



CHINA
SEMICONDUCTOR
CORPORATION

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

PRODUCT SPECIFICATION

Model No : CSM-57462VM9

Descriptions:

- 4.0Inch Dot-Matrix Display
- Dot Pitch 15.24mm
- 5*7 Array with X-Y Select.
- CSM-57462: 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:86-0575-88623888
Fax:86-0575-88623112



Model No : CSM-57462VM9

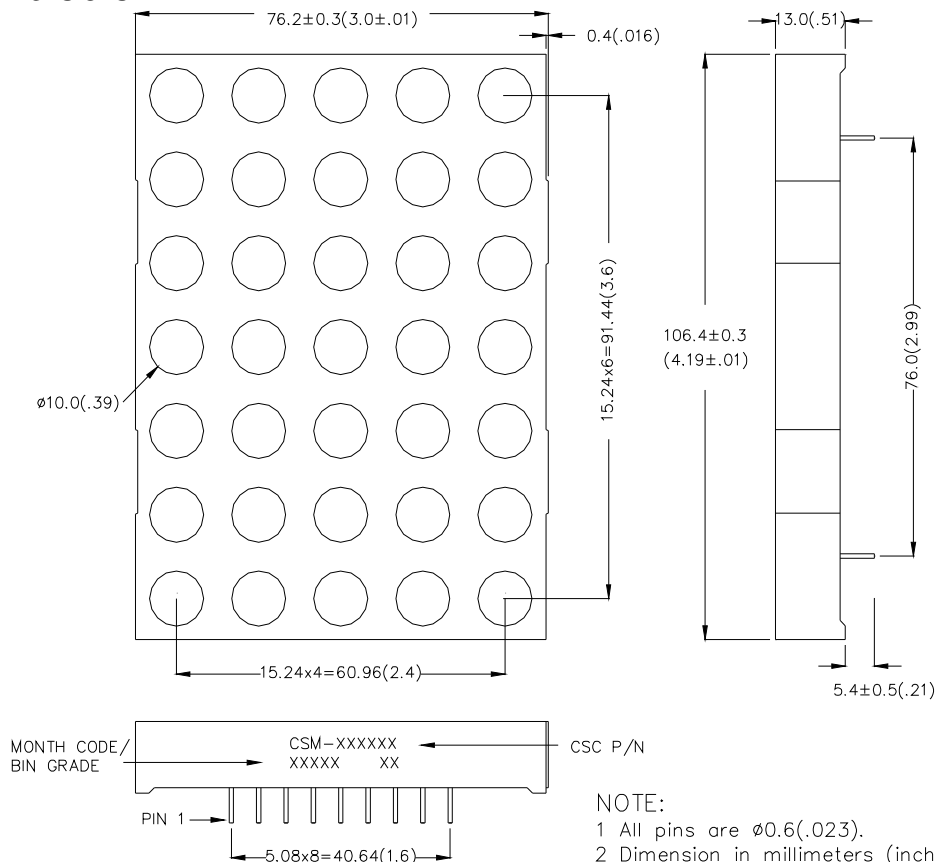
■ Features -

1. 4.0 inch (101.4mm) 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-57462VM9	AlGaInP	Super-Bright Orange	Cathode	Anode
	AlGaInP	Super-Bright Green		

■ Package Dimensions -



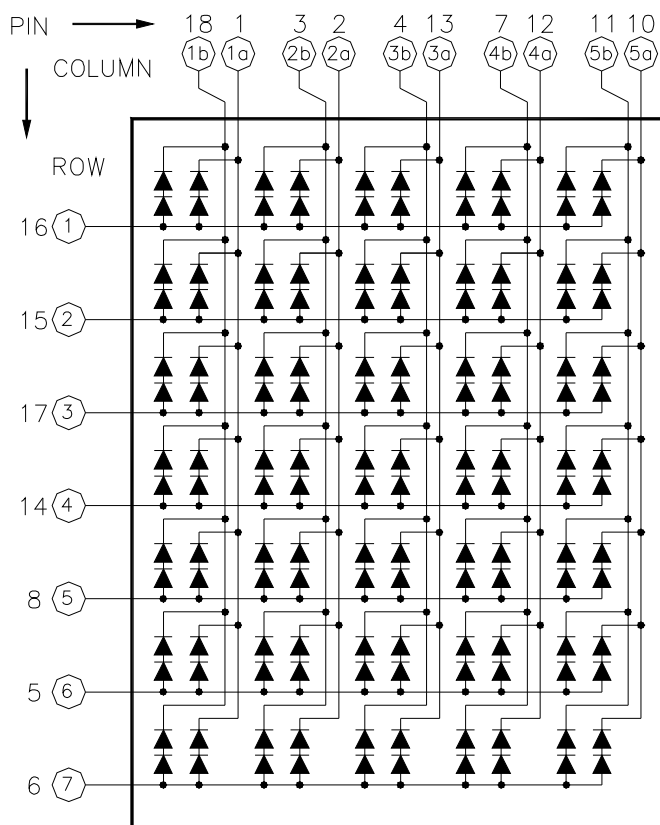
NOTE:
1 All pins are $\phi 0.6$ (.023).
2 Dimension in millimeters (inch), tolerance is ± 0.25 (.01) unless otherwise noted.



Model No : CSM-57462VM9

Internal Circuit Diagrams -

CSM-57462



CSM-57462

PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	Cathode Column 1a	10	Cathode Column 5a
2	Cathode Column 2a	11	Cathode Column 5b
3	Cathode Column 2b	12	Cathode Column 4a
4	Cathode Column 3b	13	Cathode Column 3a
5	Anode Row 6	14	Anode Row 4
6	Anode Row 7	15	Anode Row 2
7	Cathode Column 4b	16	Anode Row 1
8	Anode Row 5	17	Anode Row 3
9	No Connect	18	Cathode Column 1b

NOTE: "a" for Orange-Red color chip.
"b" for Yellow-Green color chip.



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■ Absolute Maximum Rating -

Super Bright Orange		(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			

Super Bright 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			



Model No : CSM-57462VM9

■ Electro-optical Characteristics -

Super Bright Orange		(Ta=25°C)				
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment	V _F	-	4.0(2.0)	5.6(2.8)	V	I _F =20mA
Luminous Intensity Per Segment	I _v	-	75	-	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	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

Super Bright Green		(Ta=25°C)				
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment	V _F	-	4.2(2.1)	5.6(2.8)	V	I _F =20mA
Luminous Intensity Per Segment	I _v	-	35	-	mcd	I _F =10mA
Peak Emission Wavelength	λ _p	-	572	-	nm	I _F =20mA
Dominant Wavelength	λ _d	-	570	-	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



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

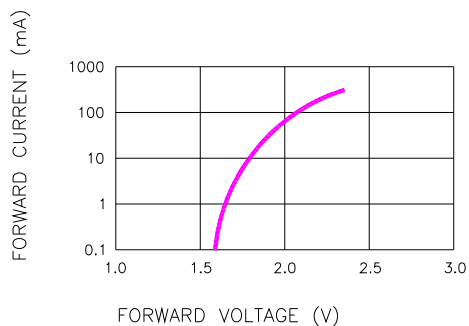


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

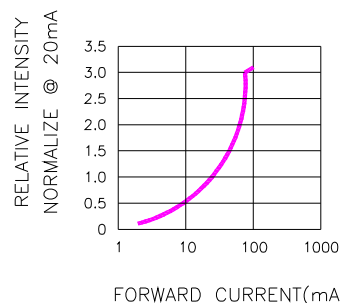


Fig.2 RELATIVE INTENSITY
VS. FORWARD CURRENT

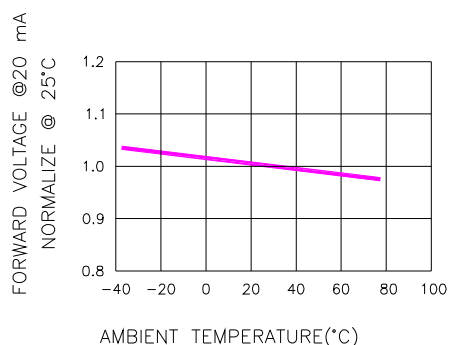


Fig.3 FORWARD VOLTAGE
VS. TEMPERATURE

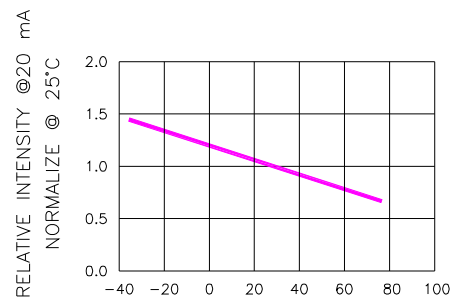


Fig.4 RELATIVE INTENSITY
VS. TEMPERATURE

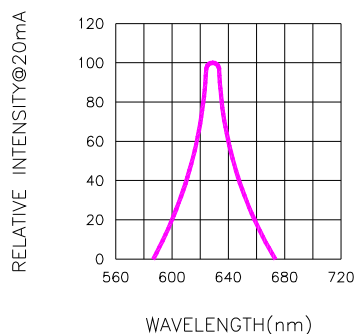


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH



Model No : CSM-57462VM9

■ Super Bright Green
(Ta = 25°C Unless Otherwise Noted)

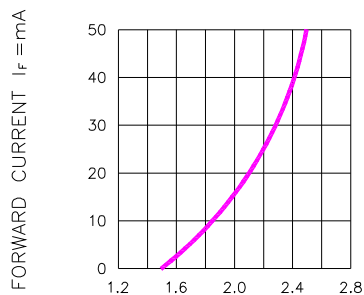


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

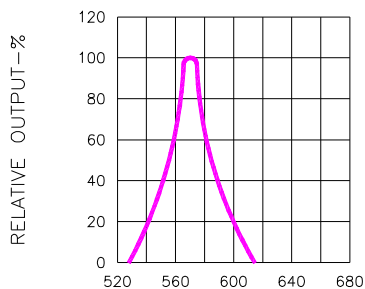


Fig.2 SPECTRAL RESPONSE

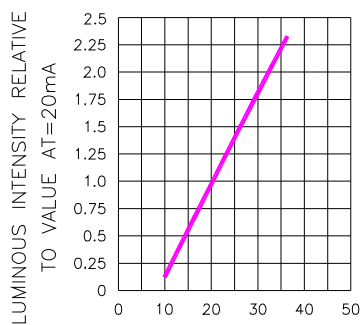


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

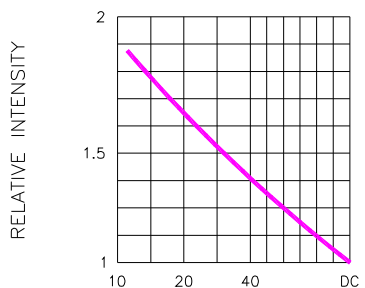


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE
(AVERAGE I_F = 10mA)

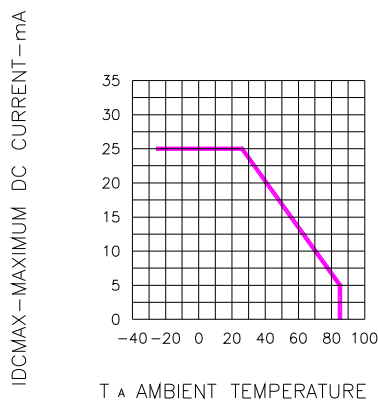


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

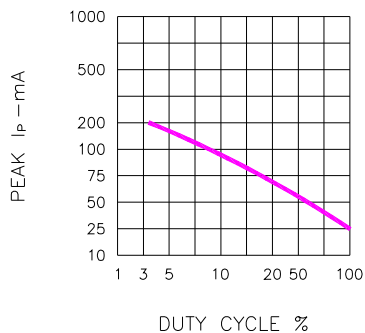
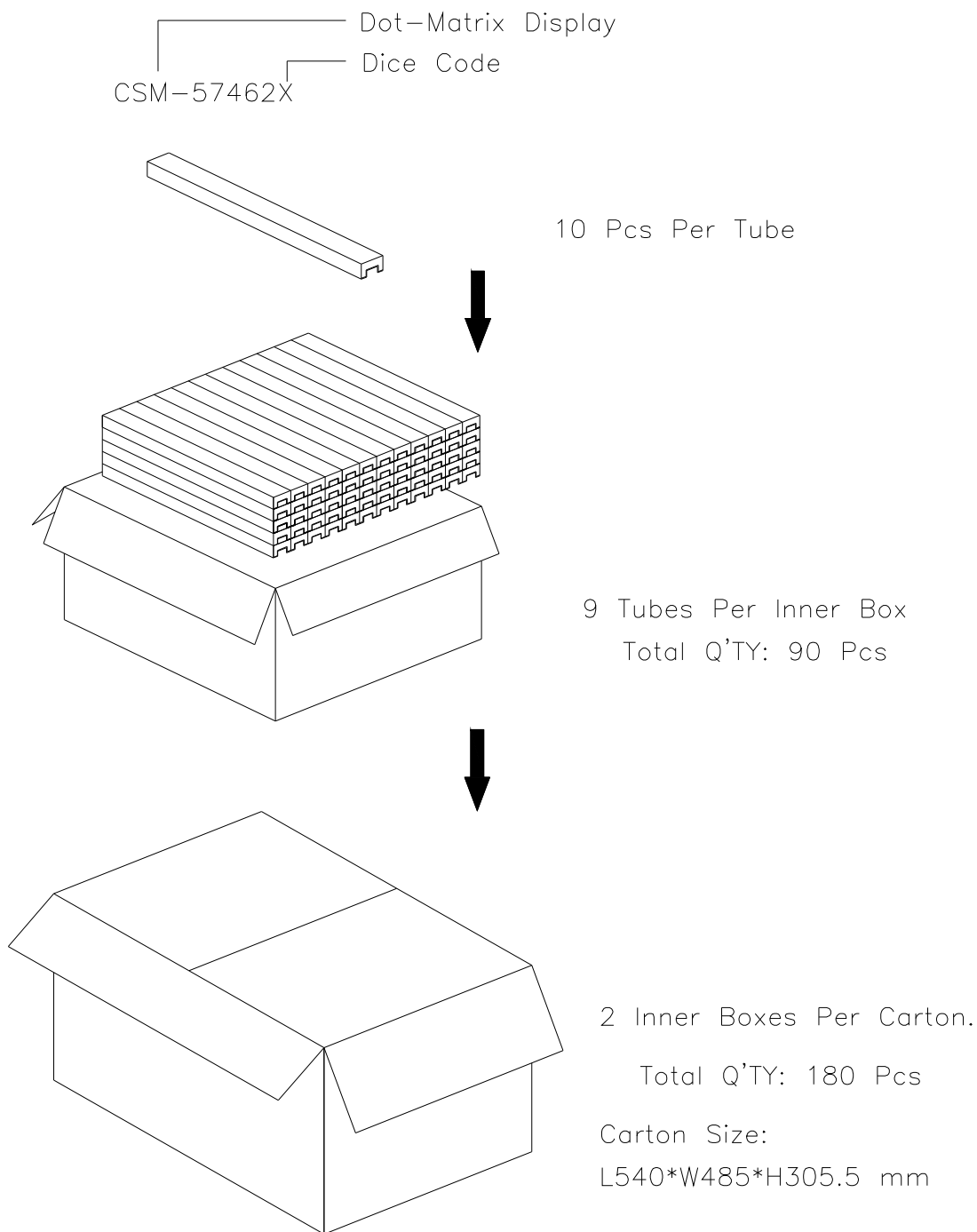


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE %
(REFRESH RATE f = 1 KHz)



Model No: CSM-57462VM9

■ Package Dimensions



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