



Spec. No.	PS-ND-08090401
Rev.	A

PRODUCT SPECIFICATION

Model No : CSM-88181EG

Descriptions:

- 1.5 Inch 8X8 Dot-Matrix Display
- Dot Pitch 5.0mm
- CSM-88181: Column Cathode, Row Anode
- Emitting Color: Orange & Yellow Green



CUSTOMER APPROVED	APPROVED BY	CHECKED BY	PREPARED BY
SIGNATURES			

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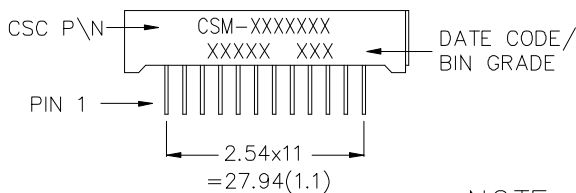
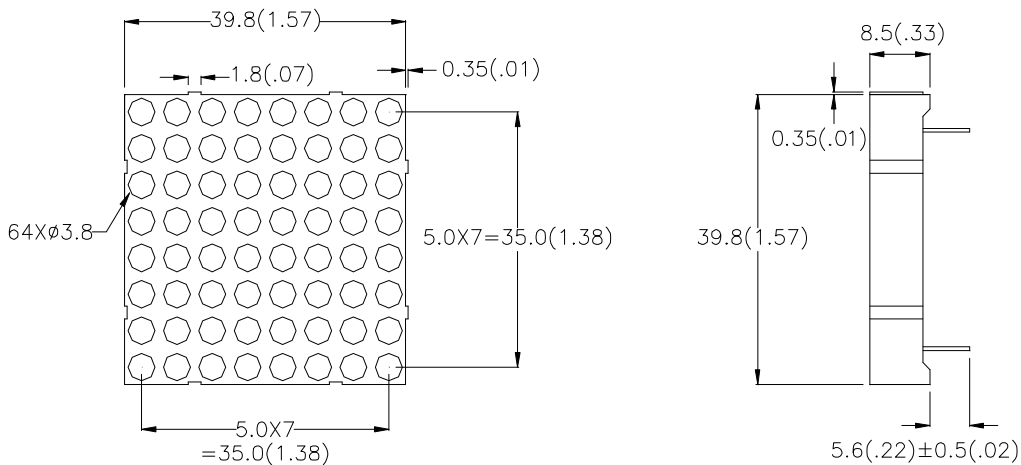
Features -

1. 1.5inch (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		
CSM-88181EG	GaAsP	Orange	Cathode	Anode
	GaP	Yellow Green		

Package Dimensions -



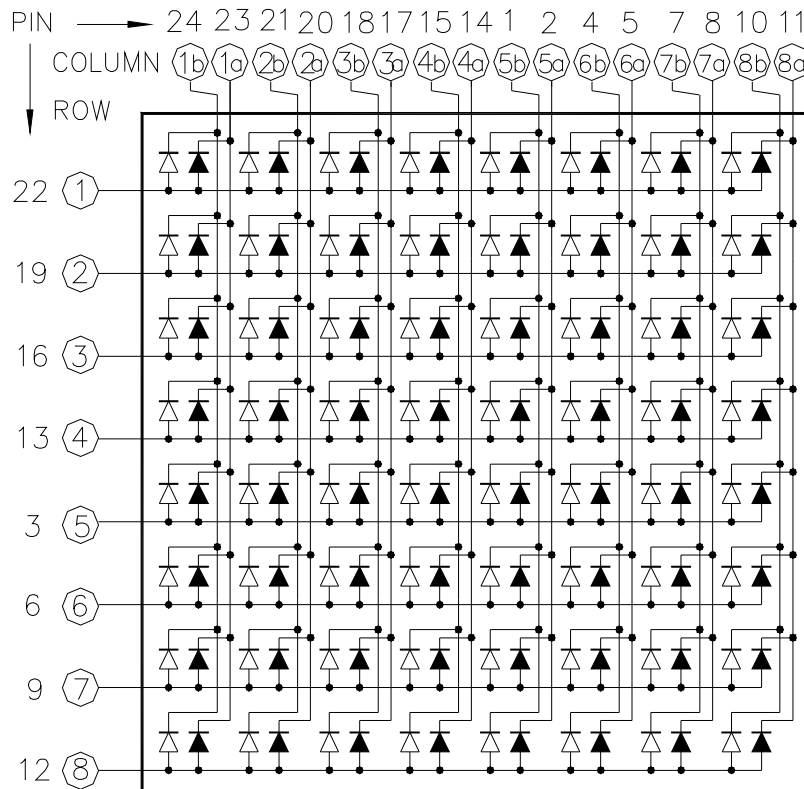
NOTE:

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



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Internal Circuit Diagrams -



- ▶ "a" for Orange color chip.
- ◀ "b" for Yellow Green color chip.

Absolute Maximum Rating -

Orange		(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			



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Yellow Green		(Ta=25°C)	
Parameter	Symbol	Rating	Unit
Power Dissipation Per Dice	P _{AD}	70	mW
Continuous Forward Current Per Dice	I _{AF}	25	mA
Peak Current Per Dice(duty cycle 1/10, 1kHz)	I _{PF}	90	mA
Derating Linear From 25°C Per Dice	-	0.33	mA/°C
Reverse Voltage Per Dice	V _R	5	V
Operating Temp.	T _{opr}	-35 ~ +85	°C
Storage Temp.	T _{stg}	-35 ~ +85	°C
Solder temperature 1/16 inch below seating plane for 3 seconds at 260°C			

■ Electro-optical Characteristics -

Orange		(Ta=25°C)				
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Dot	V _F	-	2.0	2.8	V	I _F =20mA
Luminous Intensity Per Dot	I _v	-	5	-	mcd	I _F =10mA
Peak Emission Wavelength	λ _p	-	632	-	nm	I _F =20mA
Dominant Wavelength	λ _d	-	624	-	nm	I _F =20mA
Spectrum Radiation Bandwidth	Δλ	-	35	-	nm	I _F =20mA
Reverse Current	I _R	-	-	100	μA	V _R =5V
Luminous Intensity Matching Ratio	I _{V-m}	-	-	2:1		I _p =80mA 1/16Duty

Yellow Green		(Ta=25°C)				
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Dot	V _F	-	2.1	2.8	V	I _F =20mA
Luminous Intensity Per Dot	I _v	-	6	-	mcd	I _F =10mA
Peak Emission Wavelength	λ _p	-	568	-	nm	I _F =20mA
Dominant Wavelength	λ _d	-	572	-	nm	I _F =20mA
Spectrum Radiation Bandwidth	Δλ	-	30	-	nm	I _F =20mA
Reverse Current	I _R	-	-	100	μA	V _R =5V
Luminous Intensity Matching Ratio	I _{V-m}	-	-	2:1	-	I _p =80mA 1/16Duty



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Typical Electrical / Optical Charateristics Curves -Orange

($T_a = 25^\circ\text{C}$ Unless Otherwise Noted)

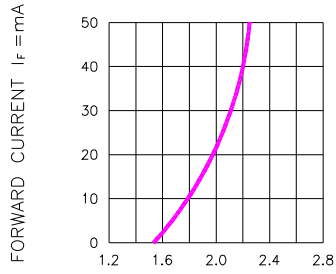


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

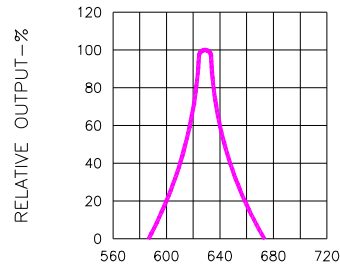


Fig.2 SPECTRAL RESPONSE

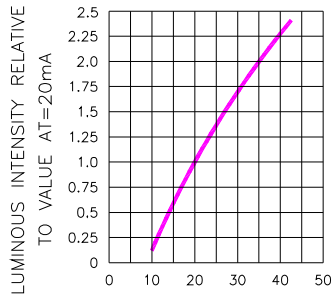


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

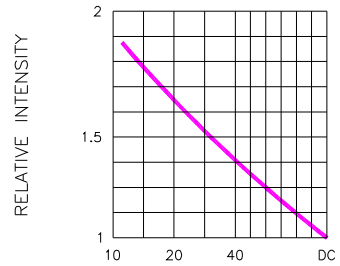


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

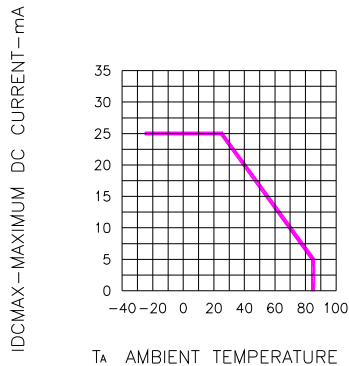


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

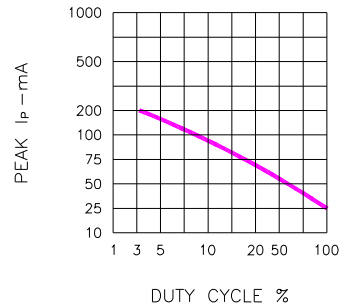


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE $f=1\text{ KHz}$)



Model No: CSM-88181EG

■ Yellow Green

(Ta = 25°C Unless Otherwise Noted)

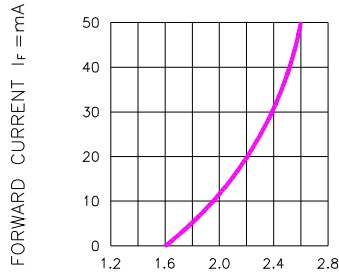


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

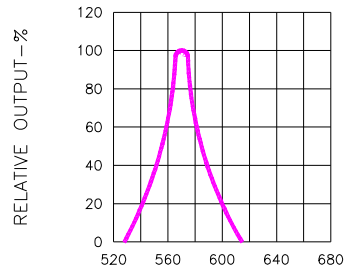


Fig.2 SPECTRAL RESPONSE

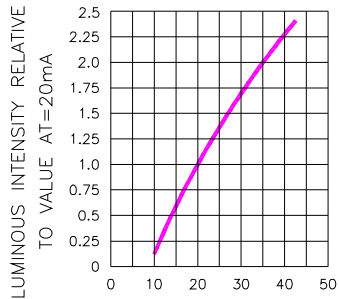


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

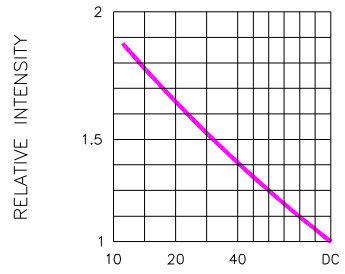


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

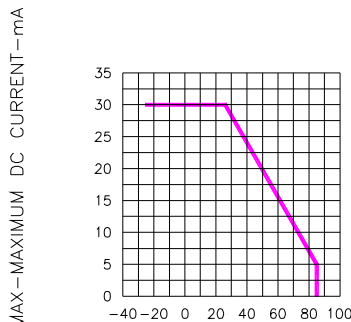


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

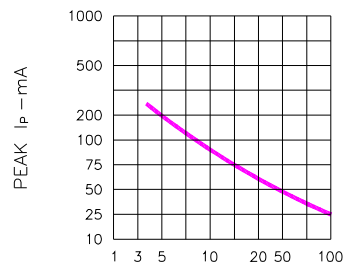


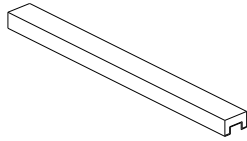
Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE f=1 KHz)



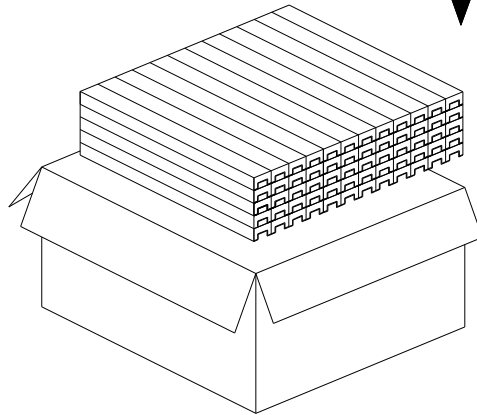
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■ Package Dimensions

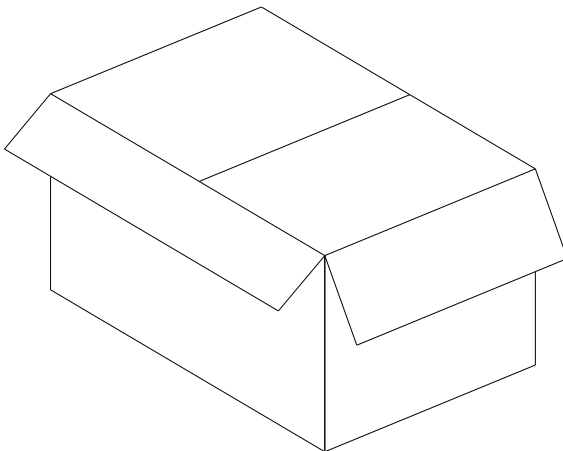
CSM-88181XX
Dot-Matrix Display
Dice Code



12 Pcs Per Tube



25 Tubes Per Inner Box
Total Q'TY: 300 Pcs



2 Inner Boxes Per Carton.

Total Q'TY: 600 Pcs

Carton Size:
L800*W291*H250 mm

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