

PRODUCT SPECIFICATION

Model No.: CSDM-57400X CSDM-57401X

| Descriptions: |
|--|
| <ul style="list-style-type: none"> ■ 4.0 Inch Dot-Matrix Display ■ 5*7 Array with X-Y Select ■ CSDM-57400 is Common Column Cathode ■ CSDM-57401 is Common Column Anode ■ Emitting Color: Pure Green; Yellow Green; Yellow; Amber; Orange; Red; Deep Red ■ Standard: -11: Gray face, white Dot. -21: Black face, white Dot. |



| CUSTOMER APPROVED SIGNATURES | APPROVED BY | CHECKED BY | PREPARED BY |
|---------------------------------|-------------|------------|-------------|
| | | | |

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Model No.: CSDM-57400X CSDM-57401X

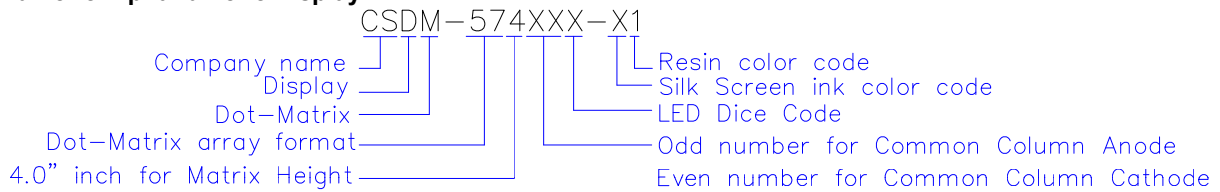
■ Features -

1. 4.0 inch (101.44mm) Matrix height.
2. Case mold type.
3. RoHS compliant.
4. Low power consumption.
5. Easy mounting on P.C. board or socket.

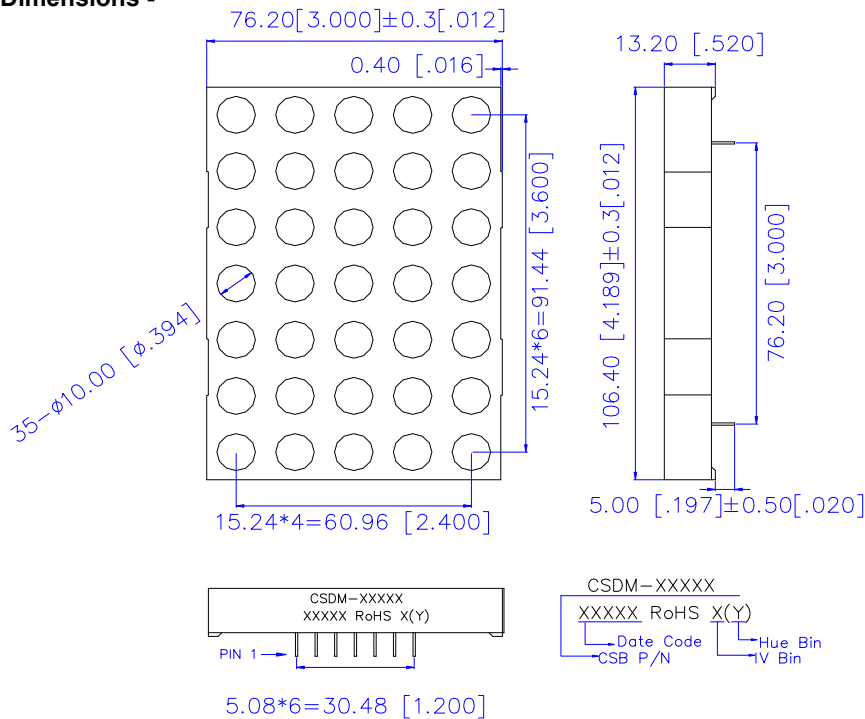
■ Device Selection Guide -

| Model No. | Chip | |
|-------------|--------------------|----------------|
| | Material | Emitting Color |
| CSDM-5740x2 | InGaN AlGaN | Pure Green |
| CSDM-5740xM | | Yellow Green |
| CSDM-5740xT | | Yellow |
| CSDM-5740xA | | Amber |
| CSDM-5740xV | | Orange |
| CSDM-5740xL | | Red |
| CSDM-5740xU | | Deep Red |

■ LED Numeric/Alphanumeric Display



■ Mechanical Dimensions -

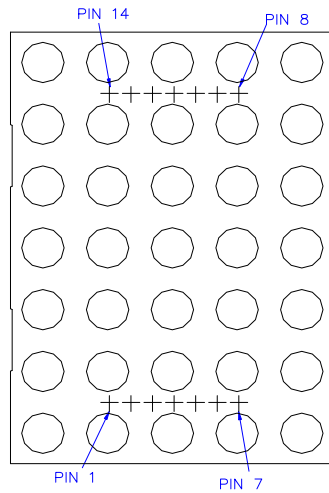


Notes:

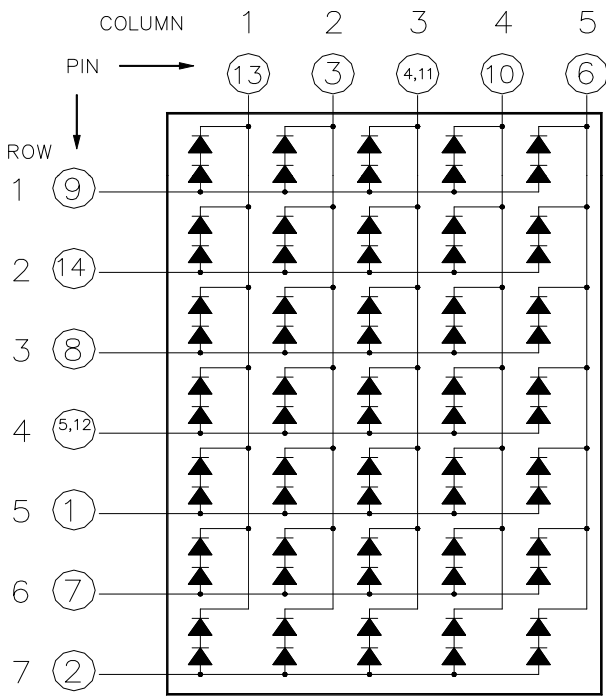
1. All pins are $\phi 0.6 [0.024] \pm 0.1 [0.004]$
2. Dimension in millimeter [inch], tolerance is $\pm 0.25 [0.010]$ and angle is $\pm 1^\circ$ unless otherwise noted.
3. Bending \leq Length*1%.

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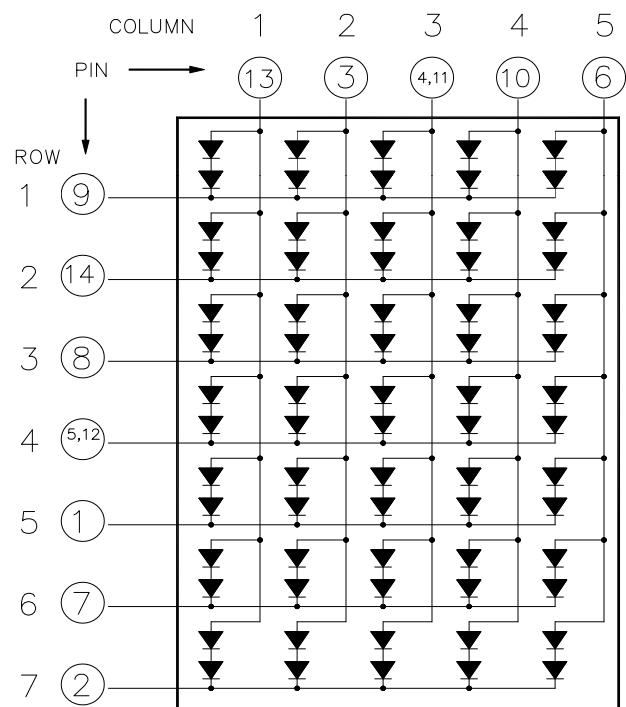
■ All Light On Segments Feature & Pin Position



■ Internal Circuit Diagrams -



CSDM-57400 is Common Column Cathode



CSDM-57401 is Common Column Anode

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■ Absolute Maximum Rating -

(Ta=25°C)

| Parameter | Symbol | Rating | | Unit |
|---|------------------|-------------|------|-------|
| | | M/T/A/V/L/U | 2 | |
| Power Dissipation Per Dice | P _{AD} | 70 | 114 | mW |
| Derating Liner from 25°C per Dice | - | 0.33 | 0.4 | mA/°C |
| Continuous Forward Current Per Dice | I _{AF} | 25 | 30 | mA |
| Peak Current Per Dice(duty cycle 1/10,1KHz) | I _{PF} | 90 | 100 | mA |
| Reverse Voltage Per Dice | VR | 5 | 5 | V |
| Electrostatic discharge(HBM) | ESD | / | 1000 | V |
| Operating Temp. | T _{opr} | -35 ~ +85 | | °C |
| Storage Temp. | T _{stg} | -35 ~ +85 | | °C |
| Hand Soldering Temp. | T _{sol} | 350 | | °C |

■ Electro-optical Characteristics -

(Ta=25°C)

| Parameter | Symbol | Chip | Min. | Typ. | Max. | Unit | Condition |
|--|--------------------------------|-------------|------|---------|------|------|-----------|
| Luminous Intensity Per Segment | I _v | 2 | - | 1100 | - | mcd | IF=10mA |
| | | M | - | 43 | - | | |
| | | T | - | 110 | - | | |
| | | A | - | 150 | - | | |
| | | V | - | 110 | - | | |
| | | L | - | 107 | - | | |
| | | U | - | 60 | - | | |
| Forward Voltage Per Segment | VF | 2 | - | 6.4 | 7.6 | V | IF=20mA |
| | | M/T/A/V/L/U | - | 4 | 5.6 | | |
| Peak Emission Wavelength / Dominant Wavelength | λ _P /λ _d | 2 | - | *525 | - | nm | IF=20mA |
| | | M | - | 572/570 | - | | |
| | | T | - | 592/590 | - | | |
| | | A | - | 612/605 | - | | |
| | | V | - | 632/625 | - | | |
| | | L | - | 644/630 | - | | |
| Reverse Current | I _R | | - | - | 100 | μA | VR=10V |
| Luminous Intensity Matching Ratio | IV-m | | - | - | 2:1 | - | *1 |

Notes: *1 Condition is I_p=80mA 1/16Duty

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Electrical / Optical Characteristics Curves -

(Ta = 25°C Unless Otherwise Noted)

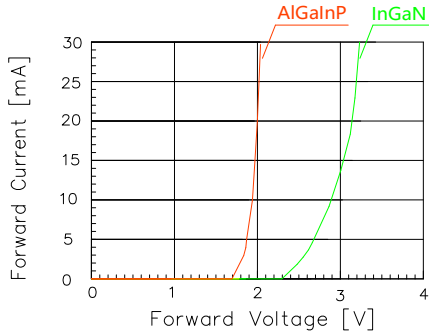


Fig 1. Forward Current vs. Forward Voltage

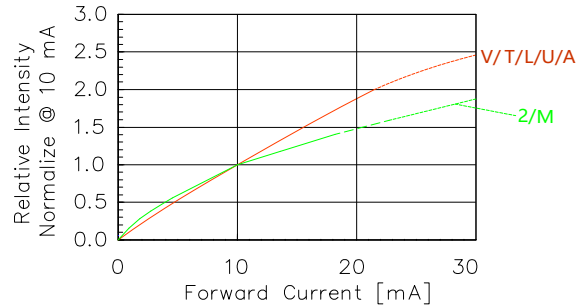


Fig 2. Relative Intensity vs. Forward Current

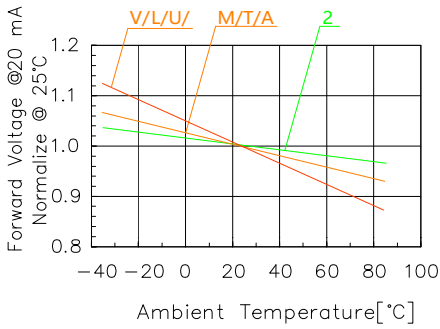


Fig 3. Forward Voltage vs. Temperature

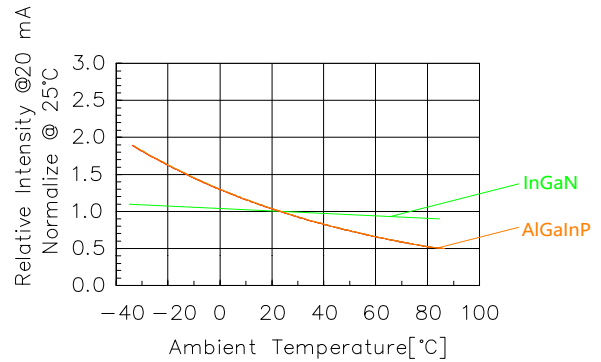


Fig 4. Relative Intensity vs. Temperature

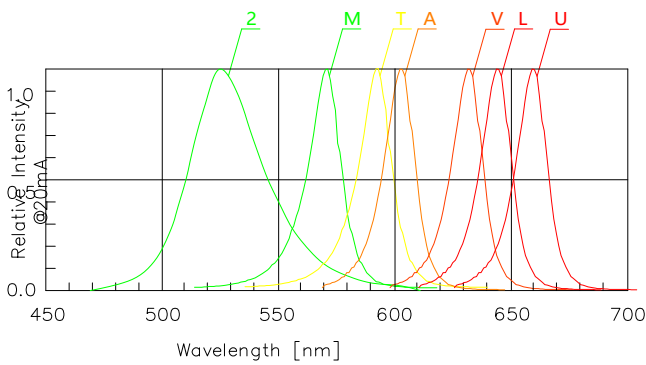


Fig 5. Relative Intensity vs. Wavelength

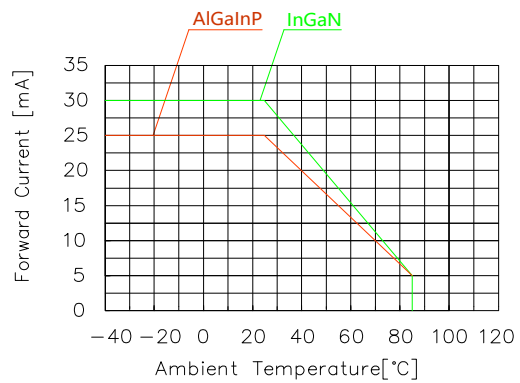


Fig 6. Forward current vs. Temperature

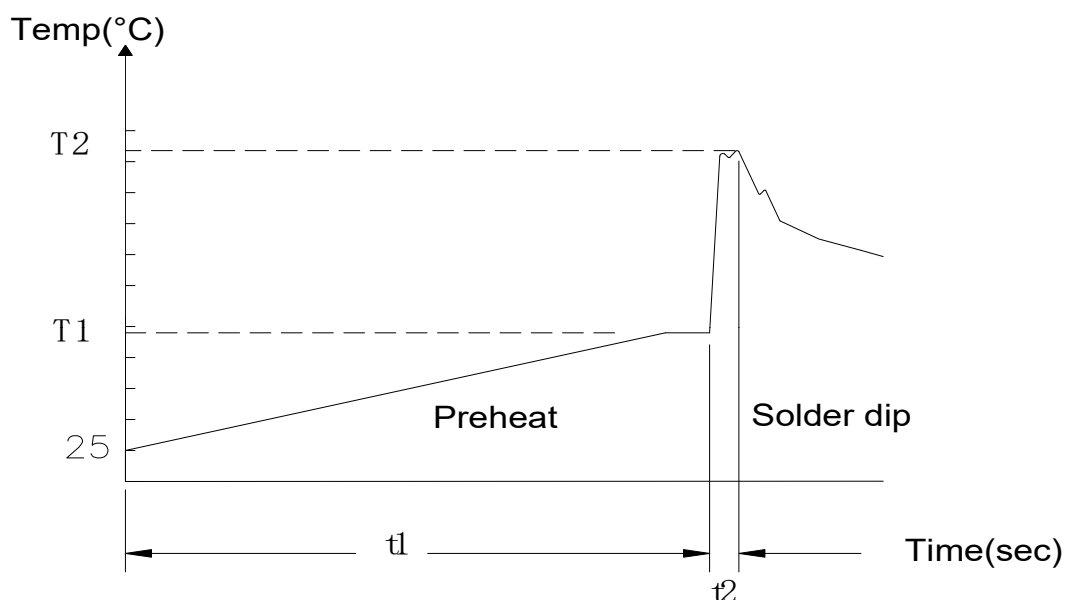
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■ Precautions For Use -

1.Wave Soldering Profile

Distance:1.6mm min(From seating plane)

| Item | Condition | | Note |
|------------|----------------|-------------|---|
| Preheat | Temperature T1 | 80 – 120°C | PWB temperature (Soldering side surface) |
| | Time t1 | 60 – 180sec | |
| Solder Dip | Temperature T2 | 230 – 260°C | Bath temperature |
| | Time t2 | 2 – 4sec | Solder tank passage time |



2.Hand Soldering (Iron Condition)

Soldering Iron:30W Max

Temperature 350°C Max

Soldering Time:3 Seconds Max(One Time)

Distance:1.6mm min(From seating plane)