



Spec. No.	PS-ND-08090404
Rev.	A

PRODUCT SPECIFICATION

Model No : CSM-88191EG/88101EG

Descriptions:

- 1.5 Inch 8X8 Dot-Matrix Display
- Dot Pitch 4.76mm
- CSM-88191: Column Anode, Row Cathode
- CSM-88101: Column Cathode, Row Anode
- Emitting Color: Orange & Yellow Green



CUSTOMER APPROVED	APPROVED BY	CHECKED BY	PREPARED BY
SIGNATURES			

CHINA SEMICONDUCTOR CORPORATION
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Fax:86-0575-88623112



Model No : CSM-88191EG/88101EG

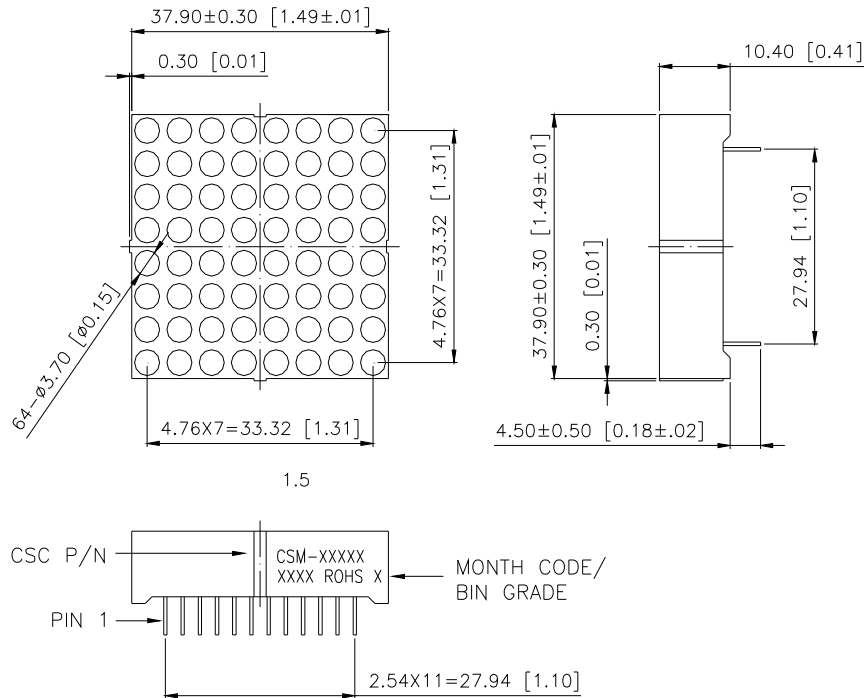
Features -

1. 1.5 inch (37.02mm) 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-88191EG	GaAsP	Orange	Anode	Cathode
	GaP	Yellow Green		
CSM-88101EG	GaAsP	Orange	Cathode	Anode
	GaP	Yellow Green		

Package Dimensions -



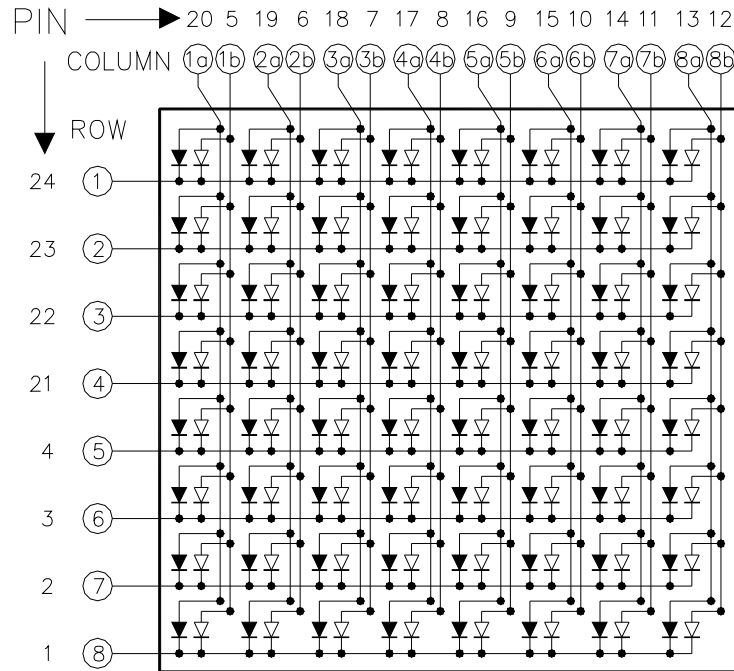
NOTE:

1. All pins are $\phi 0.6$ (.02).
2. Dimensions in millimeters (inch), tolerance is ± 0.25 (.01) unless otherwise noted.



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Internal Circuit Diagrams -



→ "a" for Orange color chip

→ "b" for Green color chip

CSM-88191: Column Anode, Row Cathode

(CSM-88101: Column Cathode, Row Anode)

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	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
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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	VF	-	2.0	2.8	V	IF=20mA
Luminous Intensity Per Dot	Iv	-	5	-	mcd	IF=10mA
Peak Emission Wavelength	λ_p	-	632	-	nm	IF=20mA
Dominant Wavelength	λ_d	-	624	-	nm	IF=20mA
Spectrum Radiation Bandwidth	$\Delta \lambda$	-	35	-	nm	IF=20mA
Reverse Current	IR	-	-	100	μA	VR=5V
Luminous Intensity Matching Ratio	IV-m	-	-	2:1	-	Ip=80mA 1/16Duty

Yellow Green		(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	-	6	-	mcd	IF=10mA
Peak Emission Wavelength	λ_p	-	568	-	nm	IF=20mA
Dominant Wavelength	λ_d	-	572	-	nm	IF=20mA
Spectrum Radiation Bandwidth	$\Delta \lambda$	-	30	-	nm	IF=20mA
Reverse Current	IR	-	-	100	μA	VR=5V
Luminous Intensity Matching Ratio	IV-m	-	-	2:1	-	Ip=80mA 1/16Duty



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Typical Electrical / Optical Characteristics Curves -Orange

(Ta = 25°C Unless Otherwise Noted)

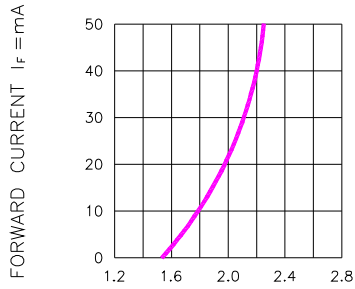


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

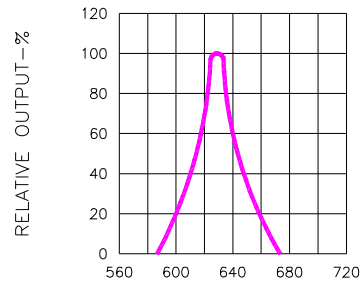


Fig.2 SPECTRAL RESPONSE

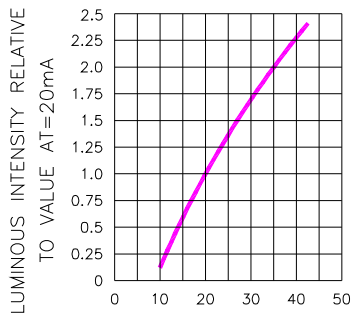


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

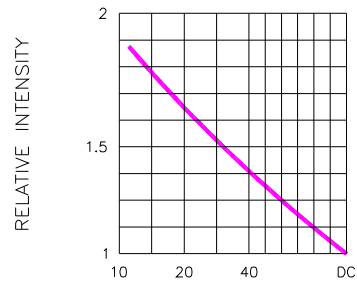


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE
(AVERAGE I_F = 10mA)

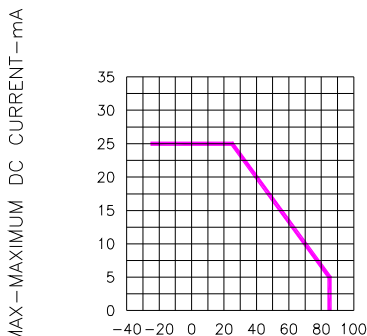


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

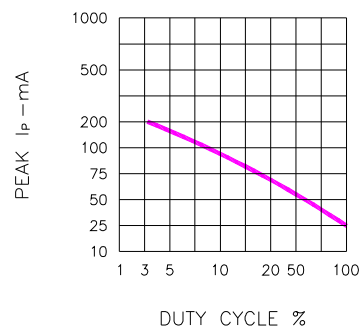


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE %
(REFRESH RATE f = 1 KHz)



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■ Yellow Green

(Ta = 25°C Unless Otherwise Noted)

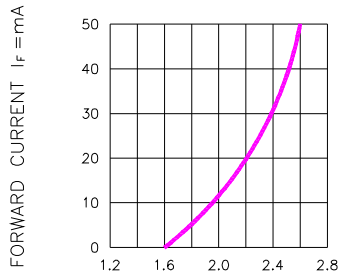


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

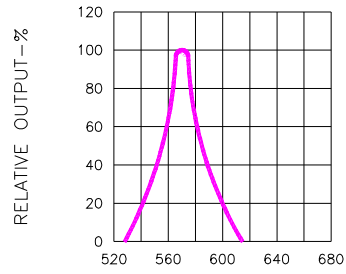


Fig.2 SPECTRAL RESPONSE

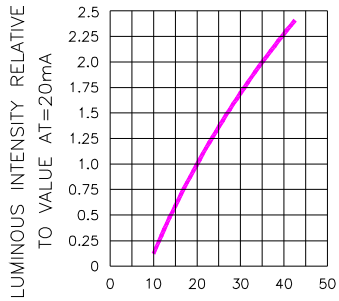


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

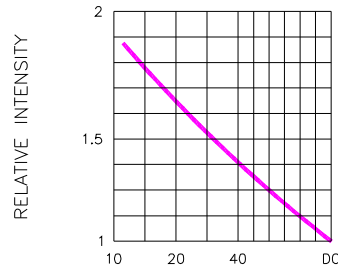


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

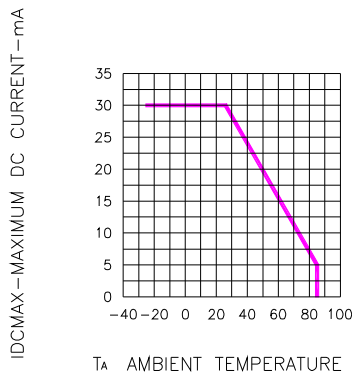


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

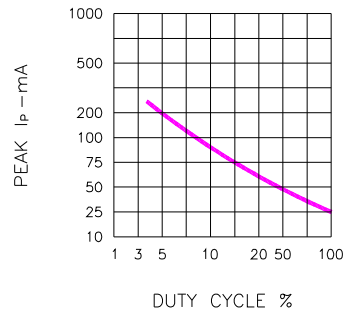


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE f=1 KHz)

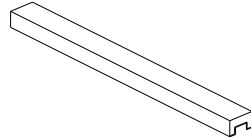


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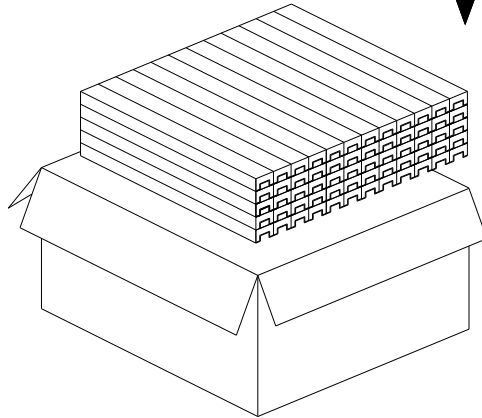
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■ Package Dimensions

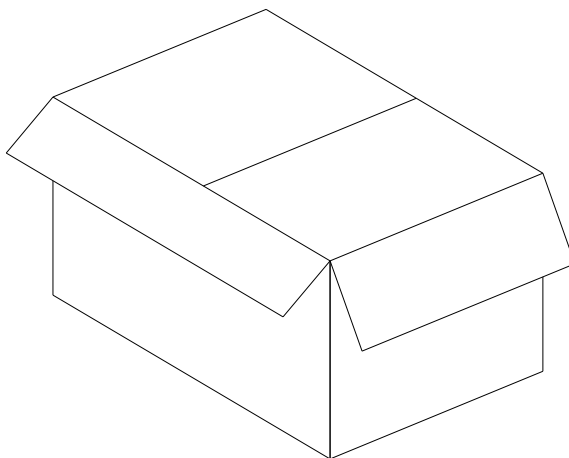
Dot-Matrix Display
Dice Code
CSM-88191/88101X



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.