



Spec. No.	PS-ND-08090305
Rev.	A

PRODUCT SPECIFICATION

Model No : CSM-16151M9/16161M9

Descriptions:
<ul style="list-style-type: none"> • 1.5 Inch 16X16 Dot-Matrix Display • Dot Pitch 2.5mm • CSM-16151: Column Anode, Row Cathode • CSM-16161: Column Cathode, Row Anode • Emitting Color: Super Bright Green



CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY

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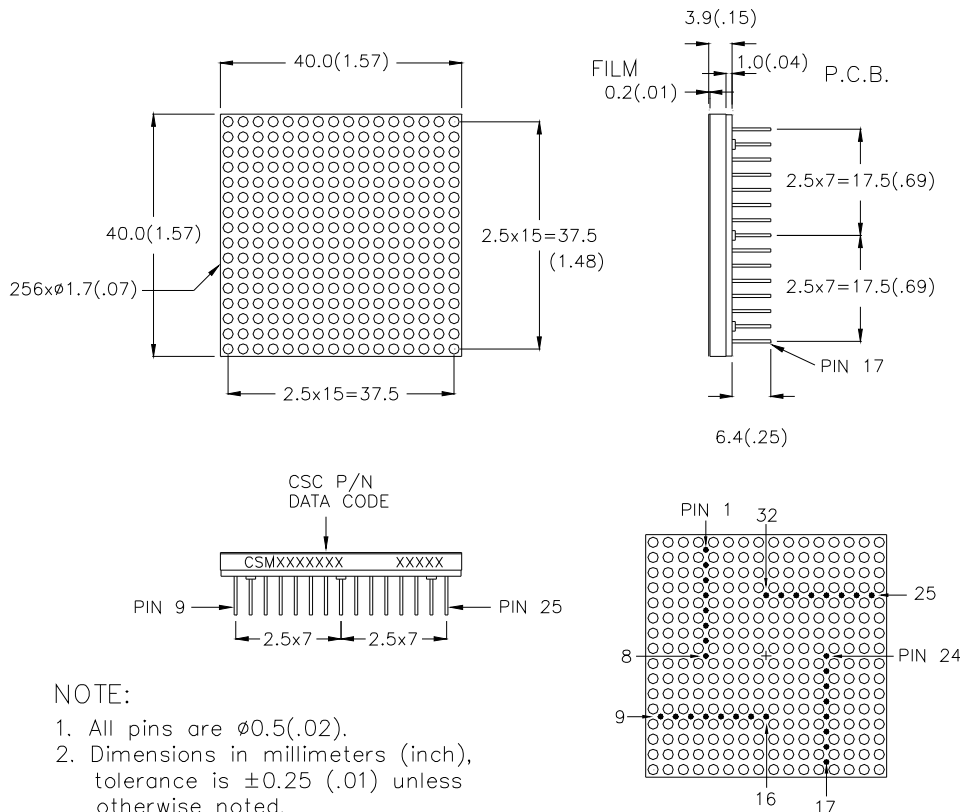
■ Features -

1. 1.5 inch (39.2mm) 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-16151M9	AlGaInP	Super Bright Green	Anode	Cathode
CSM-16161M9	AlGaInP	Super Bright Green	Cathode	Anode

■ Package Dimensions -

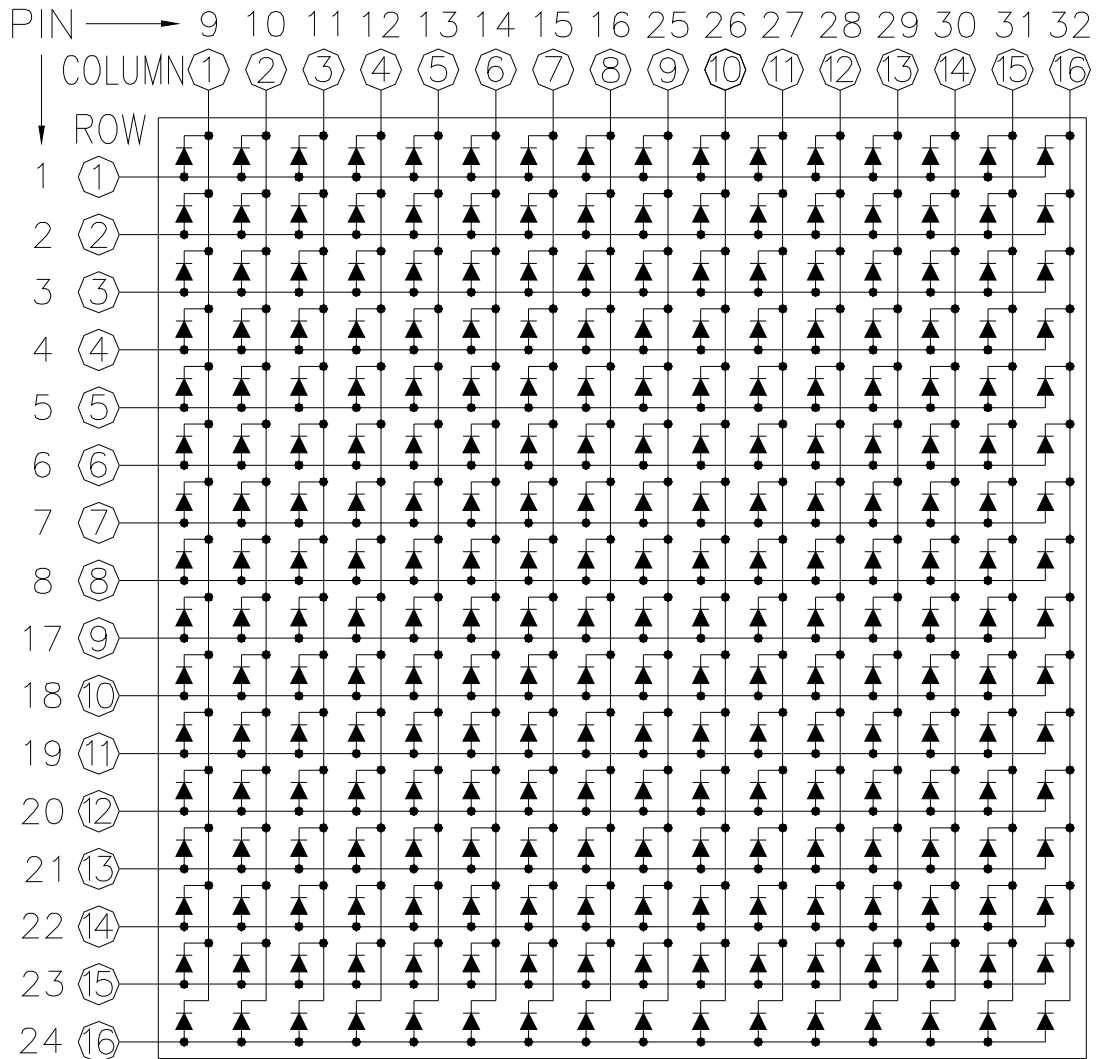


NOTE:
 1. All pins are $\varnothing 0.5(.02)$.
 2. Dimensions in millimeters (inch), tolerance is $\pm 0.25 (.01)$ unless otherwise noted.



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Internal Circuit Diagrams -



CSM-16151 Column Anode, Row Cathode.
(CSM-16161 Column Cathode, Row Anode.)



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■ Absolute Maximum Rating -

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Power Dissipation Per Dice	Pd	75	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			

■ Electro-optical Characteristics -

(Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment	VF	-	2.1	2.8	V	IF=20mA
Luminous Intensity Per Segment	Iv	-	7	-	mcd	IF=10mA
Peak Emission Wavelength	λ_p	-	568	-	nm	IF=20mA
Dominant Wavelength	λ_d	-	572	-	nm	IF=20mA
Spectrum Radiation Bandwidth	$\Delta \lambda$	-	20	-	nm	IF=20mA
Reverse Current	IR	-	-	100	μ A	VR=5V
Luminous Intensity Matching Ratio	IV-m	-	-	2:1	-	IF=10mA



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■ Typical Electrical / Optical Characteristics Curves -

(Ta = 25°C Unless Otherwise Noted)

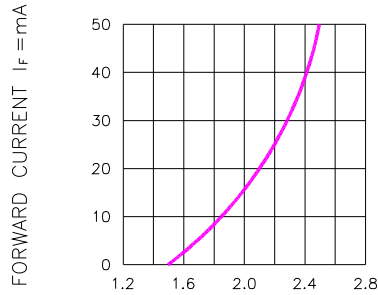


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

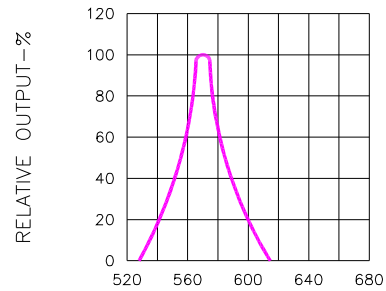


Fig.2 SPECTRAL RESPONSE

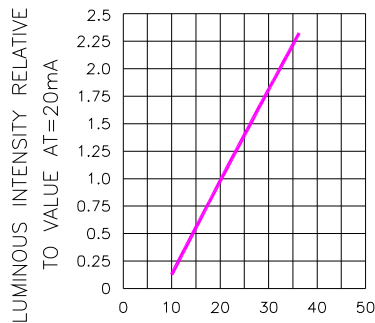


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

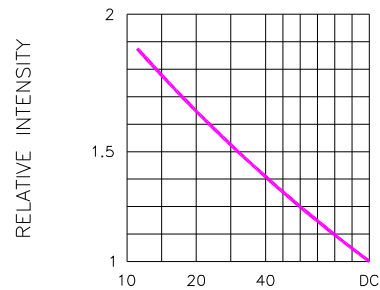


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

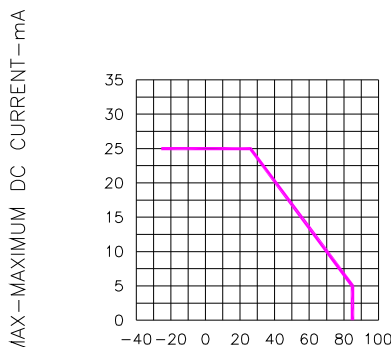


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

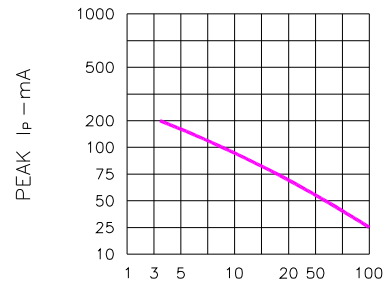


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE f=1 KHz)