

High Reliability 0.56-inch Triple-Digits 7-Segment Numeric Displays

SND-630(A) SND-637(A)

GENERAL DESCRIPTION

The SND-630 and SND-637 series are high degree of reliability epoxy resin molded three-digit 7-segment LED displays of which character height is 0.56-inch (14.1mm) and available in red, orange and yellow-green emitting colors. The standard units are constructed with black face and milky white segment color.

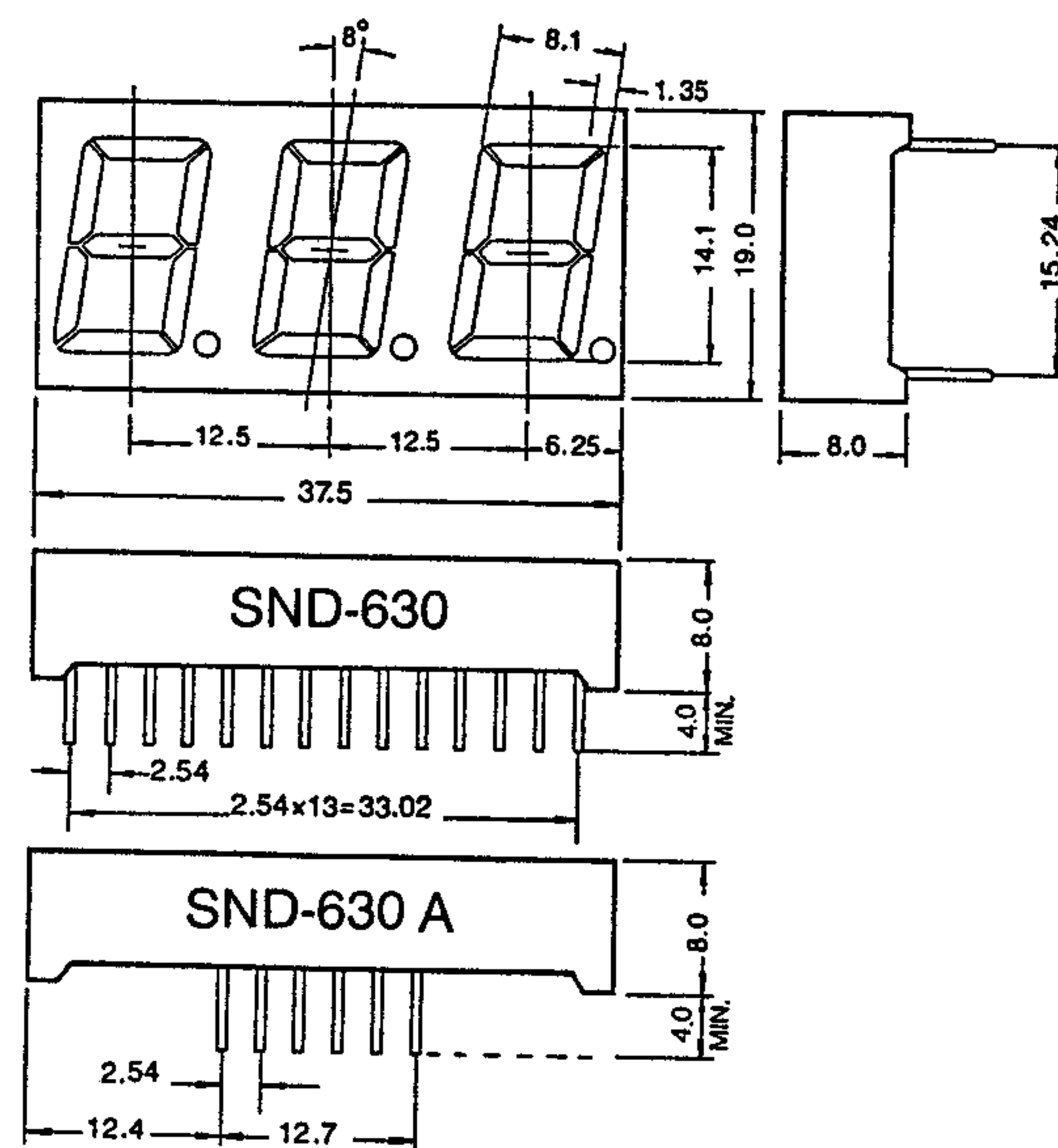
FEATURES

1. High brightness and high contrast
2. Low power consumption; Directly drive with I.C
3. Wide angle viewing
4. Solid state reliability; Long operation life
5. Match to SND640/647 series for 7 digits of applications
6. Cathode-common (SND630) and anode-common (SND637) types available

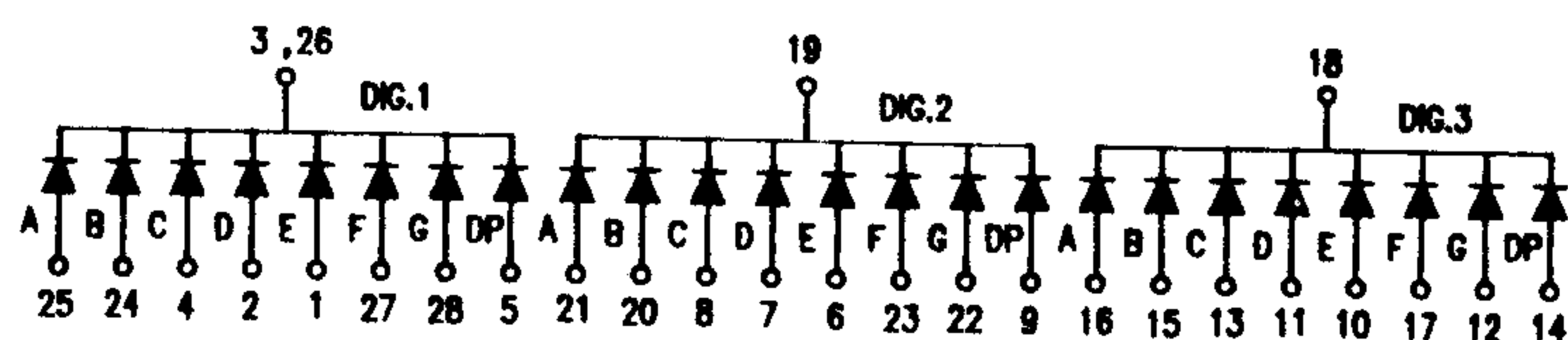
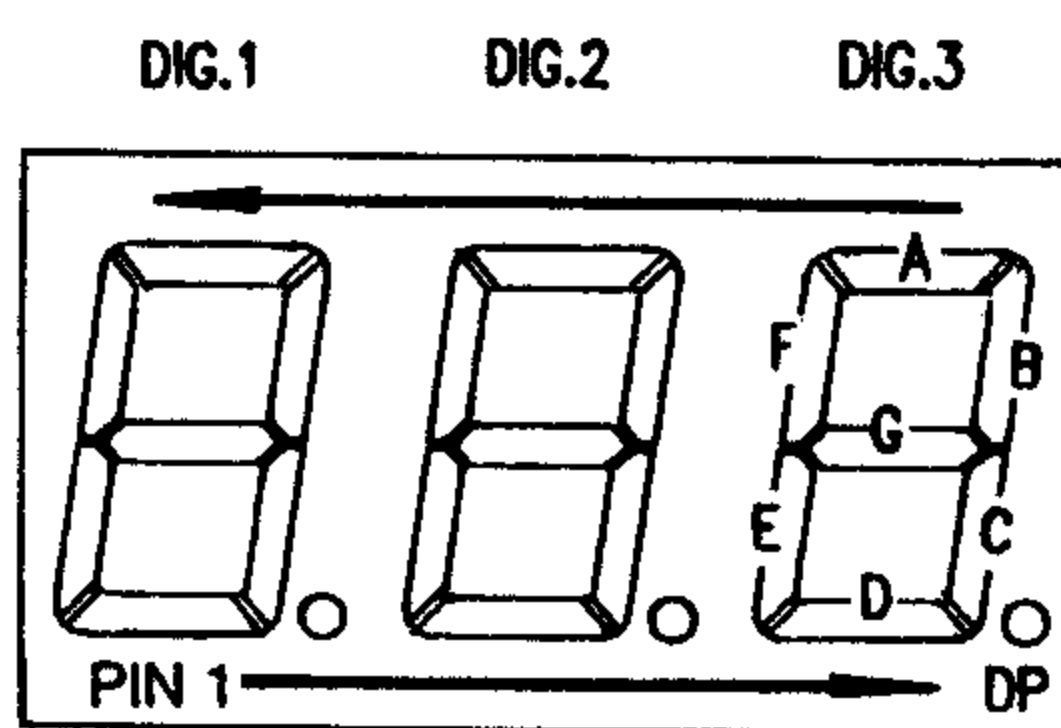
Actual size



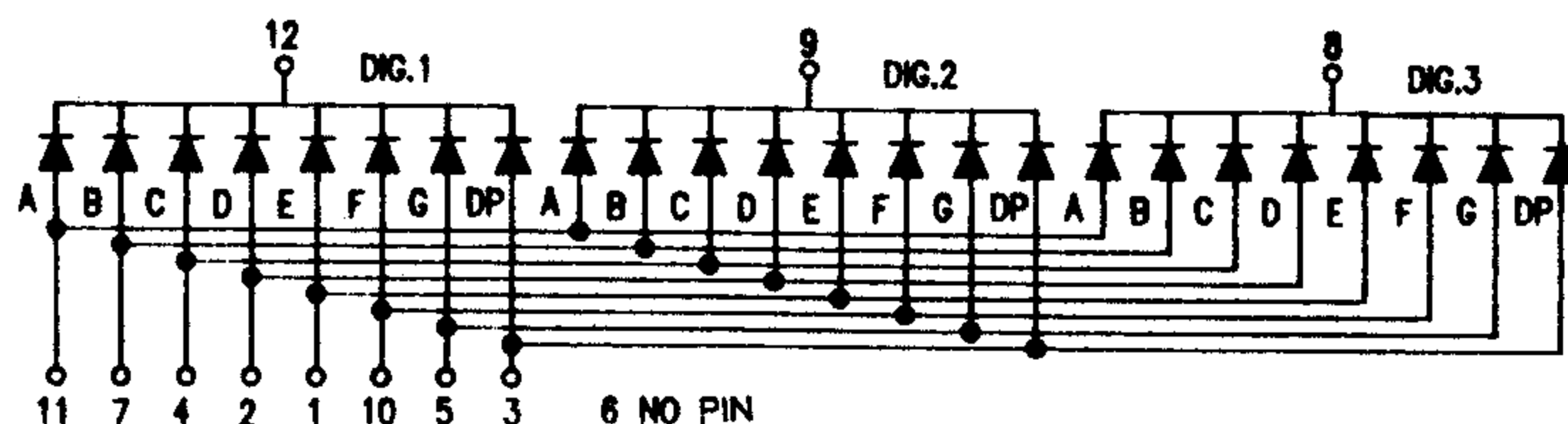
PACKAGE DIMENSIONS SCALE 1:1 (mm)



PIN ARRANGEMENT (Top View)



SND630 Cathode-common



SND630 A Cathode-common

SND637/SND-637 A Anode-common

All diodes are reversed polarity

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Red SND 630/637R (GaP)

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

Power dissipation/Total	960	mW
Power dissipation/Seg	40	mW
Forward current	20	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/Seg	V_F	$I_F = 10\text{mA}$	—	2.1	2.3	V
Reverse current/Seg	I_R	$V_R = 4\text{V}$	—	—	10	μA
Luminous intensity/digit	I_v	$I_F = 10\text{mA}$	200	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 SND 630/637SR (GaAsP/GaP)

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

Power dissipation/Total	960	mW
Power dissipation/Seg	40	mW
Forward current	20	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/Seg	V_F	$I_F = 10\text{mA}$	—	2.0	2.2	V
Reverse current/Seg	I_R	$V_R = 4\text{V}$	—	—	10	μA
Luminous intensity/digit	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 SND 630/637UG (GaP)

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

Power dissipation/Total	960	mW
Power dissipation/Seg	40	mW
Forward current	20	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/Seg	V_F	$I_F = 10\text{mA}$	—	2.1	2.3	V
Reverse current/Seg	I_R	$V_R = 4\text{V}$	—	—	10	μA
Luminous intensity/digit	I_v	$I_F = 10\text{mA}$	600	1300	—	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 SND 630/637UR (GaAlAs)

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

Power dissipation/Total	960	mW
Power dissipation/Seg	40	mW
Forward current	20	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/Seg	V_F	$I_F = 10\text{mA}$	—	1.85	2.1	V
Reverse current/Seg	I_R	$V_R = 4\text{V}$	—	—	10	μA
Luminous intensity/digit	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

* Pulse Width 1 ms
Duty Cycle 1/5