

# High Reliability 1.22-inch 3mm 5x7 Dot Matrix LED Displays

# SDM-3570 SDM-3577

## GENERAL DESCRIPTION

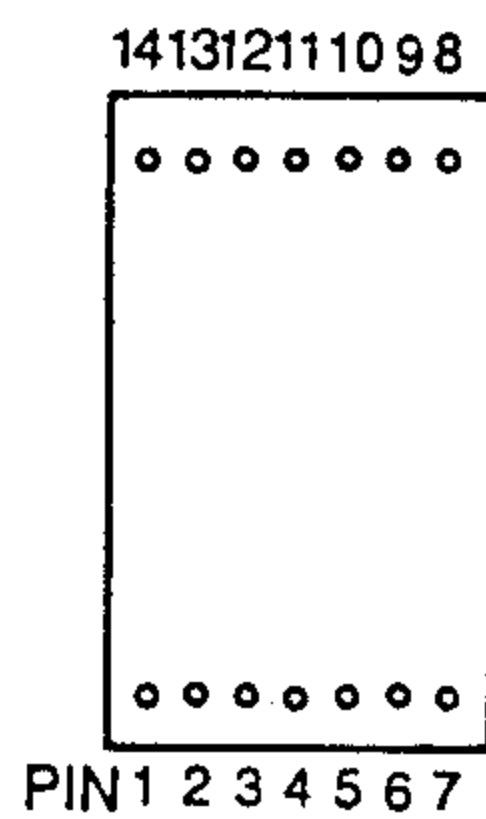
The SDM-3570 and the SDM-3577 are 1.22 inch (31.0mm) height epoxy molded 3.0mm dot matrix LED displays. The standard units are available in red, green, orange and yellow-green emitting colors, with 5x7 array and x-y select, and also available in 2 matrix orientation; cathode row and cathode column.

## 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-3570) and cathode column (SDM-3577) types available

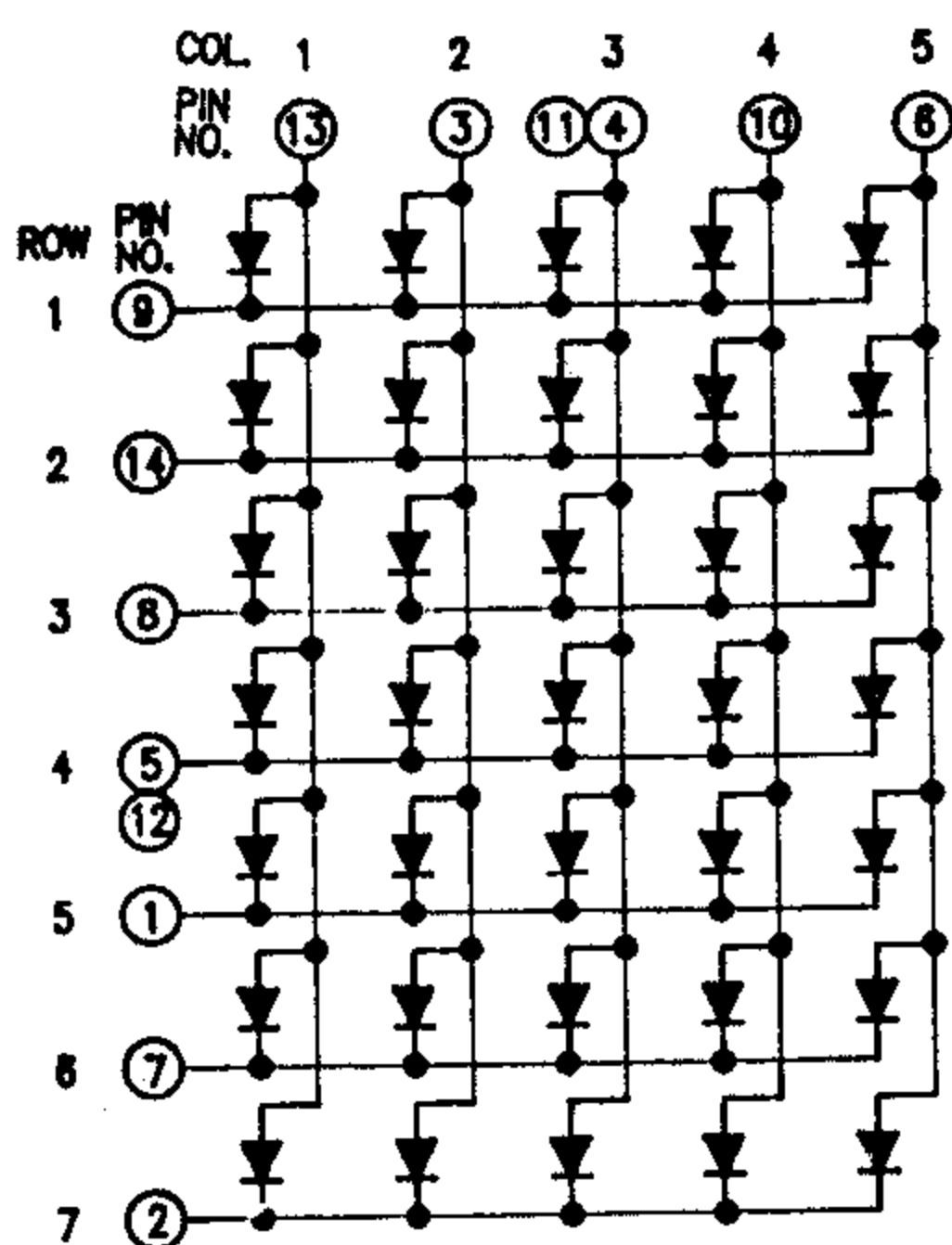
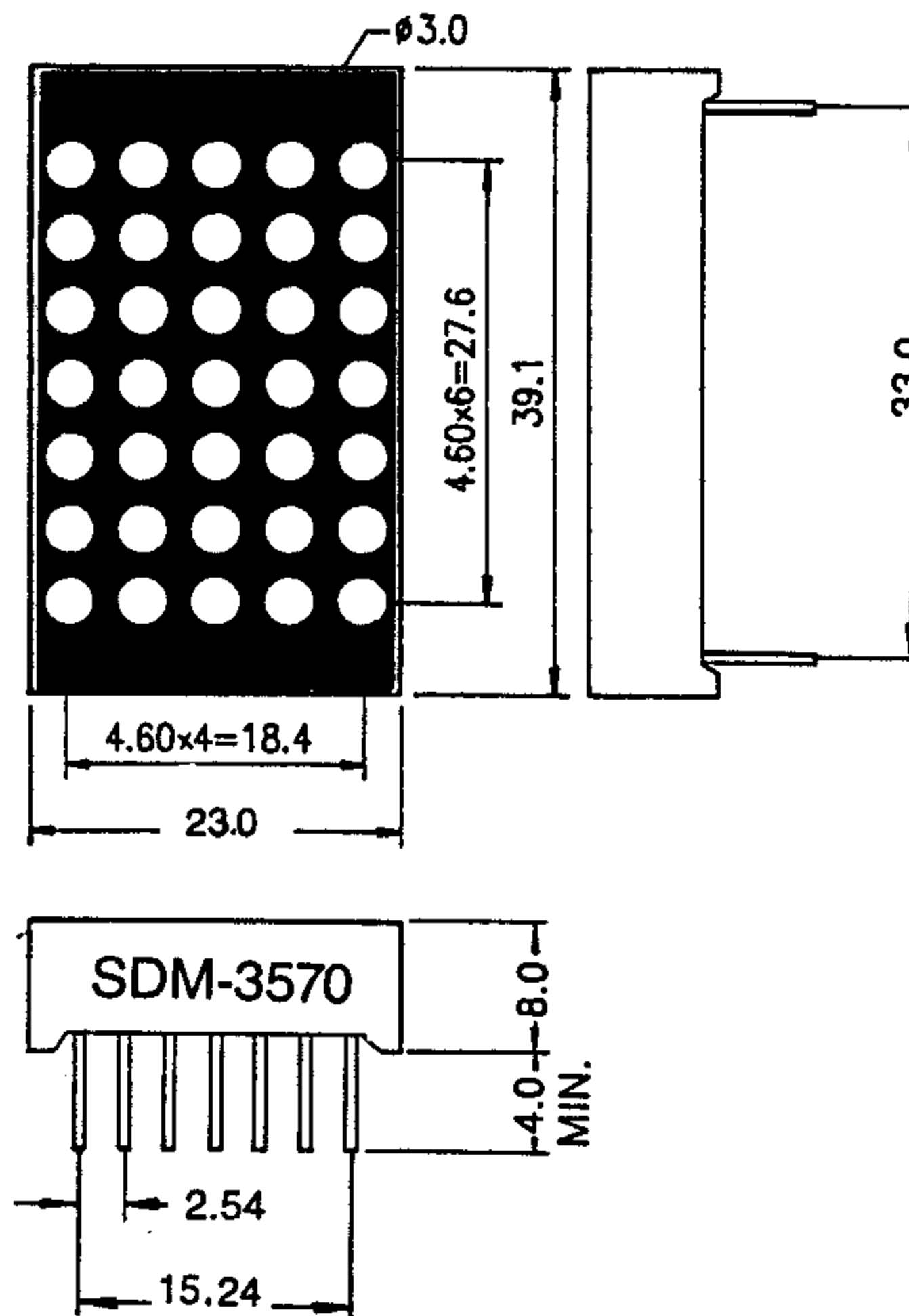
## PIN ARRANGEMENT

(Top View)

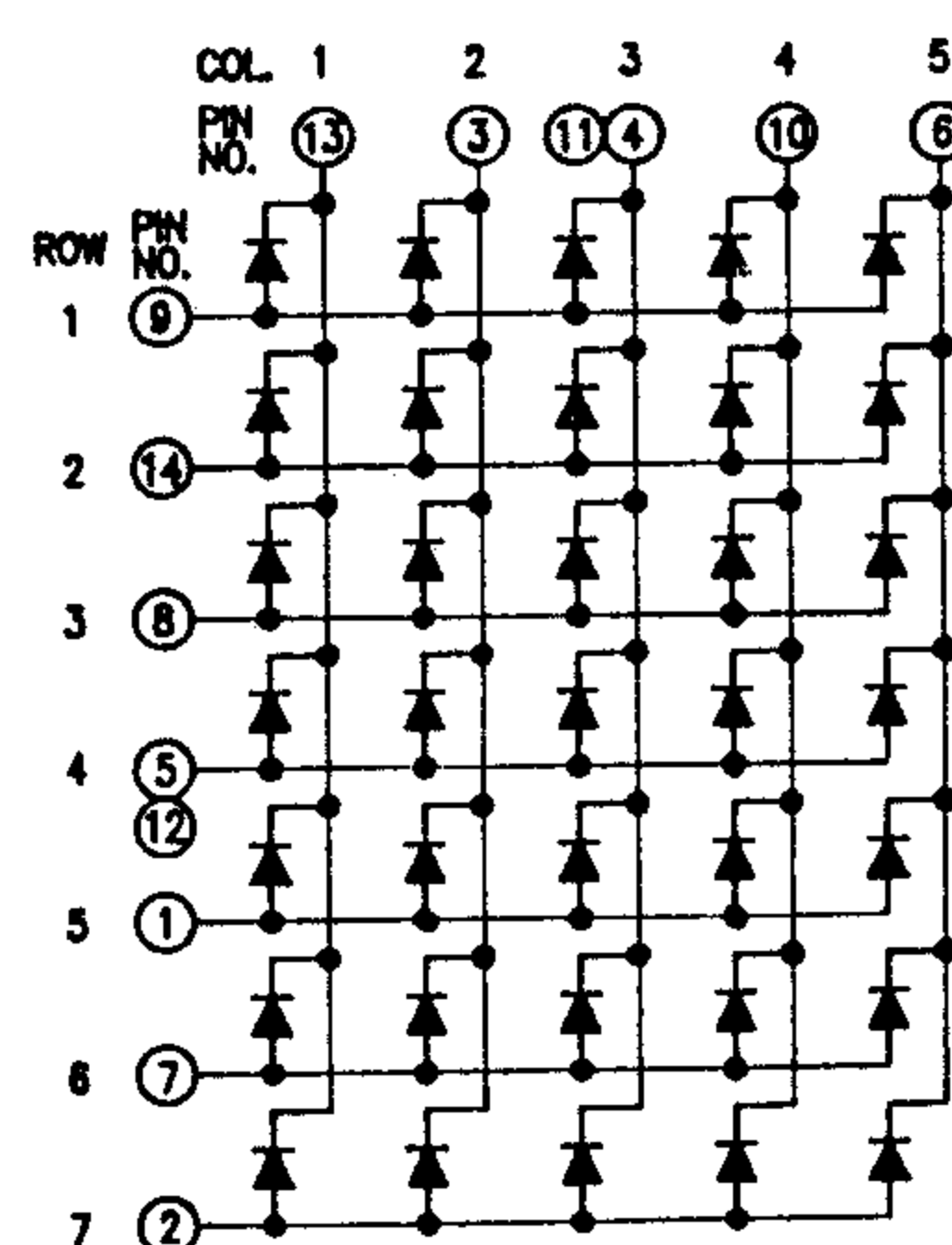


## PACKAGE DIMENSIONS

SCALE 1:1 (mm)



SDM-3570 (Cathode row)



SDM-3577 (Cathode column)

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### Red SDM 3570/3577UR (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	$\mu\text{A}$
Luminous intensity/Dot	$I_V$	$I_F = 10\text{mA}$	1300	2500	—	$\mu\text{cd}$
Peak wavelength	$\lambda_P$	$I_F = 10\text{mA}$	—	660	—	nm
Spectral line halfwidth	$\Delta\lambda$	$I_F = 10\text{mA}$	—	20	—	nm

### Orange SDM 3570/3577SR (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	$\mu\text{A}$
Luminous Intensity/Dot	$I_V$	$I_F = 10\text{mA}$	500	1000	—	$\mu\text{cd}$
Peak wavelength	$\lambda_P$	$I_F = 10\text{mA}$	—	635	—	nm
Spectral line halfwidth	$\Delta\lambda$	$I_F = 10\text{mA}$	—	35	—	nm

### Yellow-green SDM 3570/3577UG (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	$\mu\text{A}$
Luminous intensity/Dot	$I_V$	$I_F = 10\text{mA}$	600	1200	—	$\mu\text{cd}$
Peak wavelength	$\lambda_P$	$I_F = 10\text{mA}$	—	565	—	nm
Spectral line halfwidth	$\Delta\lambda$	$I_F = 10\text{mA}$	—	30	—	nm

\* Pulse Width . . . . . 1 ms  
Duty Cycle . . . . . 1/5