High Reliability 0.56-inch 4-Digits 7-Segment Numeric Displays

SND-640
SND-647

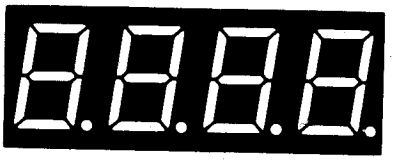
GENERAL DESCRIPTION

The SND-640 and SND-647 series are high degree of reliability epoxy resin molded four-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.

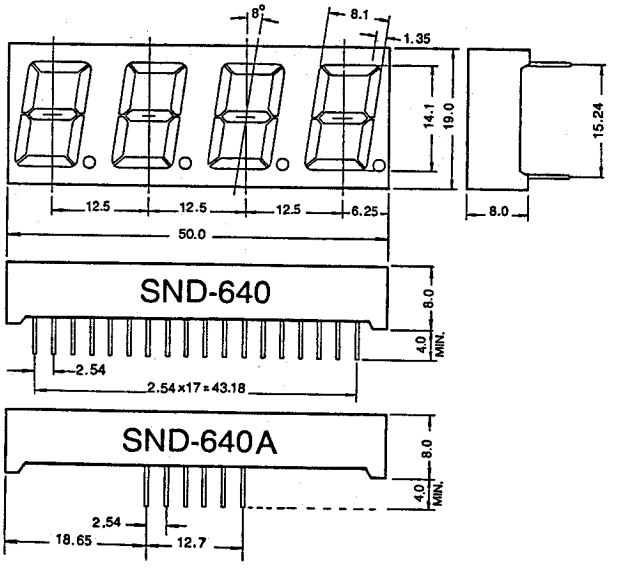
FEATURES

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 SND630/637 series for 7 digits of applications
6. Cathode-common (SND640) and anode-common (SND647) types available

PACKAGE DIMENSIONS

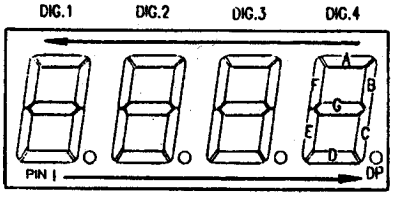


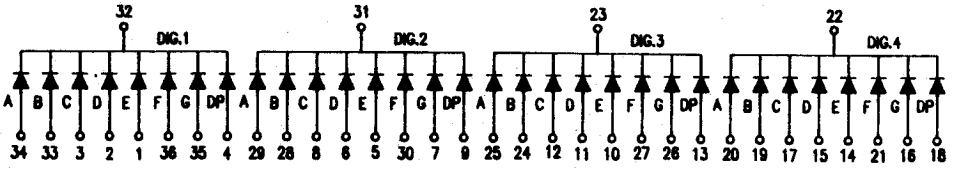
SCALE 1:1 (mm)



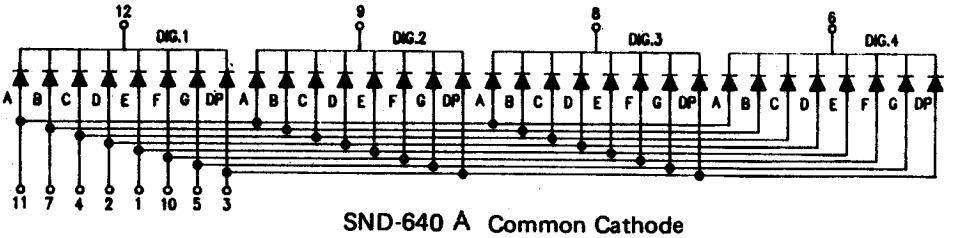
PIN CONNECTIONS

(Top View)





SND-640 Common Cathode



SND-640 A Common Cathode

SND-647 /647 A (Anode Common) All diodes are reversed polarity

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Red SND 640/647R (GaP)

Absolute Maximum Ratings (T_a=25°C)

Power dissipation/Total	1280	mW
Power dissipation/Seg	40	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	4	V
Operating temperature	−25 ~ +85	°C
Storage temperature	−55 ~ +100	°C

Electrical/Optical Characteristics (T_a=25°C)

Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Seg	V_F	I_F = 10mA	—	2.1	2.3	V
Reverse current/Seg	I_R	V_R = 4V	—	—	10	μA
Luminous intensity/digit	I_V	I_F = 10mA	200	700	—	μcd
Peak wavelength	λ_P	I_F = 10mA	—	700	—	nm
Spectral line halfwidth	$\Delta\lambda$	I_F = 10mA	—	30	—	nm

Orange SND 640/647SR (GaAsP/GaP)

Absolute Maximum Ratings (T_a=25°C)

Power dissipation/Total	1280	mW
Power dissipation/Seg	40	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	4	V
Operating temperature	−25 ~ +85	°C
Storage temperature	−55 ~ +100	°C

Electrical/Optical Characteristics (T_a=25°C)

Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Seg	V_F	I_F = 10mA	—	2.0	2.2	V
Reverse current/Seg	I_R	V_R = 4V	—	—	10	μA
Luminous intensity/digit	I_V	I_F = 10mA	600	1300	—	μcd
Peak wavelength	λ_P	I_F = 10mA	—	635	—	nm
Spectral line halfwidth	$\Delta\lambda$	I_F = 10mA	—	35	—	nm

Yellow-green SND 640/647UG (GaP)

Absolute Maximum Ratings (T_a=25°C)

Power dissipation/Total	1280	mW
Power dissipation/Seg	40	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	4	V
Operating temperature	−25 ~ +85	°C
Storage temperature	−55 ~ +100	°C

Electrical/Optical Characteristics (T_a=25°C)

Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Seg	V_F	I_F = 10mA	—	2.1	2.3	V
Reverse current/Seg	I_R	V_R = 4V	—	—	10	μA
Luminous intensity/digit	I_V	I_F = 10mA	600	1300	—	μcd
Peak wavelength	λ_P	I_F = 10mA	—	565	—	nm
Spectral line halfwidth	$\Delta\lambda$	I_F = 10mA	—	30	—	nm

Red SND 640/647UR (GaAlAs)

Absolute Maximum Ratings (T_a=25°C)

Power dissipation/Total	1280	mW
Power dissipation/Seg	40	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	4	V
Operating temperature	−25 ~ +85	°C
Storage temperature	−55 ~ +100	°C

Electrical/Optical Characteristics (T_a=25°C)

Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Seg	V_F	I_F = 10mA	—	1.85	2.1	V
Reverse current/Seg	I_R	V_R = 4V	—	—	10	μA
Luminous intensity/digit	I_V	I_F = 10mA	1800	3000	—	μcd
Peak wavelength	λ_P	I_F = 10mA	—	660	—	nm
Spectral line halfwidth	$\Delta\lambda$	I_F = 10mA	—	20	—	nm

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