CHINA
SEMICONDUCTOR
CORPORATION

Spec. No.	PS-ND-08090403
Rev.	A

PRODUCT SPECIFICATION

Model No：CSM-58462VM9

Descriptions:
• 4.6 Inch 5X8 Dot-Matrix Display
• Dot Pitch 15.25mm
• CSM-58462: Column Cathode, Row Anode
• Emitting Color: Super Bright Orange & Super Bright Green

CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY

CHINA SEMICONDUCTOR CORPORATION
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Model No：CSM-58462VM9

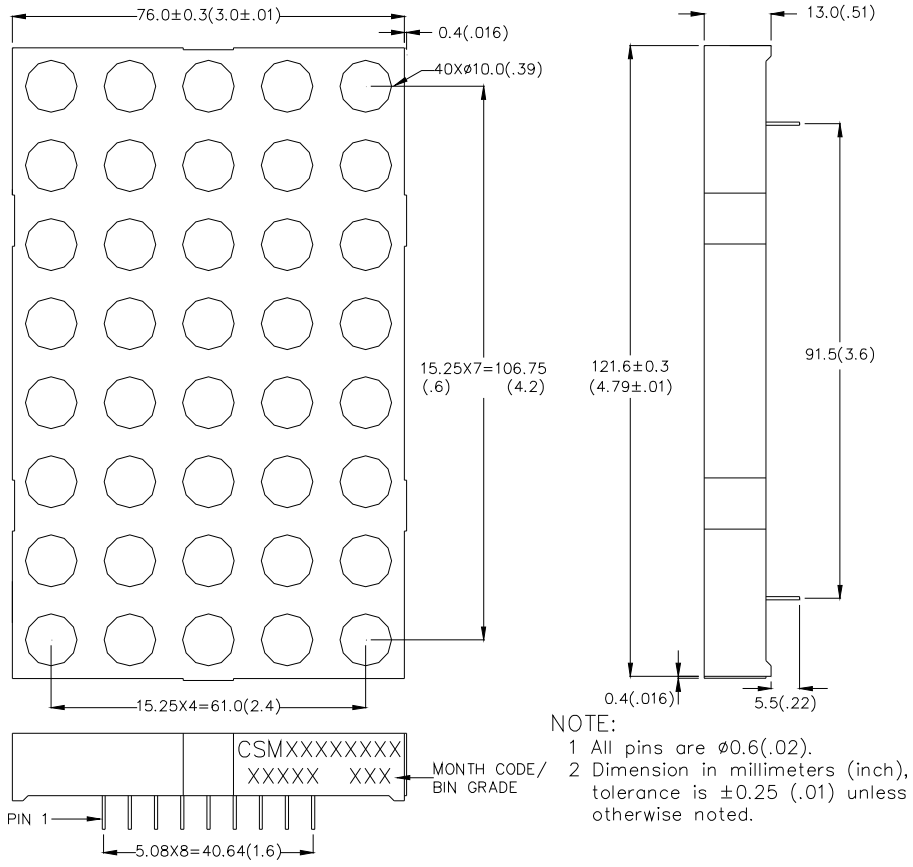
■ Features -

1. 4.6 inch (116.75mm) 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-58462VM9	AlGaInP	Super Bright Orange	Cathode	Anode
	AlGaInP	Super Bright Green		

■ Package Dimensions -



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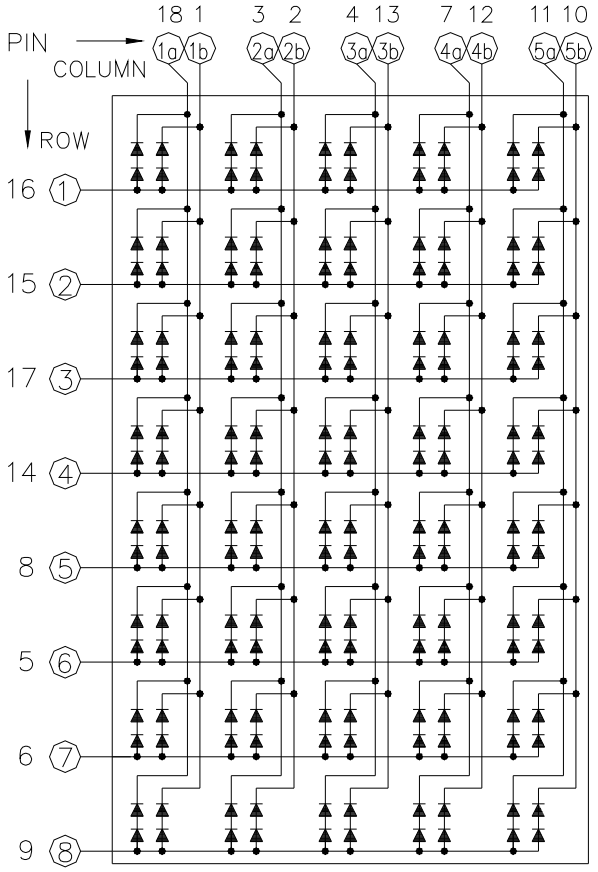
■ Internal Circuit Diagrams -



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

■ 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℃			

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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℃			

■ Electro-optical Characteristics -

Super Bright Orange (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Dot	V_F	-	4.0	5.6	V	I_F=20mA
Luminous Intensity Per Dot	Iv	-	75	-	mcd	I_F=10mA
Peak Emission Wavelength	λp	-	632	-	nm	I_F=20mA
Dominant Wavelength	λd	-	624	-	nm	I_F=20mA
Spectrum Radiation Bandwidth	$\Delta \lambda$	-	20	-	nm	I_F=20mA
Reverse Current	IR	-	-	100	μA	V_R=5V
Luminous Intensity Matching Ratio	IV-m	-	-	2:1	-	I_F=10mA

Super Bright Green (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Dot	V_F	-	4.2	5.6	V	I_F=20mA
Luminous Intensity Per Dot	Iv	-	35	-	mcd	I_F=10mA
Peak Emission Wavelength	λp	-	572	-	nm	I_F=20mA
Dominant Wavelength	λd	-	570	-	nm	I_F=20mA
Spectrum Radiation Bandwidth	$\Delta \lambda$	-	20	-	nm	I_F=20mA
Reverse Current	IR	-	-	100	μA	V_R=5V
Luminous Intensity Matching Ratio	IV-m	-	-	2:1	-	I_F=10mA

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■ Typical Electrical / Optical Charateristics Curves -Super Bright Orange

(Ta = 25℃ Unless Otherwise Noted)

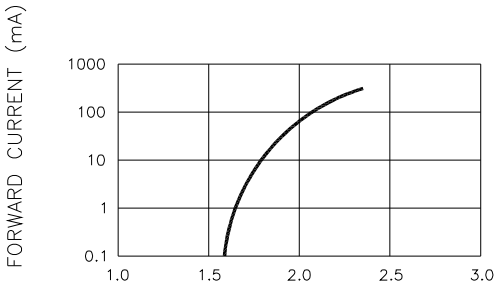


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

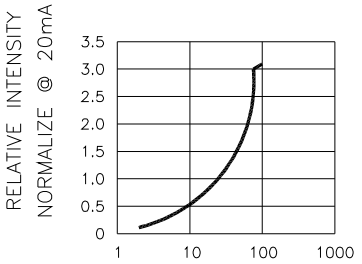


Fig.2 RELATIVE INTENSITY
VS. FORWARD CURRENT

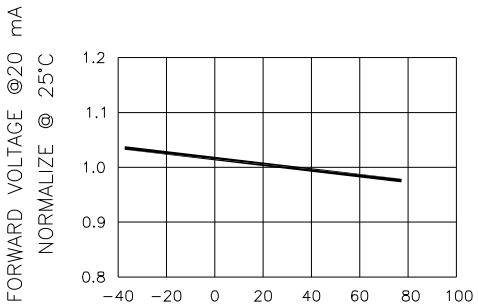


Fig.3 FORWARD VOLTAGE
VS. TEMPERATURE

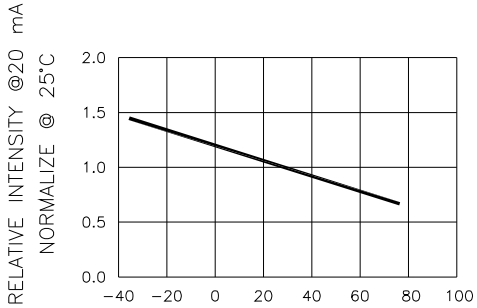


Fig.4 RELATIVE INTENSITY
VS. TEMPERATURE

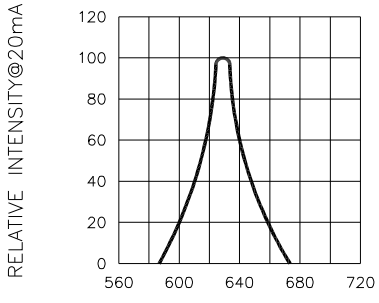
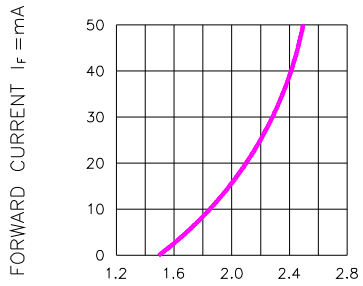


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

Model No：CSM-58462VM9

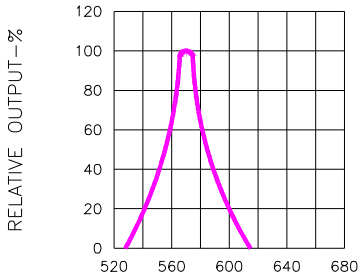
■ Super Bright Green

(Ta = 25℃ Unless Otherwise Noted)



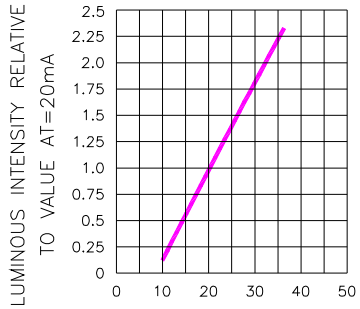
FORWARD VOLTAGE (VF)−VOLTS

Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE



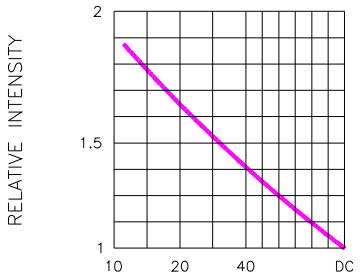
WAVELENGTH (λ)−nm

Fig.2 SPECTRAL RESPONSE



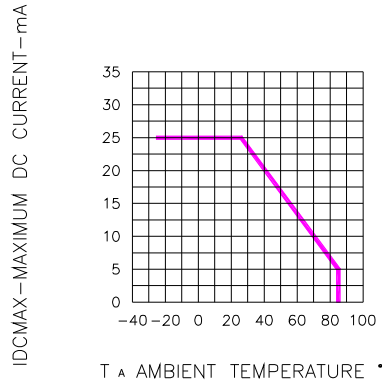
IF−FORWARD CURRENT−mA

Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



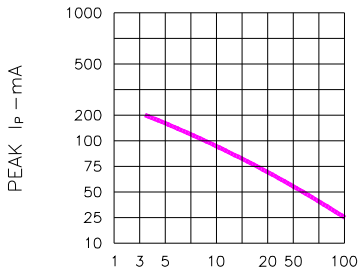
DUTY CYCLE % PER SEGMENT
(AVERAGE IF=10mA)

Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE



TA AMBIENT TEMPERATURE °C

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



DUTY CYCLE %

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

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■ Package Dimensions