

High Reliability 1.57-inch (40mm) 16x16 1.9 Dot Matrix LED Displays

SDM-2167

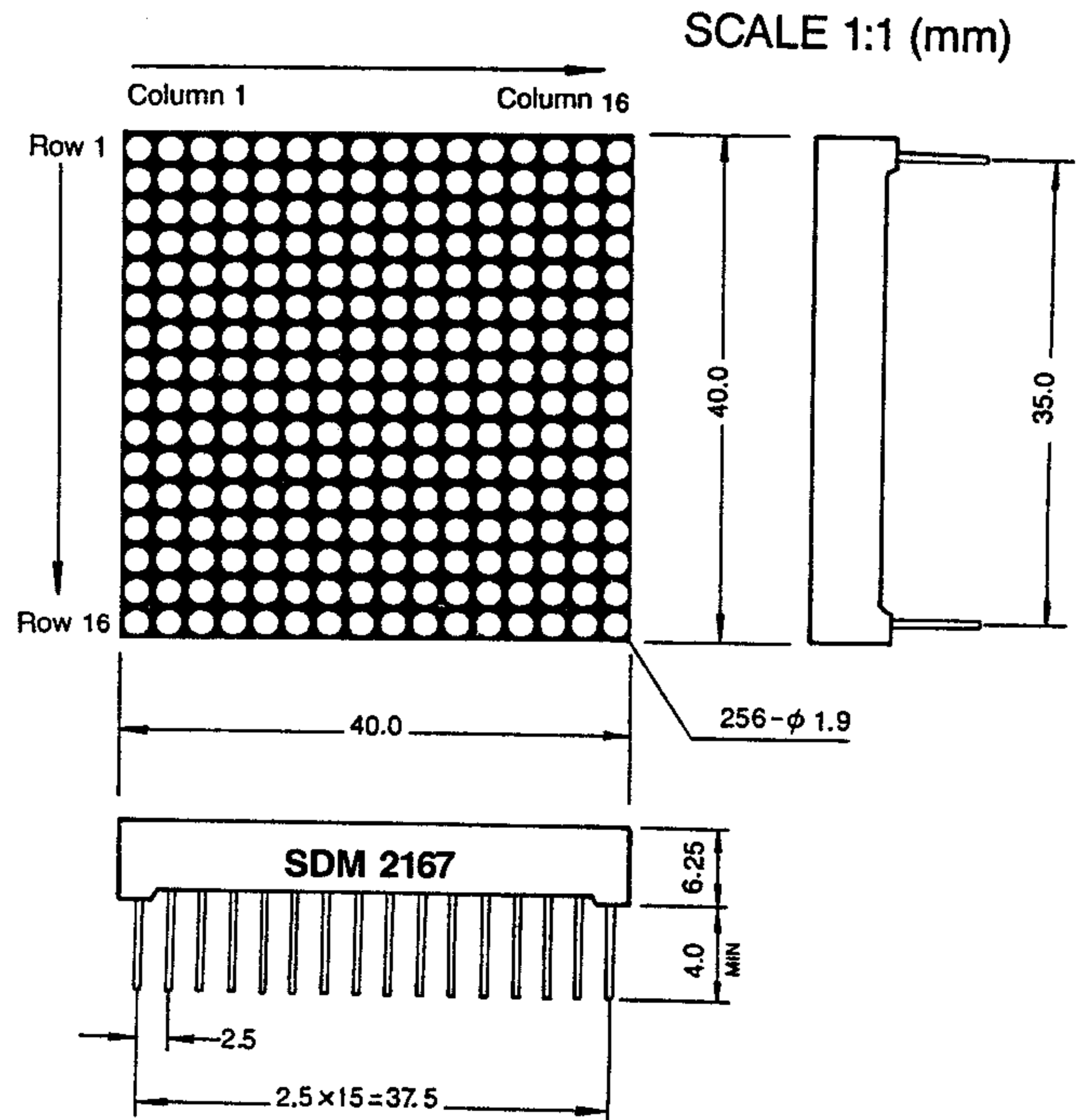
GENERAL DESCRIPTION

The SDM-2167 (cathode column) series are a high performance epoxy resin molded 40.0x40.0mm ø1.9 dot matrix LED displays. The standard units are available in red, orange and yellow-green emitting colors with 16x16 array x-y select, and constructed with black face and milky white segment color.

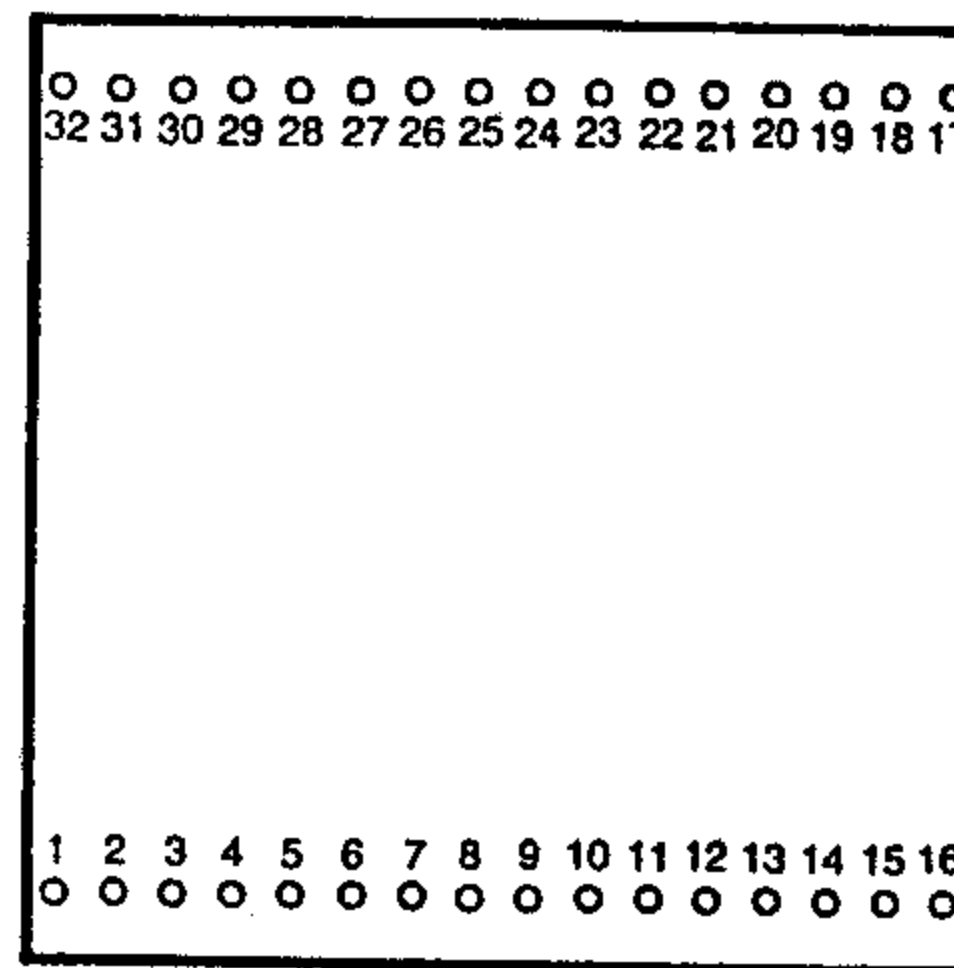
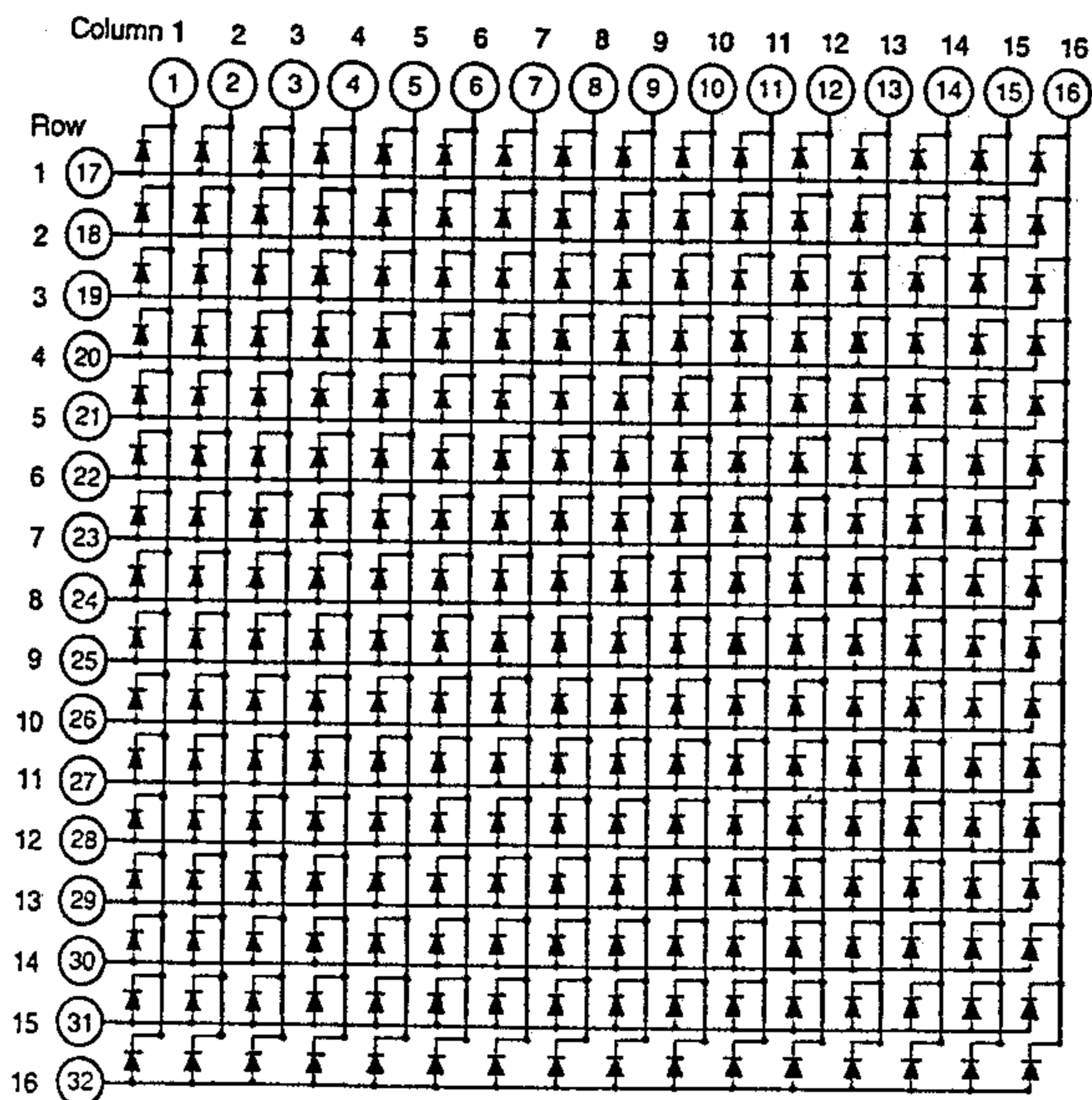
FEATURES

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

PACKAGE DIMENSIONS



PIN ARRANGEMENT (Top View)



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Red SDM 2167R (GaP)

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

Power dissipation/Total	1500	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	$I_F = 10\text{mA}$	400	700	—	μcd
Peak wavelength	λ_P	$I_F = 10\text{mA}$	—	700	—	nm
Spectral line halfwidth	$\Delta\lambda$	$I_F = 10\text{mA}$	—	30	—	nm

Orange SDM 2167SR (GaAsP/GaP)

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

Power dissipation/Total	1500	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	$I_F = 10\text{mA}$	600	1300	—	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 2167UG (GaP)

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

Power dissipation/Total	1500	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	$I_F = 10\text{mA}$	500	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

Red SDM 2167UR (GaAlAs)

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

Power dissipation/Total	1500	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	$I_F = 10\text{mA}$	—	1.85	2.1	V
Reverse current/Dot	I_R	$V_R = 4\text{V}$	—	—	10	μA
Luminous intensity/Dot	I_v	$I_F = 10\text{mA}$	1800	3000	—	μcd
Peak wavelength	λ_P	$I_F = 10\text{mA}$	—	660	—	nm
Spectral line halfwidth	$\Delta\lambda$	$I_F = 10\text{mA}$	—	20	—	nm

• Duty ratio=1/16, Pulse width=0.1ms, Lighting ratio=50%