

LM19088C/D Series – 1.90 inch 8x8 Dot Matrix LED Display



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES



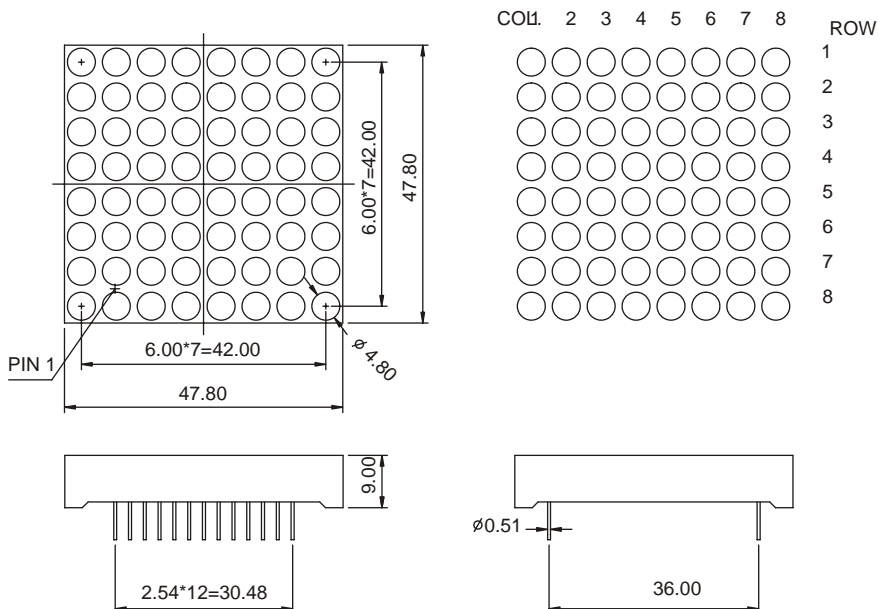
Features

- 47.80 mm (1.90 inch) matrix height
- Dot size: Diameter 4.80 mm
- Pitch: 6.00 mm
- Wide viewing angle
- Range of emitted colors
- I.C. compatible
- Low power consumption
- White dot, grey or black face
- RoHS compliant

Available options

- Alternative emitting luminosity:
Standard or high brightness version
- Alternative emitted color
- Alternative dot color
- Alternative face color
- Both CA or CC versions are available
- Cropped terminal pins

Package Dimensions

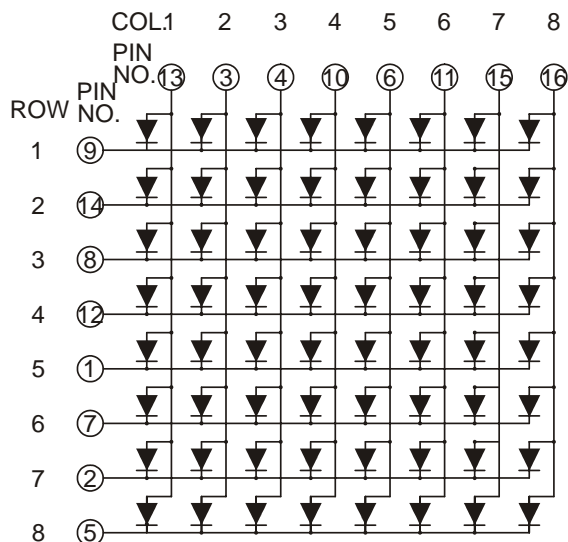


Notes:

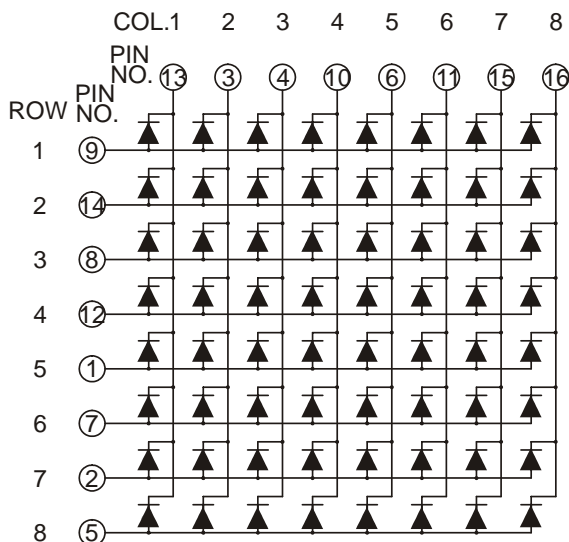
1. All dimensions are in millimeters (inches), Tolerance is $\pm 0.25\text{mm}$ (0.01inch) unless other wise noted.
2. Specifications are subject to change without notice.
3. The gap between the reflector and PCB shall not exceed 0.25mm.

Internal Circuit Diagram

LM19088C (Common Cathode Row)



LM19088D (Common Anode Row)



Selection Guide

| Part No. | | Chip | | | Iv@IF=20mA | |
|--------------------|------------------|----------|--------------|-----|------------|------|
| Common Cathode Row | Common Anode Row | Material | Color | WLD | One Dot | |
| | | | | | Min. | Typ. |
| LM19088CR | LM19088DR | GaAlAs | Super Red | 640 | 8 | 10 |
| LM19088CD | LM19088DD | GaAlAs | Hi-Red | 640 | 18 | 25 |
| LM19088CO | LM19088DO | GaAsP | Orange | 625 | 7 | 9 |
| LM19088CY | LM19088DY | GaAsP | Yellow | 588 | 8 | 10 |
| LM19088CG | LM19088DG | GaP | Green | 568 | 7 | 9 |
| LM19088CUR | LM19088DUR | AlGaInP | Ultra Red | 640 | 30 | 45 |
| LM19088CUO | LM19088DUO | AlGaInP | Ultra Orange | 625 | 45 | 60 |
| LM19088CUA | LM19088DUA | AlGaInP | Ultra Amber | 605 | 30 | 45 |
| LM19088CUY | LM19088DUY | AlGaInP | Ultra Yellow | 595 | 30 | 45 |
| LM19088CUG | LM19088DUG | AlGaInP | Ultra Green | 573 | 30 | 45 |
| LM19088CPG | LM19088DPG | InGaN | Pure Green | 525 | 120 | 300 |
| LM19088CUB | LM19088DUB | InGaN | Ultra Blue | 470 | 30 | 45 |
| LM19088CUW | LM19088DUW | SMD | Ultra White | \ | 100 | 120 |
| Unit: | \ | \ | \ | nm | mcd | mcd |

Electrical Characteristics & Absolute Maximum Ratings

| Color | | Electrical Characteristics ^[1] | | | Absolute Maximum Ratings ^[1] | | |
|--------------|---------|---|------|-----------------------------|---|--------------------------|---|
| | | V _F @ I _F =20mA ^[2] | | Reverse Current VR=5V | Power Dissipation | DC Forward Current | Peak Forward Current ^[3] |
| | | Typ. | Max. | | | | |
| Super Red | Per Dot | 1.8 | 2.2 | 30 | 60 | 25 | 100 |
| Hi-Red | Per Dot | 1.8 | 2.2 | 30 | 60 | 25 | 100 |
| Orange | Per Dot | 2.1 | 2.5 | 30 | 80 | 30 | 100 |
| Yellow | Per Dot | 2.1 | 2.5 | 30 | 80 | 30 | 100 |
| Green | Per Dot | 2.2 | 2.5 | 30 | 80 | 30 | 100 |
| Ultra Red | Per Dot | 1.9 | 2.6 | 30 | 60 | 30 | 100 |
| Ultra Orange | Per Dot | 2.0 | 2.6 | 30 | 65 | 30 | 100 |
| Ultra Amber | Per Dot | 2.0 | 2.6 | 30 | 65 | 30 | 100 |
| Ultra Yellow | Per Dot | 2.0 | 2.6 | 30 | 65 | 30 | 100 |
| Ultra Green | Per Dot | 2.1 | 2.6 | 30 | 75 | 30 | 100 |
| Pure Green | Per Dot | 3.5 | 4.0 | 30 | 110 | 30 | 100 |
| Ultra Blue | Per Dot | 3.5 | 4.0 | 30 | 120 | 30 | 100 |
| Ultra White | Per Dot | 3.5 | 4.0 | 30 | 120 | 30 | 100 |
| Unit: | \ | V | V | uA | mW | mA | mA |

Notes:

1. At Ta = 25 °C.
2. Forward voltage at forward current = 20mA.
3. Peak forward current at 1/10 Duty Cycle, 0.1ms Pulse.