Cathode Row 5	12	Cathode Row 4
6	Anode Column 5	13	Anode Column 1
7	Cathode Row 7	14	Cathode Row 2

CSM-58241			
PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	Anode Row 6	8	Anode Row 3
2	Anode Row 9	9	Anode Row 1
3	Cathode Column 2	10	Cathode Column 4
4	Cathode Column 3	11	Cathode Column 3
5	Anode Row 5	12	Anode Row 4
6	Cathode Column 5	13	Cathode Column 1
7	Anode Row 7	14	Anode Row 2



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■ Absolute Maximum Rating -

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Power Dissipation Per Dice	<b>Pd</b>	70	mW
Continuous Forward Current Per Dice	<b>IAF</b>	25	mA
Peak Current Per Dice(duty cycle 1/10, 1kHz)	<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			

■ Electro-optical Characteristics -

(Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment	<b>VF</b>	-	2.0	2.8	V	IF=20mA
Luminous Intensity Per Segment	<b>Iv</b>	-	40	-	mcd	IF=10mA
Peak Emission Wavelength	$\lambda_p$	-	632	-	nm	IF=20mA
Dominant Wavelength	$\lambda_d$	-	624	-	nm	IF=20mA
Spectrum Radiation Bandwidth	$\Delta \lambda$	-	20	-	nm	IF=20mA
Reverse Current	<b>IR</b>	-	-	100	$\mu A$	VR=5V
Luminous Intensity Matching Ratio	<b>IV-m</b>	-	-	2:1	-	IF=10mA



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■ Typical Electrical / Optical Characteristics Curves -

(Ta = 25°C Unless Otherwise Noted)

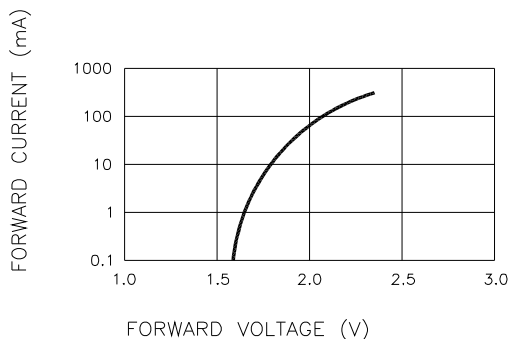


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

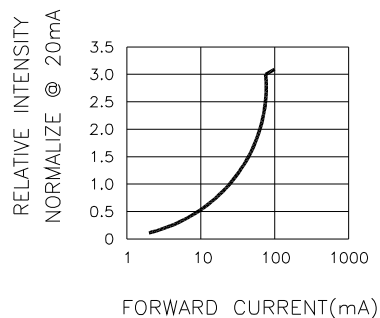


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

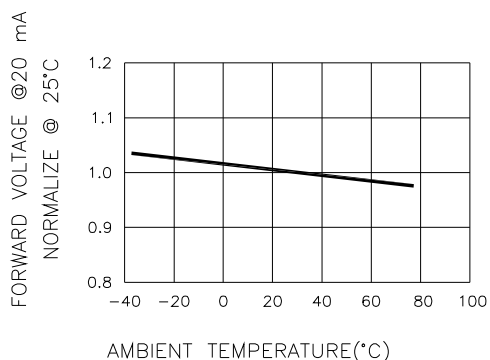


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

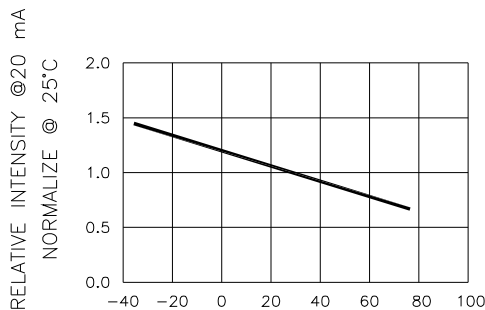


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

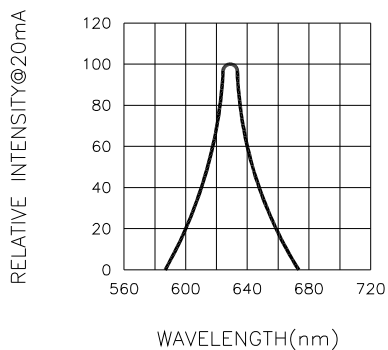


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH