

High Reliability 1.4-inch 5x7 3mm Dot Matrix LED Displays

SDM-3580 SDM-3587

GENERAL DESCRIPTION

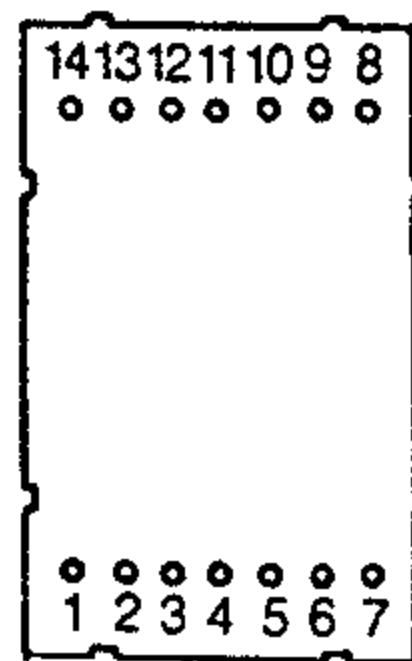
The SDM-3580 and the SDM-3587 are 1.4 inch (approximately 35.6mm) height epoxy resin molded 3.0mm dot matrix LED displays. The standard units are available in red, green, orange and yellow-green emitting colors with 5x8 array and x-y select, and also available in 2 matrix orientation; cathode row and cathode column.

FEATURES

1. High brightness with high contrast
2. Wide angle viewing
3. Low power consumption;
Directly drive with I.C
4. Solid state reliability;
Long operation life
5. Cathode- row (SDM-3580) and Cathode- column (SDM-3587) types available

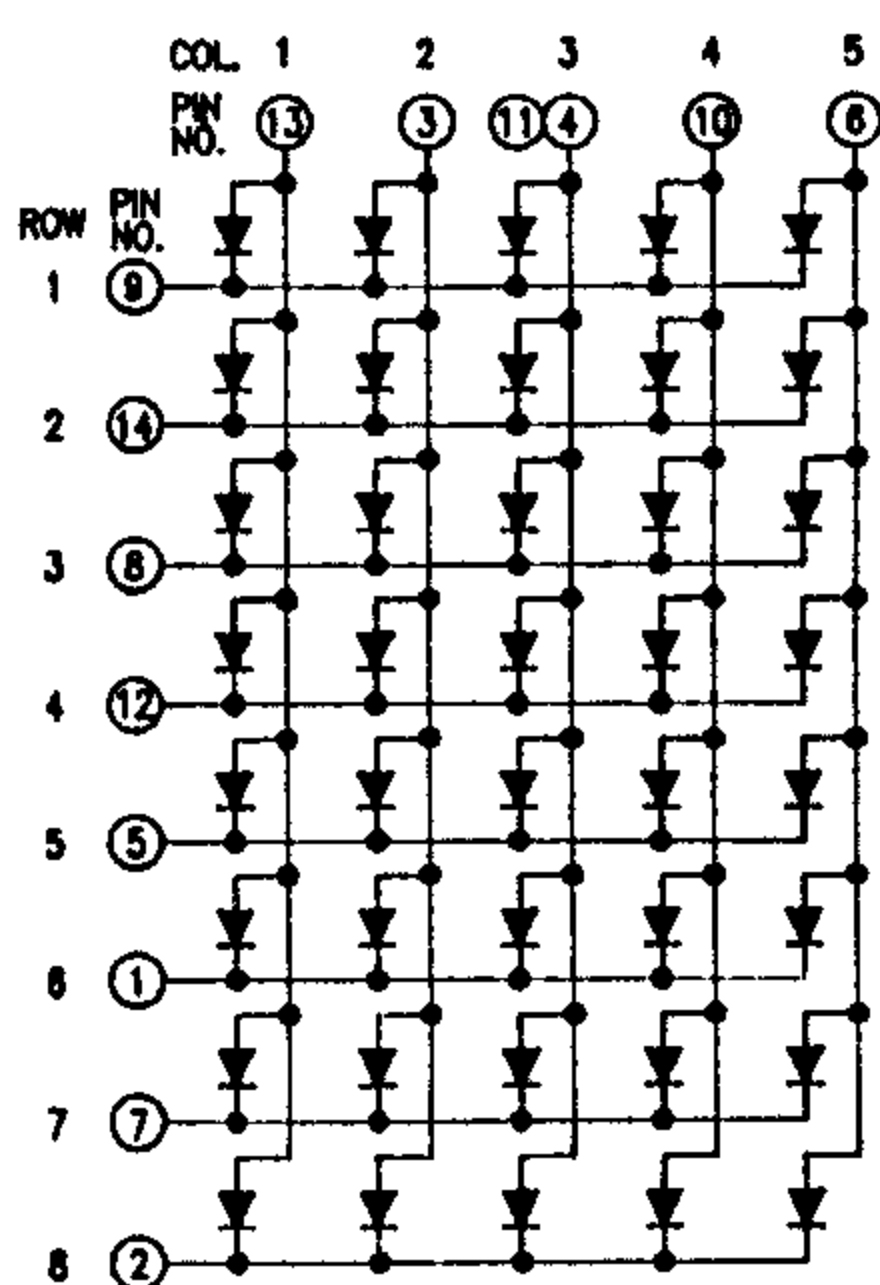
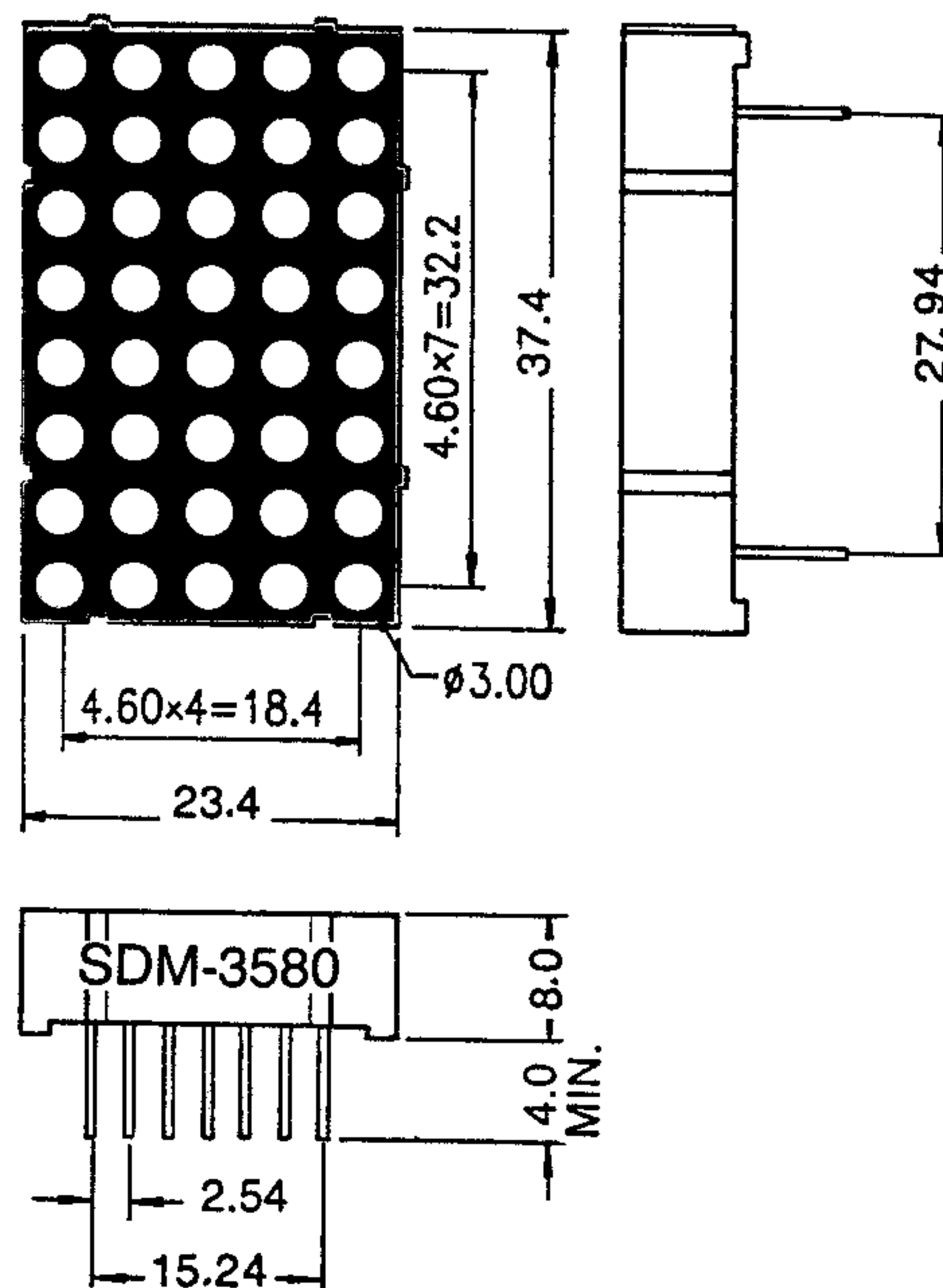
PACKAGE DIMENSIONS

(Top View)

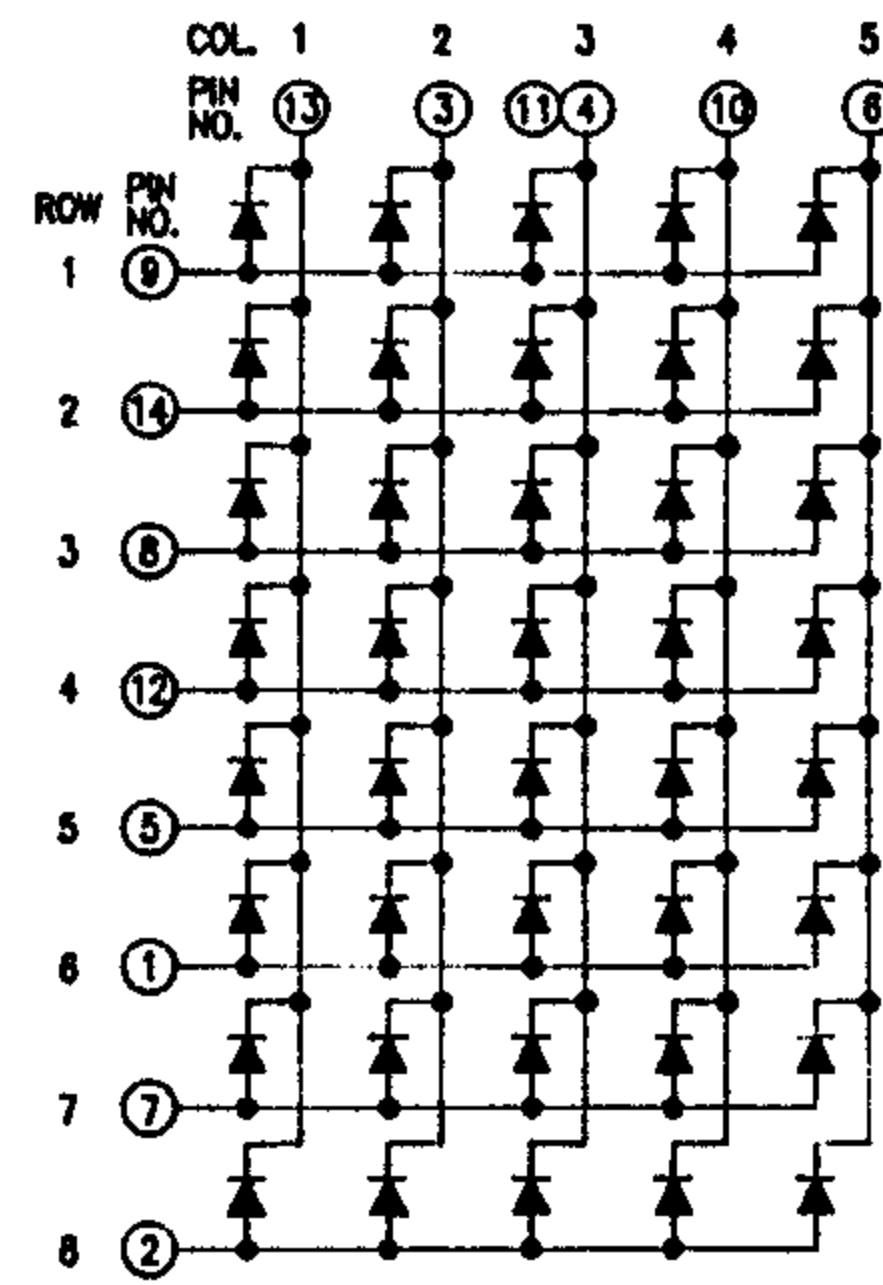


PACKAGE DIMENSIONS

SCALE 1:1 (mm)



SDM-3580 (Cathode row)



SDM-3587 (Cathode column)

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Red SDM 3580/3587UR (GaAlAs)

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

| | | |
|-------------------------|------------|------------------|
| Power dissipation/Total | 700 | mW |
| Power dissipation/Dot | 20 | mW |
| Forward current | 10 | mA |
| Peak forward current | 60* | mA |
| Reverse voltage | 4 | V |
| Operating temperature | -25 ~ +85 | $^\circ\text{C}$ |
| Storage temperature | -55 ~ +100 | $^\circ\text{C}$ |

Electrical/Optical Characteristics ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Conditions | Min | Typ | Max. | Unit |
|-------------------------|-----------------|---------------------|------|------|------|----------------|
| Forward voltage/Dot | V_F | $I_F = 10\text{mA}$ | — | 1.9 | 2.1 | V |
| Reverse current/Dot | I_R | $V_R = 4\text{V}$ | — | — | 10 | μA |
| Luminous intensity/Dot | I_V | $I_F = 10\text{mA}$ | 1300 | 2500 | — | μcd |
| Peak wavelength | λ_P | $I_F = 10\text{mA}$ | — | 660 | — | nm |
| Spectral line halfwidth | $\Delta\lambda$ | $I_F = 10\text{mA}$ | — | 20 | — | nm |

Orange SDM 3580/3587SR (GaAsP/GaP)

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

| | | |
|-------------------------|------------|------------------|
| Power dissipation/Total | 700 | mW |
| Power dissipation/Dot | 20 | mW |
| Forward current | 10 | mA |
| Peak forward current | 60* | mA |
| Reverse voltage | 4 | V |
| Operating temperature | -25 ~ +85 | $^\circ\text{C}$ |
| Storage temperature | -55 ~ +100 | $^\circ\text{C}$ |

Electrical/Optical Characteristics ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Conditions | Min | Typ | Max. | Unit |
|-------------------------|-----------------|---------------------|-----|------|------|----------------|
| Forward voltage/Dot | V_F | $I_F = 10\text{mA}$ | — | 2.0 | 2.2 | V |
| Reverse current/Dot | I_R | $V_R = 4\text{V}$ | — | — | 10 | μA |
| Luminous intensity/Dot | I_V | $I_F = 10\text{mA}$ | 500 | 1000 | — | μcd |
| Peak wavelength | λ_P | $I_F = 10\text{mA}$ | — | 635 | — | nm |
| Spectral line halfwidth | $\Delta\lambda$ | $I_F = 10\text{mA}$ | — | 35 | — | nm |

Yellow-green SDM 3580/3587UG (GaP)

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

| | | |
|-------------------------|------------|------------------|
| Power dissipation/Total | 700 | mW |
| Power dissipation/Dot | 20 | mW |
| Forward current | 10 | mA |
| Peak forward current | 60* | mA |
| Reverse voltage | 4 | V |
| Operating temperature | -25 ~ +85 | $^\circ\text{C}$ |
| Storage temperature | -55 ~ +100 | $^\circ\text{C}$ |

Electrical/Optical Characteristics ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Conditions | Min | Typ | Max. | Unit |
|-------------------------|-----------------|---------------------|-----|------|------|----------------|
| Forward voltage/Dot | V_F | $I_F = 10\text{mA}$ | — | 2.1 | 2.3 | V |
| Reverse current/Dot | I_R | $V_R = 4\text{V}$ | — | — | 10 | μA |
| Luminous intensity/Dot | I_V | $I_F = 10\text{mA}$ | 600 | 1200 | — | μcd |
| Peak wavelength | λ_P | $I_F = 10\text{mA}$ | — | 565 | — | nm |
| Spectral line halfwidth | $\Delta\lambda$ | $I_F = 10\text{mA}$ | — | 30 | — | nm |

* Pulse Width 1 ms
Duty Cycle 1/5