



Spec. No.	PS-ND-0710
Rev.	A

PRODUCT SPECIFICATION

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

Descriptions:
<ul style="list-style-type: none"> • 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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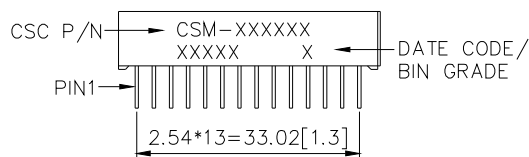
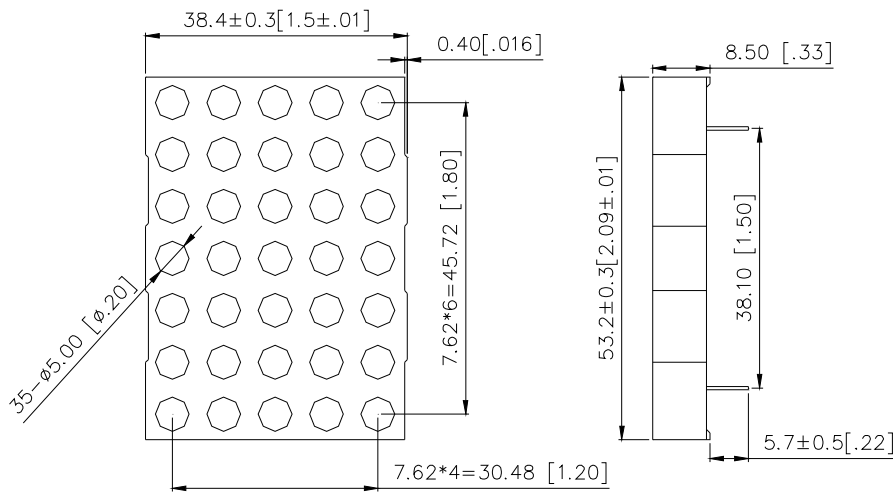
Features -

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 -



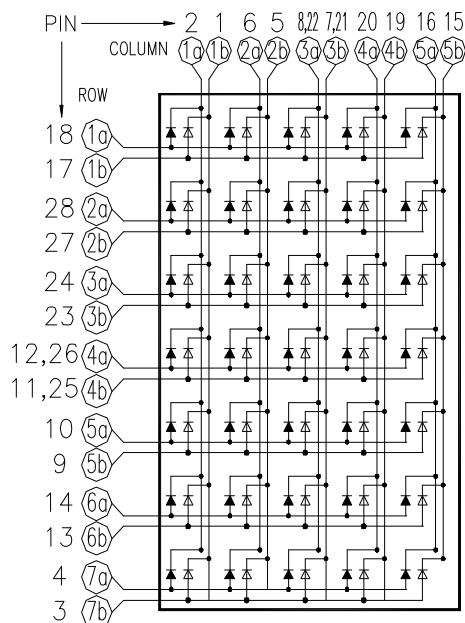
NOTE:

- 1 All pins are $\phi 0.5(.02)$.
- 2 All dimensions are in millimeters (inch), tolerance is $\pm 0.25 (.01)$ 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	Cathode Row 1a
5	Anode Column 2b	19	Anode Column 4b
6	Anode Column 2a	20	Anode Column 4a
7	Anode Column 3b	21	Anode Column 3b
8	Anode Column 3a	22	Anode Column 3a
9	Cathode Row 5b	23	Cathode Row 3b
10	Cathode Row 5a	24	Cathode Row 3a
11	Cathode Row 4b	25	Cathode Row 4b
12	Cathode Row 4a	26	Cathode Row 4a
13	Cathode Row 6b	27	Cathode Row 2b
14	Cathode Row 6a	28	Cathode Row 2a
		PIN NO.	FUNCTION
		1	Cathode Column 1b
		2	Cathode Column 1a
		3	Anode Row 7b
		4	Anode Row 7a
		5	Cathode Column 2b
		6	Cathode Column 2a
		7	Cathode Column 3b
		8	Cathode Column 3a
		9	Anode Row 5b
		10	Anode Row 5a
		11	Anode Row 4b
		12	Anode Row 4a
		13	Anode Row 6b
		14	Anode Row 6a
		15	Cathode Column 5b
		16	Cathode Column 5a
		17	Anode Row 1b
		18	Anode Row 1a
		19	Cathode Column 4b
		20	Cathode Column 4a
		21	Cathode Column 3b
		22	Cathode Column 3a
		23	Anode Row 3b
		24	Anode Row 3a
		25	Anode Row 4b
		26	Anode Row 4a
		27	Anode Row 2b
		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°C)	
Parameter	Symbol	Rating	Unit
Power Dissipation Per Dice	PAD	75	mW
Continuous Forward Current Per Dice	IAF	30	mA
Peak Current Per Dice(duty cycle 1/10, 1kHz)	IPF	120	mA
Derating Linear From 25°C Per Dice	-	0.42	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			

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
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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■ Electro-optical Characteristics -

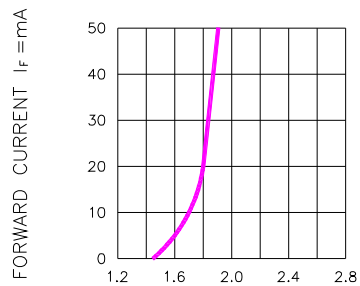
Super Bright Red							(Ta=25°C)
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition	
Forward Voltage Per Segment	V _F	-	1.8	2.5	V	I _F =20mA	
Luminous Intensity Per Segment	I _v	-	9	-	mcd	I _F =10mA	
Peak Emission Wavelength	λ _p	-	660	-	nm	I _F =20mA	
Dominant Wavelength	λ _d	-	644	-	nm	I _F =20mA	
Spectrum Radiation Bandwidth	Δλ	-	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	Δλ	-	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	

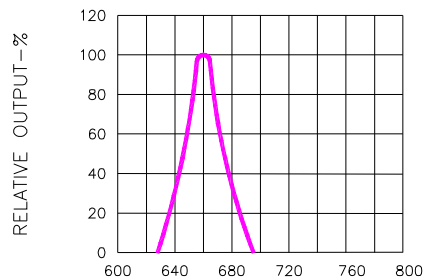


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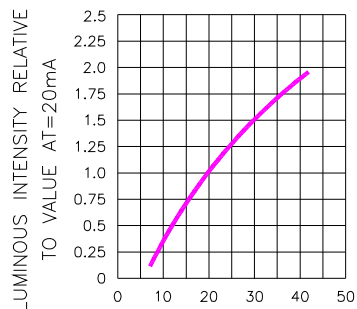
■ Typical Electrical / Optical Characteristics Curves -Super Bright Red
(Ta = 25°C Unless Otherwise Noted)



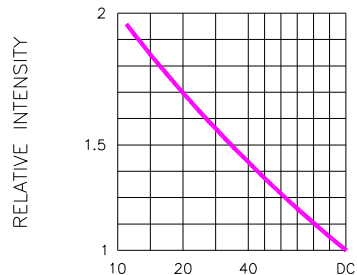
FORWARD VOLTAGE (V_F)—VOLTS
Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE



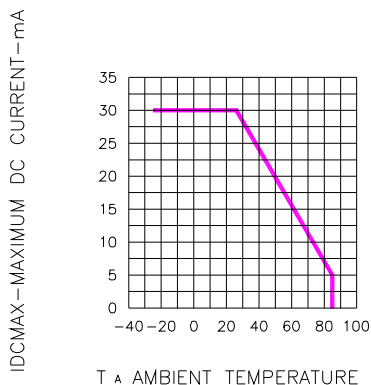
WAVELENGTH (λ)—nm
Fig.2 SPECTRAL RESPONSE



I_F —FORWARD CURRENT—mA
Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



DUTY CYCLE % PER SEGMENT
(AVERAGE $I_F=10mA$)
Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE



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

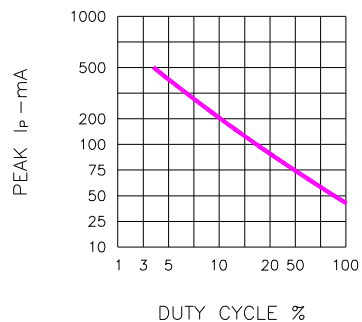


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE %
(REFRESH RATE $f=1$ KHz)



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Yellow Green

(Ta = 25°C Unless Otherwise Noted)

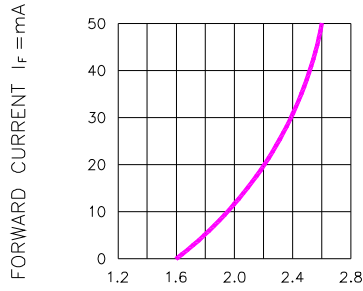


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

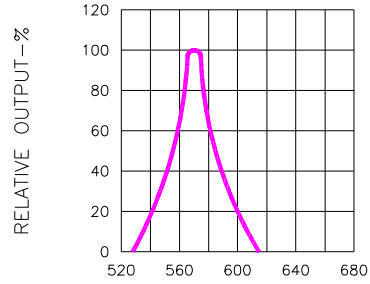


Fig.2 SPECTRAL RESPONSE

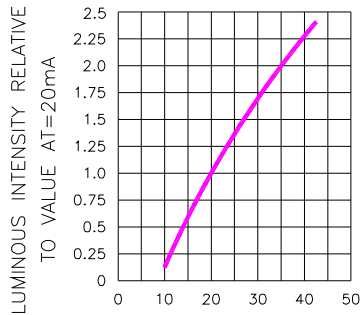


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

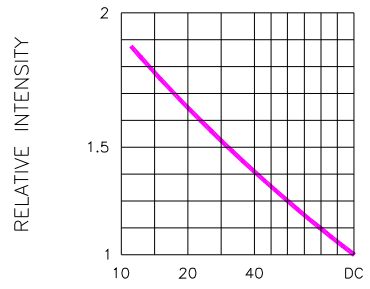


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE
(AVERAGE I_F = 10mA)

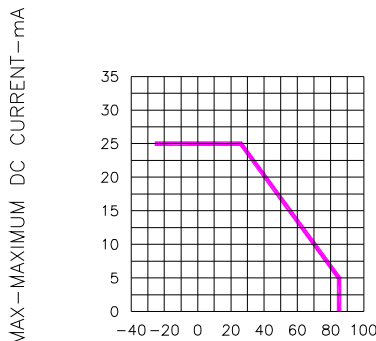


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

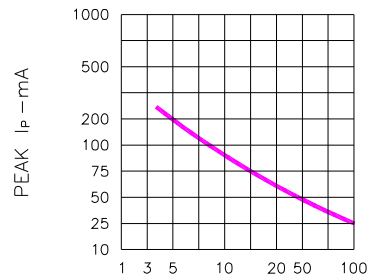


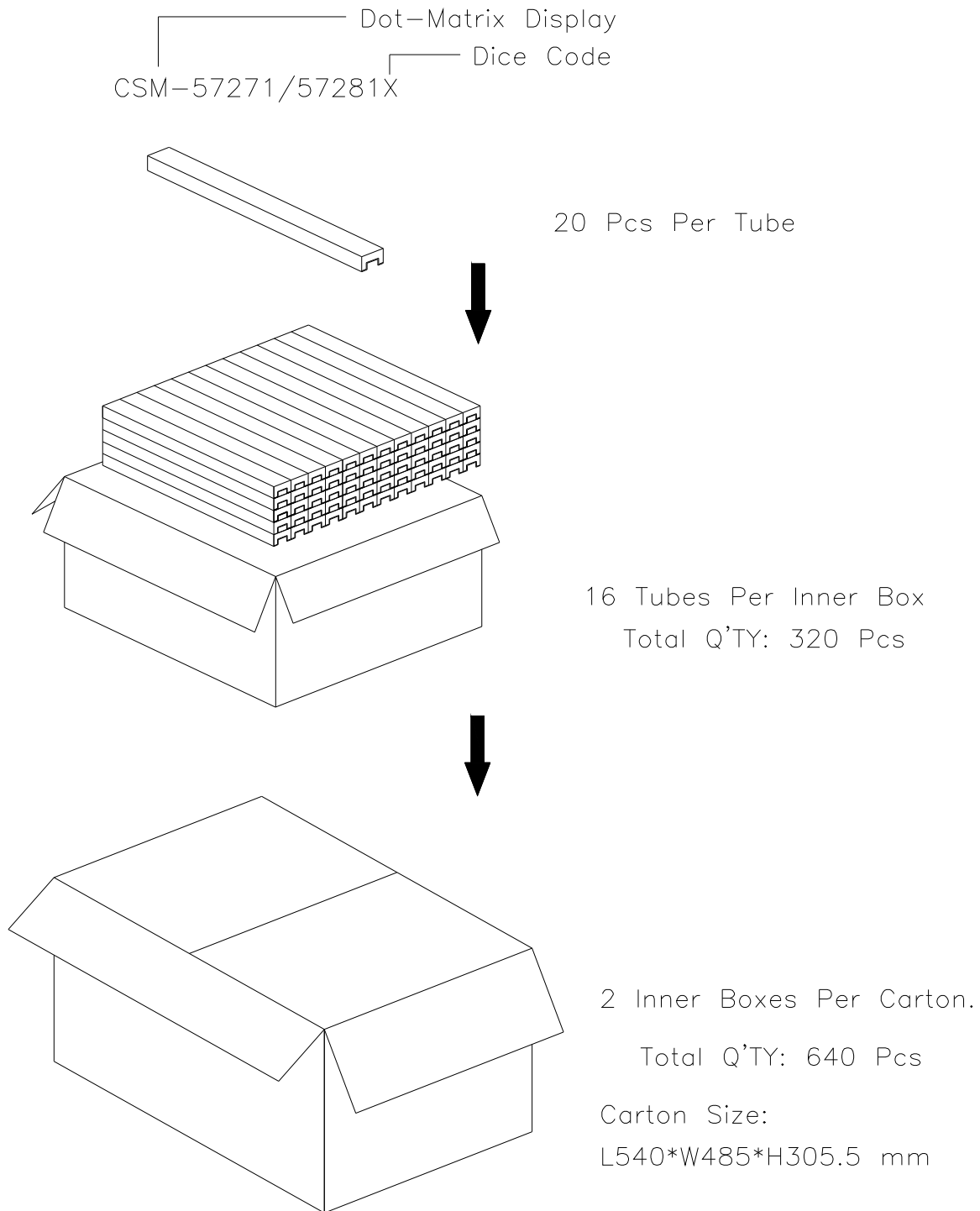
Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE %
(REFRESH RATE f = 1 KHz)



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■ Package Dimensions



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