



PRODUCT SPECIFICATION

Model No : CSM-57271SG/CSM-57281SG

Descriptions:

- 2.0Inch Dot-Matrix Display
- Dot Pitch 7.62mm
- 5*7 Array with X-Y Select.
- CSM-57271: Column Anode, Row Cathode
- CSM-57281: Column Cathode, Row Anode
- Emitting Color: Super Bright Red & Yellow Green



CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY

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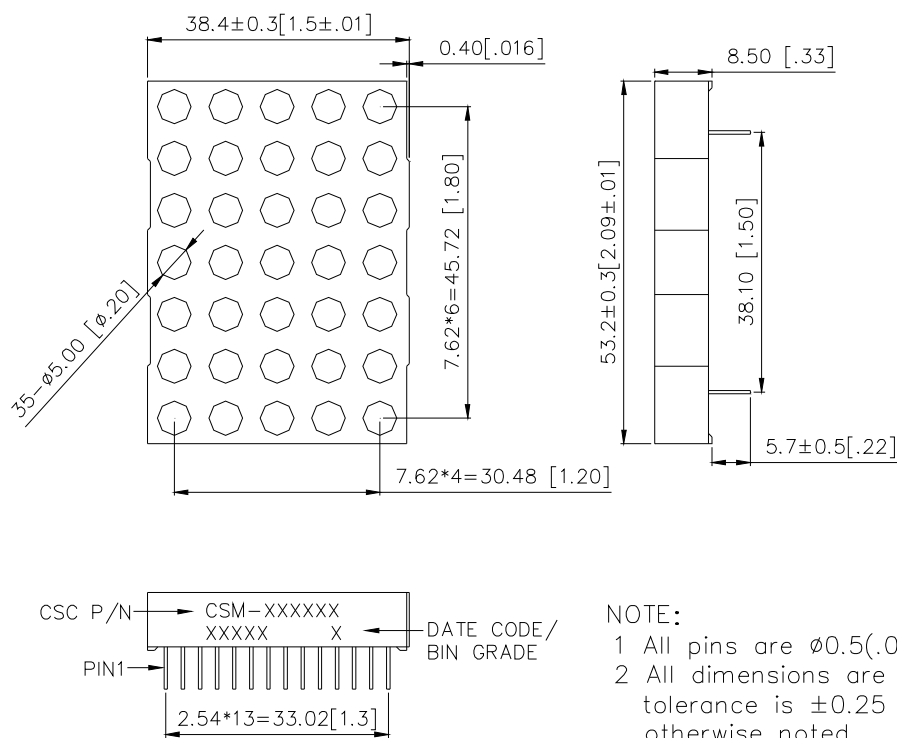
■ **Features -**

1. 2.0 inch (50.7mm) 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
CSM-57271SG	AlGaAs	Super Bright Red	Anode	Cathode
	GaP	Yellow Green		
CSM-57281SG	AlGaAs	Super Bright Red	Cathode	Anode
	GaP	Yellow Green		

■ **Package Dimensions -**



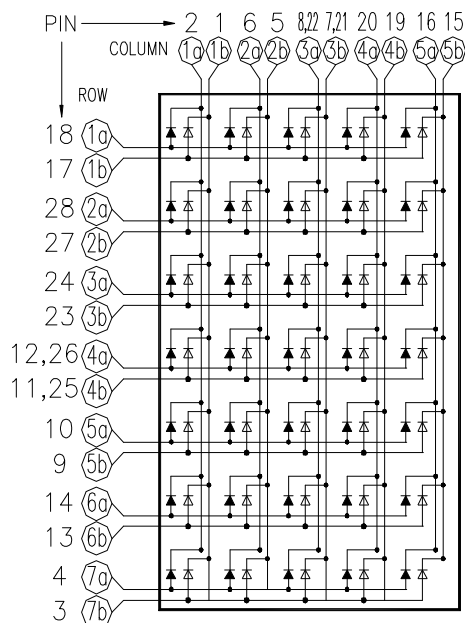
NOTE:

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



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Internal Circuit Diagrams -



CSM-57271		CSM-57281	
PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	Anode Column 1b	15	Anode Column 5b
2	Anode Column 1a	16	Anode Column 5a
3	Cathode Row 7b	17	Cathode Row 1b
4	Cathode Row 7a	18	Anode Row 1a
5	Anode Column 2b	19	Cathode Column 4b
6	Anode Column 2a	20	Cathode Column 4a
7	Anode Column 3b	21	Cathode Column 3b
8	Anode Column 3a	22	Cathode Column 3a
9	Cathode Row 5b	23	Anode Row 3b
10	Cathode Row 5a	24	Anode Row 3a
11	Cathode Row 4b	25	Anode Row 4b
12	Cathode Row 4a	26	Anode Row 4a
13	Cathode Row 6b	27	Anode Row 2b
14	Cathode Row 6a	28	Anode Row 2a

NOTE: "a" for Super Bright Red color chip.
"b" for Yellow Green color chip



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■ Absolute Maximum Rating -

Super Bright Red		(Ta=25℃)	
Parameter	Symbol	Rating	Unit
Power Dissipation Per Dice	P _{AD}	75	mW
Continuous Forward Current Per Dice	I _{AF}	30	mA
Peak Current Per Dice(duty cycle 1/10, 1kHz)	I _{PF}	120	mA
Derating Linear From 25℃ Per Dice	-	0.42	mA/℃
Reverse Voltage Per Dice	V _R	5	V
Operating Temp.	T _{opr}	-35 ~ +85	℃
Storage Temp.	T _{stg}	-35 ~ +85	℃
Solder temperature 1/16 inch below seating plane for 3 seconds at 260℃			

Yellow Green		(Ta=25℃)	
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℃ Per Dice	-	0.33	mA/℃
Reverse Voltage Per Dice	V _R	5	V
Operating Temp.	T _{opr}	-35 ~ +85	℃
Storage Temp.	T _{stg}	-35 ~ +85	℃
Solder temperature 1/16 inch below seating plane for 3 seconds at 260℃			



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■ Electro-optical Characteristics -

Super Bright Red		(Ta=25°C)				
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment	V _F	-	1.8	2.5	V	I _F =20mA
Luminous Intensity Per Segment	I _v	-	9	-	mcd	I _F =10mA
Peak Emission Wavelength	λ _p	-	660	-	nm	I _F =20mA
Dominant Wavelength	λ _d	-	644	-	nm	I _F =20mA
Spectrum Radiation Bandwidth	Δ λ	-	20	-	nm	I _F =20mA
Reverse Current	I _R	-	-	100	μA	V _R =5V
Luminous Intensity Matching Ratio	IV-m	-	-	2:1	-	I _p =80mA 1/16Duty

Yellow Green		(Ta=25°C)				
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment	V _F	-	2.1	2.8	V	I _F =20mA
Luminous Intensity Per Segment	I _v	-	7	-	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	Δ λ	-	30	-	nm	I _F =20mA
Reverse Current	I _R	-	-	100	μA	V _R =5V
Luminous Intensity Matching Ratio	IV-m	-	-	2:1	-	I _p =80mA 1/16Duty



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■ Typical Electrical / Optical Characteristics Curves -Super Bright Red
($T_a = 25^\circ\text{C}$ Unless Otherwise Noted)

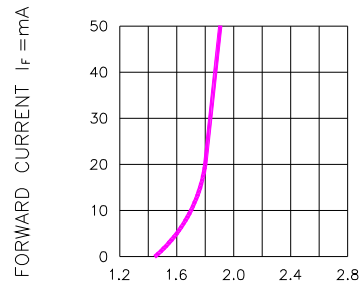


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

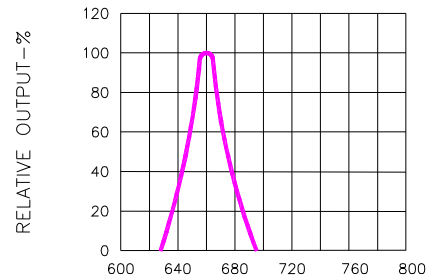


Fig.2 SPECTRAL RESPONSE

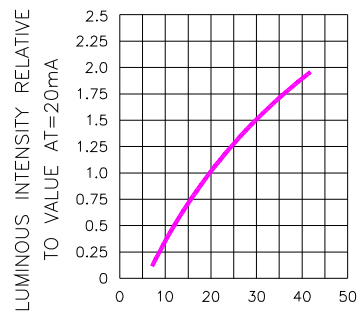


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

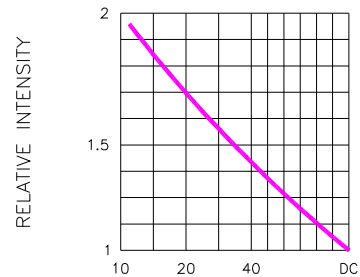


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

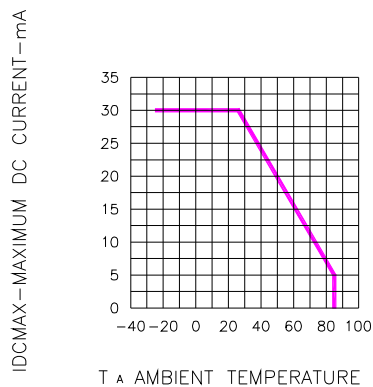


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

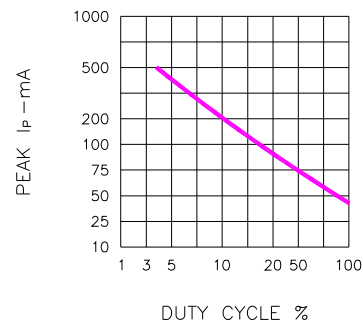


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE
(REFRESH RATE $f=1$ KHz)



Model No : CSM-57271SG/CSM-57281SG

■ Yellow Green

(Ta = 25°C Unless Otherwise Noted)

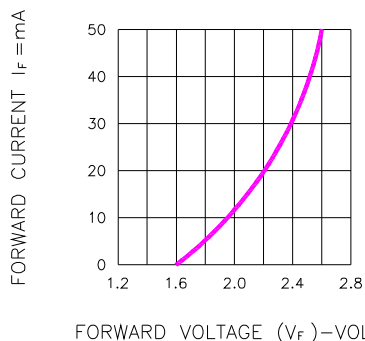


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

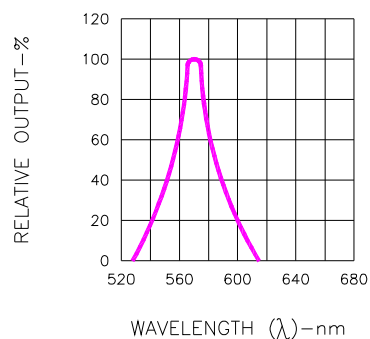


Fig.2 SPECTRAL RESPONSE

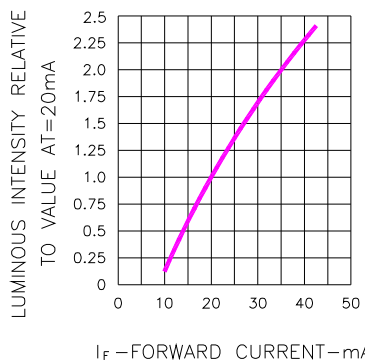


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

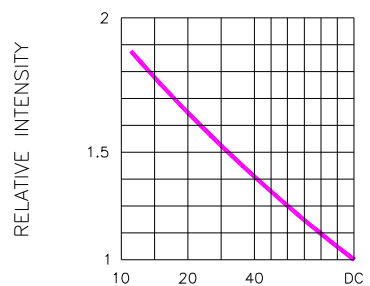


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

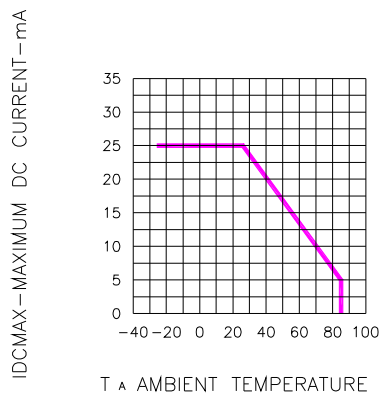


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

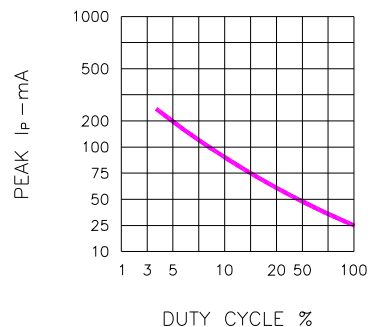
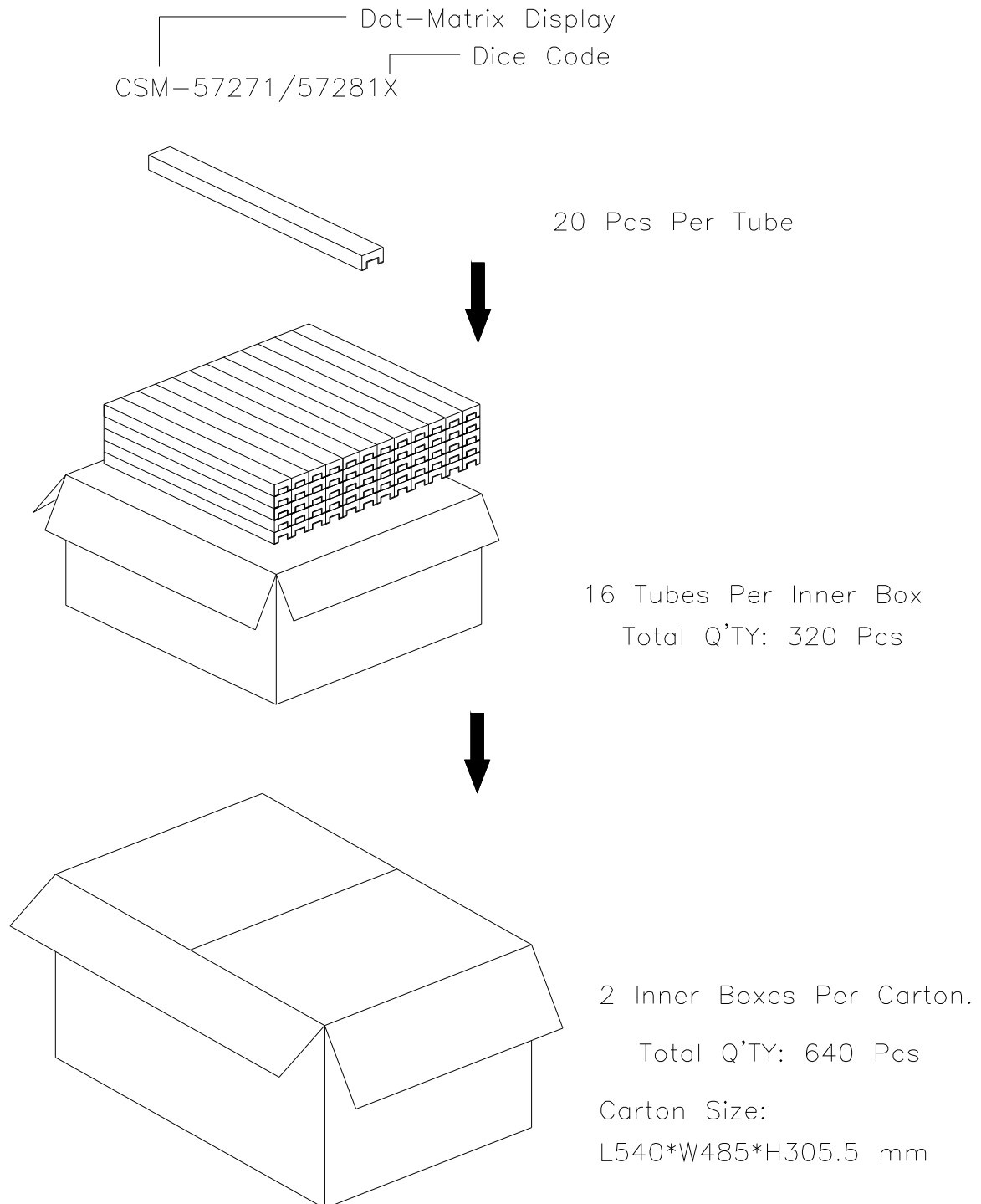


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE $f=1$ KHz)



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■ Package Dimensions



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