

# High Reliability 0.4-inch 4-Digits 7-Segment Numeric Displays

# SND-440A SND-447A

## GENERAL DESCRIPTION

The SND-440A and the SND-447A series are high performance epoxy resin molded 4-digit 7-segment LED displays of which character height is 0.4-inch (10.16mm) and available in red, green, orange and yellow-green emitting colors. The standard units are constructed with black face and milky white segment color.

## PACKAGE DIMENSIONS

Actual size

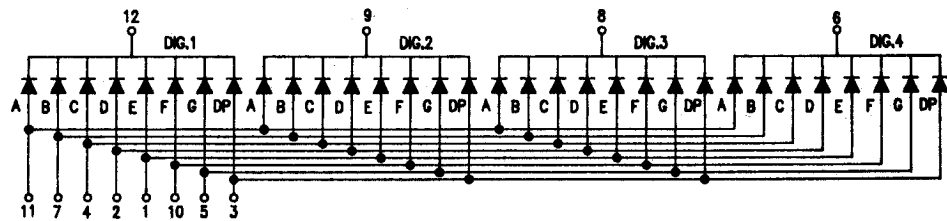
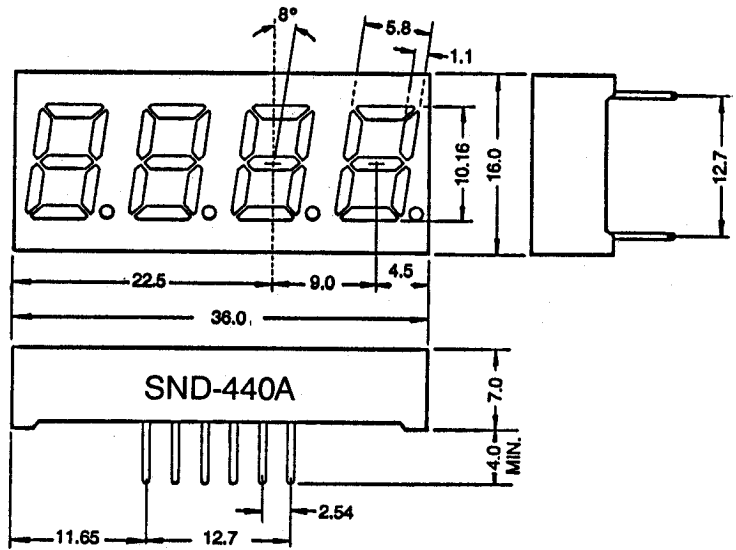
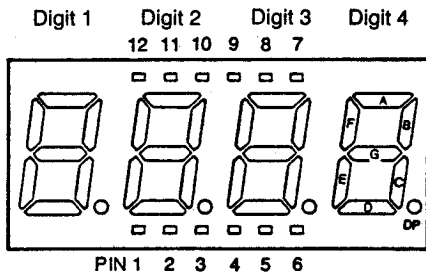
## FEATURES

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 SND-430A/437A series for 7 digits of applications
6. Cathode-common (SND-440A) and anode-common (SND-447A) types available



## PIN ARRANGEMENT

(Top View)



SND-440A (Cathode Common)

SND-447A (Anode Common) All diodes are reversed polarity



**三光半導体株式会社**  
**SAM KWANG SEMICONDUCTOR CO., LTD.**  
 803 Silla Techno Vil., 39-3 Dang-dong Kunpo-City Kyungki-do, Korea,  
 TEL:031-456-1444/1484, FAX:031-456-4224

### Red SND 440A/447R (GaP)

Absolute Maximum Ratings (T<sub>a</sub> = 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<sub>a</sub> = 25°C)

Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Seg	V <sub>F</sub>	I <sub>F</sub> = 10mA	—	2.1	2.3	V
Reverse current /Seg	I <sub>R</sub>	V <sub>R</sub> = 4V	—	—	10	μA
Luminous Intensity/digit	I <sub>v</sub>	I <sub>F</sub> = 10mA	300	800	—	μcd
Peak wavelength	λ <sub>P</sub>	I <sub>F</sub> = 10mA	—	700	—	nm
Spectral line halfwidth	Δλ	I <sub>F</sub> = 10mA	—	100	—	nm

### Green SND 440A/447G (GaP)

Absolute Maximum Ratings (T<sub>a</sub> = 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<sub>a</sub> = 25°C)

Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Seg	V <sub>F</sub>	I <sub>F</sub> = 10mA	—	2.1	2.3	V
Reverse current /Seg	I <sub>R</sub>	V <sub>R</sub> = 4V	—	—	10	μA
Luminous Intensity/digit	I <sub>v</sub>	I <sub>F</sub> = 10mA	350	900	—	μcd
Peak wavelength	λ <sub>P</sub>	I <sub>F</sub> = 10mA	—	555	—	nm
Spectral line halfwidth	Δλ	I <sub>F</sub> = 10mA	—	30	—	nm

### Orange SND 440A/447SR (GaAsP/GaP)

Absolute Maximum Ratings (T<sub>a</sub> = 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<sub>a</sub> = 25°C)

Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Seg	V <sub>F</sub>	I <sub>F</sub> = 10mA	—	2.0	2.2	V
Reverse current/Seg	I <sub>R</sub>	V <sub>R</sub> = 4V	—	—	10	μA
Luminous Intensity/digit	I <sub>v</sub>	I <sub>F</sub> = 10mA	700	1500	—	μcd
Peak wavelength	λ <sub>P</sub>	I <sub>F</sub> = 10mA	—	635	—	nm
Spectral line halfwidth	Δλ	I <sub>F</sub> = 10mA	—	35	—	nm

### Yellow-green SND 440A/447AUG (GaP)

Absolute Maximum Ratings (T<sub>a</sub> = 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<sub>a</sub> = 25°C)

Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Seg	V <sub>F</sub>	I <sub>F</sub> = 10mA	—	2.1	2.3	V
Reverse current/Seg	I <sub>R</sub>	V <sub>R</sub> = 4V	—	—	10	μA
Luminous Intensity/digit	I <sub>v</sub>	I <sub>F</sub> = 10mA	600	1500	—	μcd
Peak wavelength	λ <sub>P</sub>	I <sub>F</sub> = 10mA	—	565	—	nm
Spectral line halfwidth	Δλ	I <sub>F</sub> = 10mA	—	30	—	nm

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