

**5x7 DOT Matrix rot**

**P/N: C03571-M-UR4-0-W-BS**

Custom Design Series

**PACKAGE DIMENSION**

The technical drawing shows the package dimensions and a pinout diagram. The package is rectangular with a width of 9.60 mm (0.384 inches) and a height of 14.00 mm (0.56 inches). The dot pitch is 1.83 mm (0.072 inches) between rows and 1.60 mm (0.063 inches) between columns. The dot diameter is 0.9 mm. The package has a thickness of 3.05 mm. The pin length is 0.3 mm. The pin diameter is 0.45 mm. The pin pitch is 7.00 mm. The pinout diagram shows a 5x7 grid of pins, with the top-left pin labeled PIN 1 and the top-right pin labeled PIN 12. The pinout diagram also shows a 5x7 grid of red dots representing the matrix.

**Pb-free**

**COL.**

ROW	1	2	3	4	5
1	•	•	•	•	•
2	•	•	•	•	•
3	•	•	•	•	•
4	•	•	•	•	•
5	•	•	•	•	•
6	•	•	•	•	•
7	•	•	•	•	•

**INTERNAL CIRCUIT DIAGRAM**

The internal circuit diagram shows a 5x7 matrix of LEDs. The top row of LEDs is connected to pins 1 through 5. The bottom row of LEDs is connected to pins 6 through 10. The middle three rows of LEDs are connected to pins 11 through 15. The circuit diagram also shows the connections to pins 16 through 20. The code M is indicated below the diagram.

CODE M

**NOTES:**

1. All dimensions are in millimeter(inch);
2. Tolerance is  $\pm 0.25\text{mm}(0.01")$  especially other specified;
3. Pin length, housing color, marking no & circuit diagram can be customized;
4. Specifications are subject to change without notice.

Chip Material: AlGaInP / GaAs Ultra Bright Red LED Chip

**ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)**

PARAMETER	SYMBOL	MAXIMUM RATING	UNIT
Power Dissipation	P <sub>D</sub>	72	mW
Peak Forward Current (1/10 Duty Cycle, 0.1 Ms Pulse Width)	I <sub>PEAK</sub>	90	mA
DC Forward Current	I <sub>F</sub>	30	mA
Reverse Voltage	V <sub>R</sub>	5	V
Operating Temperature Range	T <sub>A</sub>	-40°C to +85°C	
Storage Temperature Range	T <sub>STG</sub>	-40°C to +85°C	
Solder temperature 1/16 inch below seating plane for 3 seconds at 260°C			

**ELECTRICAL OPTICAL CHARACTER AND CURVES (Ta = 25°C)**

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	LOCATION	TEST CONDITION
Forward Voltage	V <sub>F</sub>	-	2.10	2.40	V	Per Segment	I <sub>F</sub> = 20mA
Luminous Intensity	I <sub>v</sub>	48.0	53.0	59.0	mcd	Per Segment	I <sub>F</sub> = 20mA
Peak Emission Wavelength	λ <sub>p</sub>	-	645	-	nm	Per Segment	I <sub>F</sub> = 20mA
Dominant Emission Wavelength	λ <sub>d</sub>	626	631	636	nm	Per Segment	I <sub>F</sub> = 20mA
Spectral Line Half-Width	Δλ <sub>1/2</sub>	-	20	-	nm	Per Segment	I <sub>F</sub> = 20mA
Capacitance	C	-	95	-	pF	Per Segment	V <sub>F</sub> = 0V; f = 1MHz
Reverse Current	I <sub>R</sub>	-	-	10	uA	Per Segment	V <sub>R</sub> = 5V

**Note:**

1. Luminous intensity tolerance is ±10%;
2. Dominant Emission Wavelength tolerance is ±5%.

■ Typical Electro-Optical Characteristic Curve:

FIG. 1 Forward Current Vs. Forward Voltage

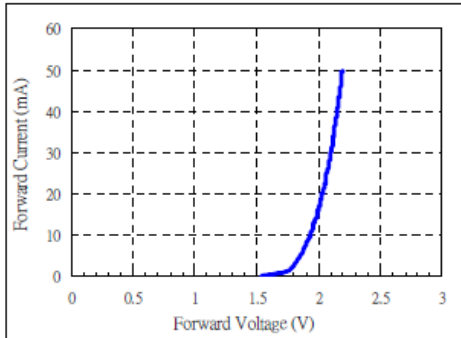


FIG. 2 Relative Intensity Vs. Forward Current

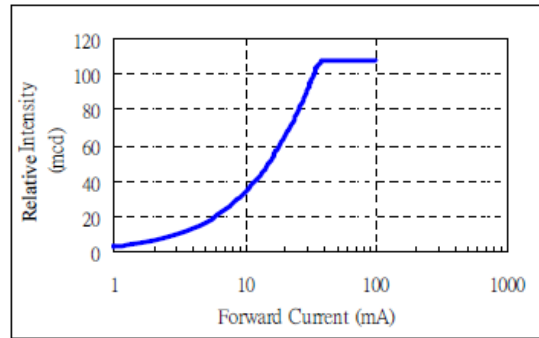


FIG. 3 Forward Voltage Vs. Temperature

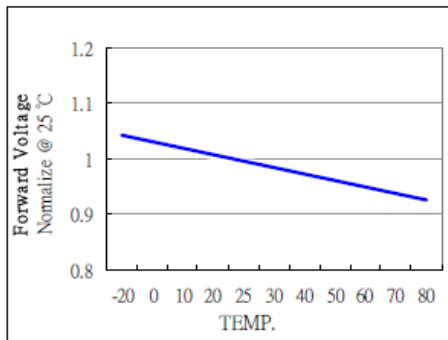


FIG. 4 Relative Intensity Vs. Temperature

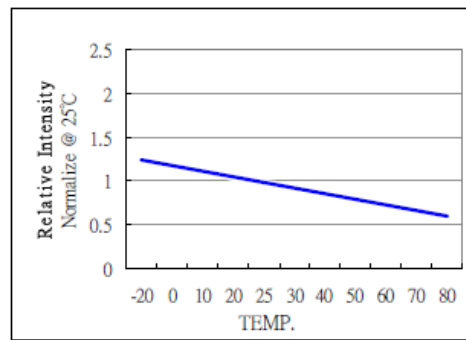


FIG. 5 Relative Intensity Vs. Wavelength

