



# PRODUCT SPECIFICATION

**Model No : CSM-88131M9/88141M9**

Descriptions:
<ul style="list-style-type: none"> <li>• 1.5 Inch 8X8 Dot-Matrix Display</li> <li>• Dot Pitch 5.0mm</li> <li>• CSM-88131: Column Anode, Row Cathode</li> <li>• CSM-88141: Column Cathode, Row Anode</li> <li>• Emitting Color: Super Bright Green</li> </ul>



CUSTOMER APPROVED	APPROVED BY	CHECKED BY	PREPARED BY
SIGNATURES			

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<b>Spec. No.</b>	PS-ND-08090301
<b>Rev.</b>	A

**Model No : CSM-88131M9/88141M9**

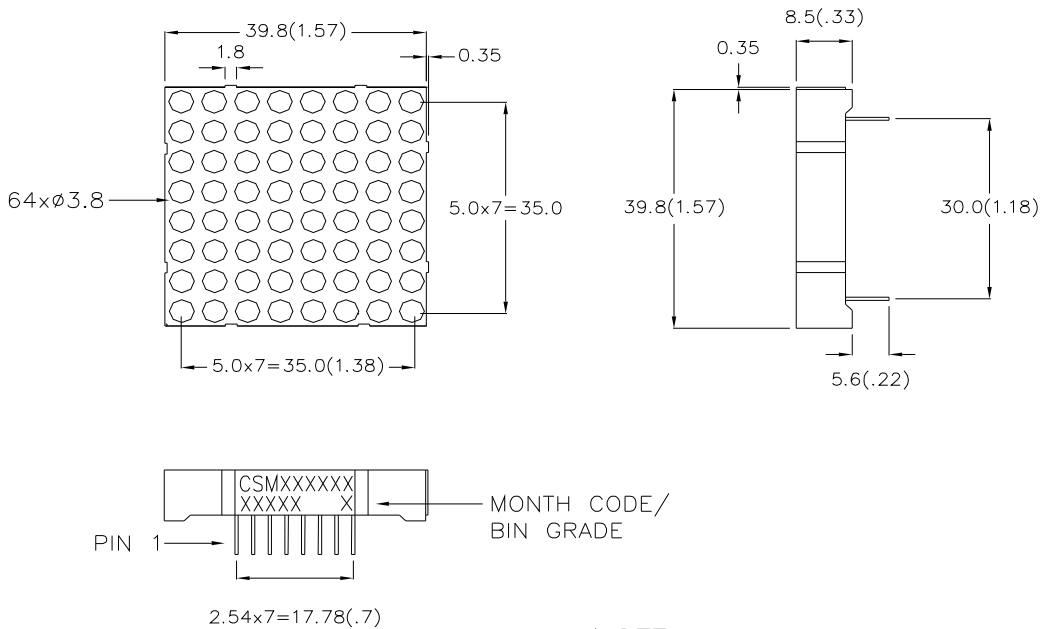
**Features -**

1. 1.5 inch (38.8mm) 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		Column	Row
	Material	Emitted Color		
<b>CSM-88131M9</b>	<b>AlGaInP</b>	<b>Super Bright Green</b>	<b>Anode</b>	<b>Cathode</b>
<b>CSM-88141M9</b>	<b>AlGaInP</b>	<b>Super Bright Green</b>	<b>Cathode</b>	<b>Anode</b>

**Package Dimensions -**



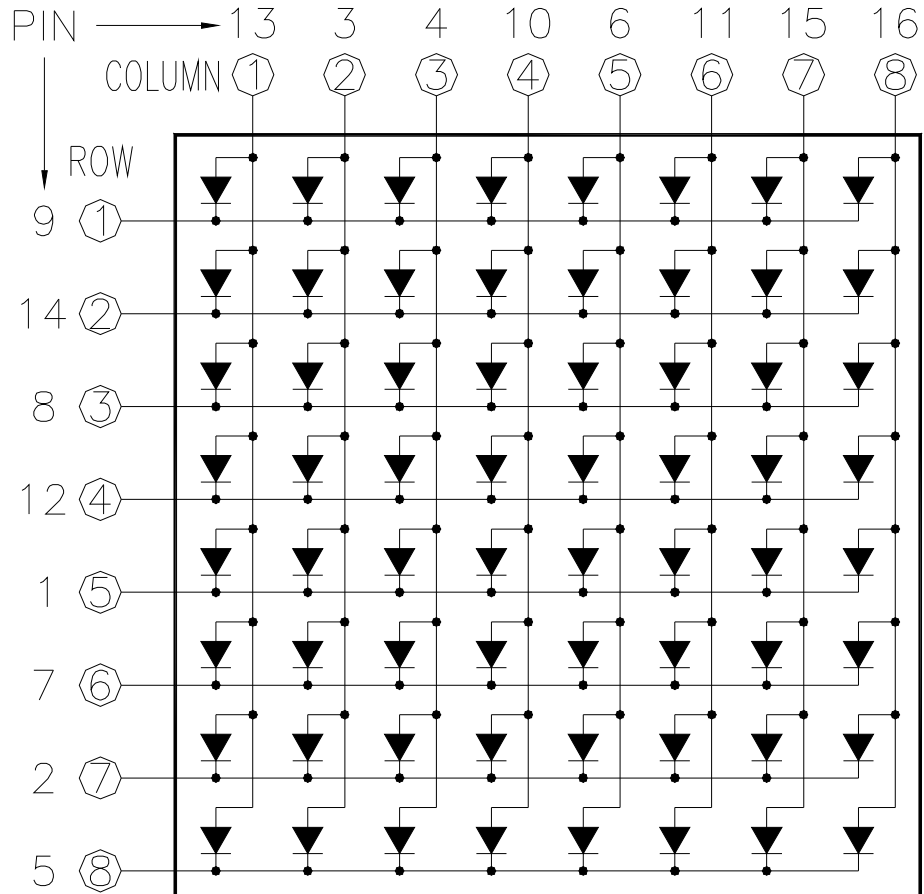
**NOTE:**

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



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Internal Circuit Diagrams -



CSM-88131 Column Anode, Row Cathode  
(CSM-88141 Column Cathode, Row Anode)



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■ Absolute Maximum Rating -

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Power Dissipation Per Dice	PAD	70	mW
Continuous Forward Current Per Dice	IAF	25	mA
Peak Current Per Dice(duty cycle 1/10,1KHz)	IPF	90	mA
Derating Linear From 25°C Per Dice	-	0.33	mA/°C
Reverse Voltage Per Dice	VR	5	V
Operating Temp.	Topr	-35 ~ +85	°C
Storage Temp.	Tstg	-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 Dot	VF	-	2.1	2.8	V	IF=20mA
Luminous Intensity Per Dot	Iv	-	14	-	mcd	IF=10mA
Peak Emission Wavelength	$\lambda_p$	-	572	-	nm	IF=20mA
Dominant Wavelength	$\lambda_d$	-	570	-	nm	IF=20mA
Spectrum Radiation Bandwidth	$\Delta \lambda$	-	20	-	nm	IF=20mA
Reverse Current	IR	-	-	100	$\mu A$	VR=5V
Luminous Intensity Matching Ratio	IV-m	-	-	2:1	-	I <sub>p</sub> =80mA 1/16Duty



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**Typical Electrical / Optical Characteristics Curves -**

**(Ta = 25°C Unless Otherwise Noted)**

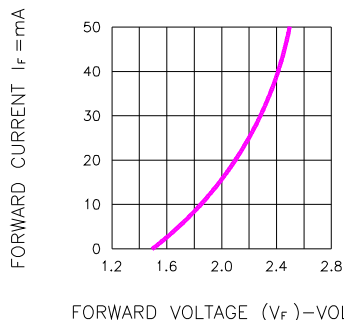


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

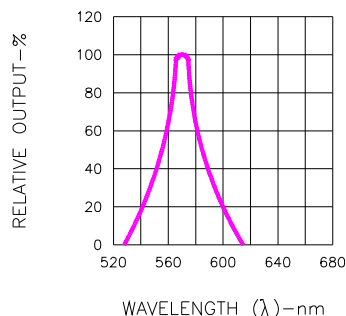


Fig.2 SPECTRAL RESPONSE

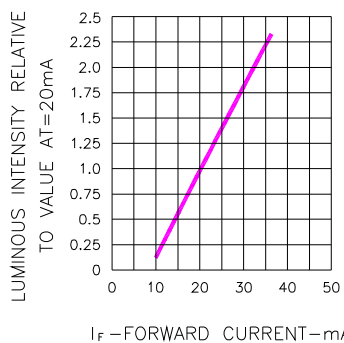


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

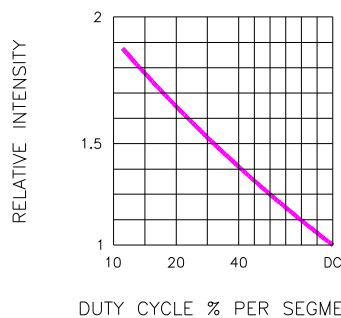


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

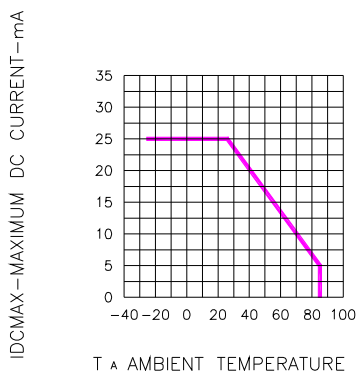


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

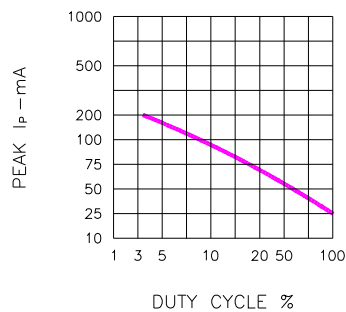


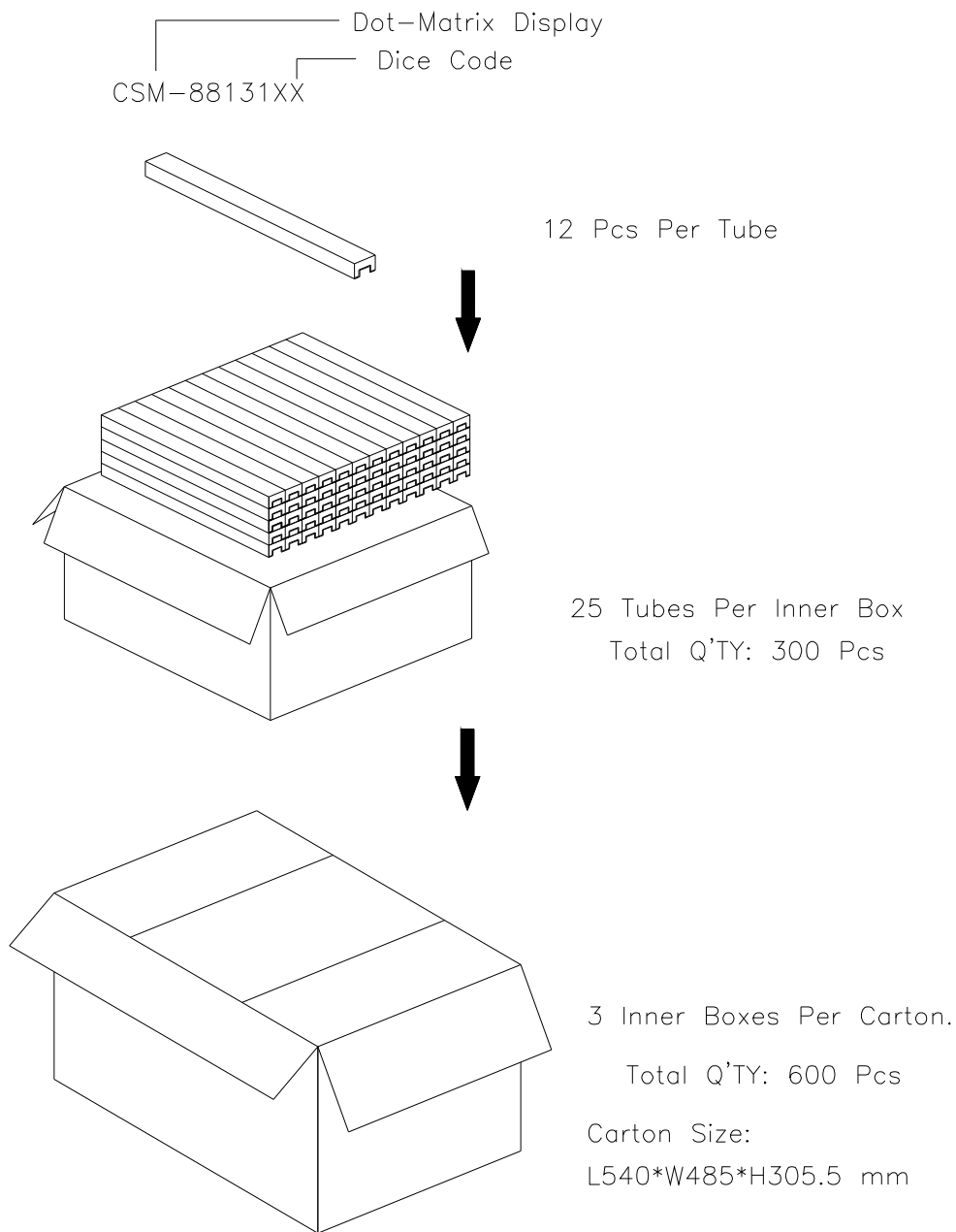
Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE (REFRESH RATE f=1 KHz)



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■ Package Dimensions



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

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