CHINA
SEMICONDUCTOR
CORPORATION

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

PRODUCT SPECIFICATION

Model No：CSM-57271VM9/CSM-57281VM9

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 Orange & Super Bright Green

CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY

CHINA SEMICONDUCTOR CORPORATION
Address:2FL. NO.909,Chung-Cheng Road,
Chung-Ho City Taipei Hsien,Taiwan.

Tel:886-2-2223-9696
Fax:886-2-2223-9377

OPTO PLUS TECHNOLOGIES CO.,LTD
Address:696 Shun jiang Rd.,Ji Shan St.Shaoxing,
ZheJiang,China

Tel:86-0575-8623888
Fax:86-0575-8623112

http://www.csctw.com.tw

Model No：CSM-57271VM9/CSM-57281VM9

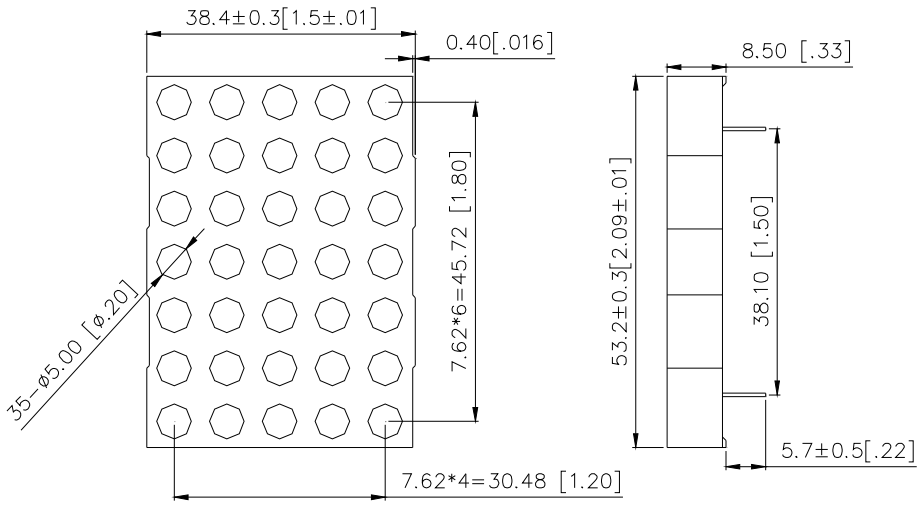
■ Features -

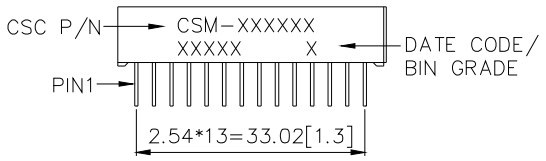
1. 2.0 inch (50.7mm) Matrix height.
2. Case mold type.
3. RoHs compliant.
4. Low power consumption.
5. Easy mounting on P.C. board or socket.

■ Device Selection Guide -

Part No.	Chip		Column	Row
	Material	Emitted Color		
CSM-57271VM9	AlGaInP	Super-Bright Orange	Anode	Cathode
	AlGaInP	Super-Bright Green		
CSM-57281VM9	AlGaInP	Super-Bright Orange	Cathode	Anode
	AlGaInP	Super-Bright Green		

■ Package Dimensions -

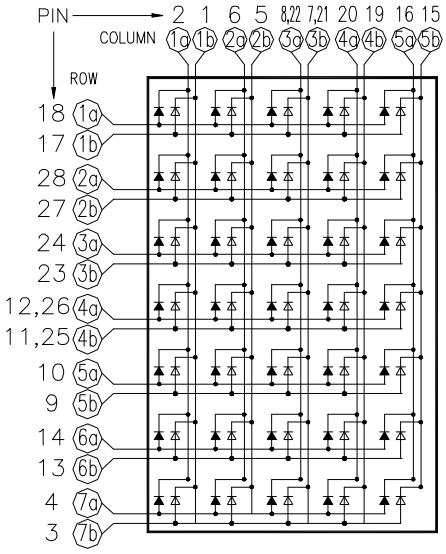




NOTE:
1 All pins are ø0.5(.02).
2 All dimensions are in millimeters (inch), tolerance is ±0.25 (.01) unless otherwise noted.

Model No：CSM-57271VM9/CSM-57281VM9

■ Internal Circuit Diagrams -



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

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

Model No：CSM-57271VM9/CSM-57281VM9

■ Absolute Maximum Rating -

Super Bright Orange (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.	Topr	-35 ~ +85	℃
Storage Temp.	Tstg	-35 ~ +85	℃
Solder temperature 1/16 inch below seating plane for 3 seconds at 260℃			

Super Bright 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.	Topr	-35 ~ +85	℃
Storage Temp.	Tstg	-35 ~ +85	℃
Solder temperature 1/16 inch below seating plane for 3 seconds at 260℃			

Model No：CSM-57271VM9/CSM-57281VM9

■ Electro-optical Characteristics -

Super Bright Orange (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment	V_F	-	2.0	2.8	V	I_F=20mA
Luminous Intensity Per Segment	Iv	-	40	-	mcd	I_F=10mA
Peak Emission Wavelength	λp	-	632	-	nm	I_F=20mA
Dominant Wavelength	λd	-	624	-	nm	I_F=20mA
Spectrum Radiation Bandwidth	Δλ	-	20	-	nm	I_F=20mA
Reverse Current	IR	-	-	100	μA	V_R=5V
Luminous Intensity Matching Ratio	IV-m	-	-	2:1	-	Ip=80mA 1/16Duty

Super Bright Green (Ta=25℃)

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	Iv	-	18	-	mcd	I_F=10mA
Peak Emission Wavelength	λp	-	572	-	nm	I_F=20mA
Dominant Wavelength	λd	-	570	-	nm	I_F=20mA
Spectrum Radiation Bandwidth	Δλ	-	20	-	nm	I_F=20mA
Reverse Current	IR	-	-	100	μA	V_R=5V
Luminous Intensity Matching Ratio	IV-m	-	-	2:1	-	Ip=80mA 1/16Duty

Model No：CSM-57271VM9/CSM-57281VM9

■ Typical Electrical / Optical Charateristics Curves -Super Bright Orange

(Ta = 25℃ Unless Otherwise Noted)

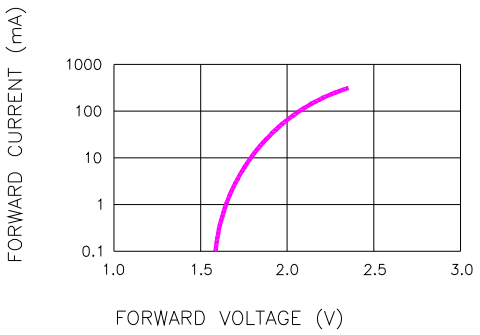


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

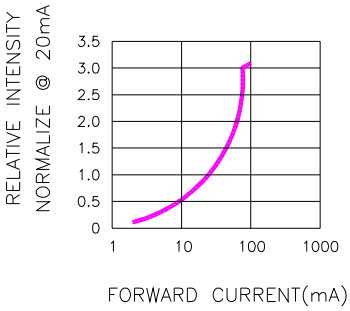


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

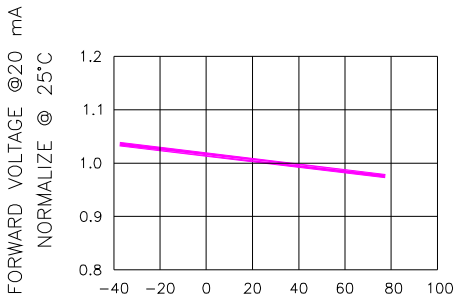


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

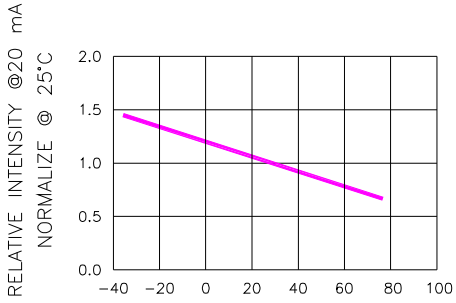


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

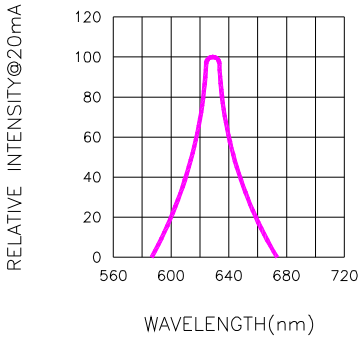


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

Model No：CSM-57271VM9/CSM-57281VM9

■ Super Bright Green

(Ta = 25℃ Unless Otherwise Noted)

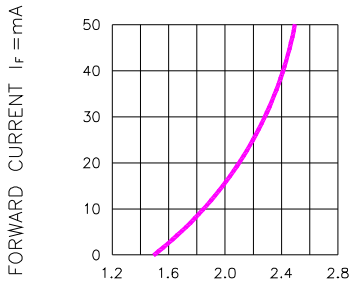


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

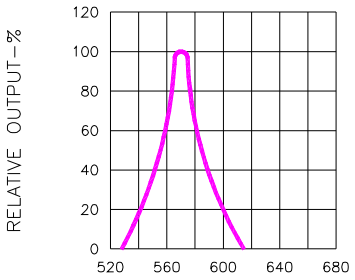


Fig.2 SPECTRAL RESPONSE

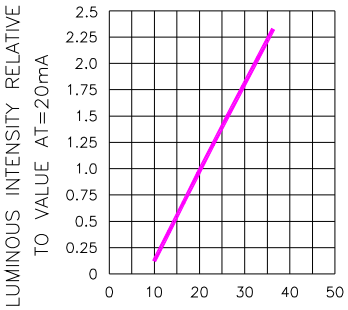


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

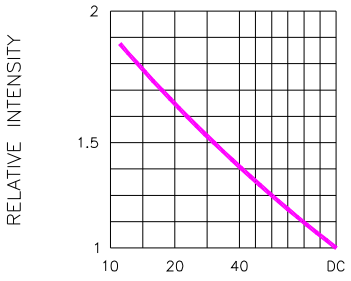


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

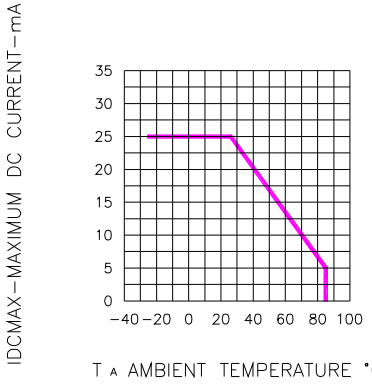


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

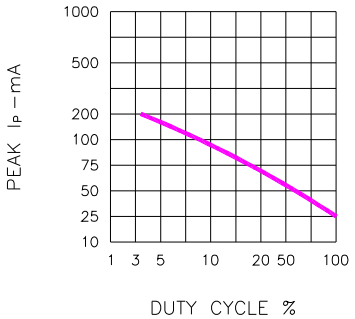
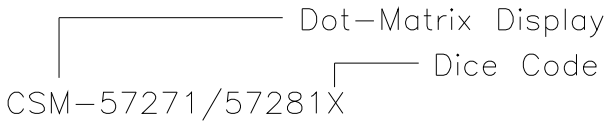
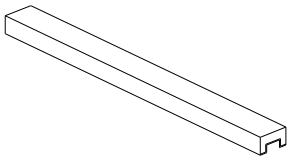


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE f=1 KHz)

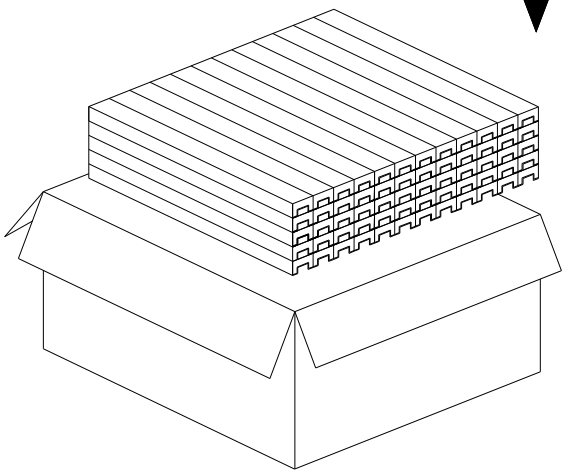
Model No：CSM-57271VM9/CSM-57281VM9

■ Package Dimensions

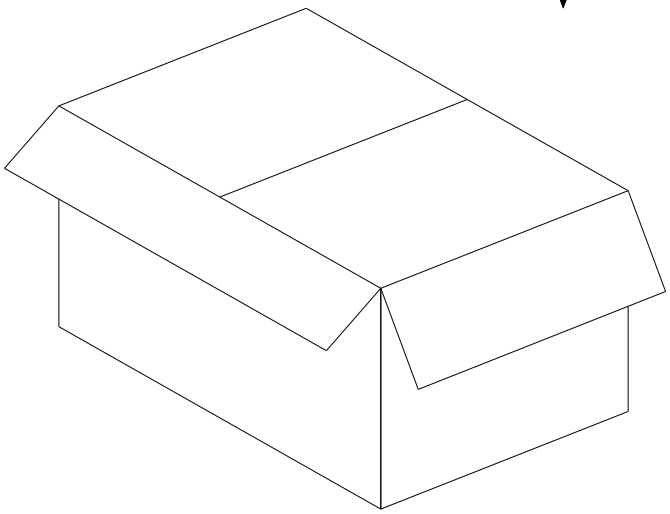




20 Pcs Per Tube



16 Tubes Per Inner Box
Total Q'TY: 320 Pcs



2 Inner Boxes Per Carton.
Total Q'TY: 640 Pcs
Carton Size:
L540*W485*H305.5 mm

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