

High Reliability 0.8-inch Dual-Digits 7-Segment Numeric LED Displays

SND-820 SND-827

GENERAL DESCRIPTION

The SND-820 and the SND-827 series are high performance epoxy resin molded dual-digit 7-segment LED displays of which character height is 0.8 inch (20.3mm). These series provide excellent readability in bright ambients and available in three emitting colors; red, orange and yellow-green. The standard unit is constructed with black face and milky white segment color.

PACKAGE DIMENSIONS

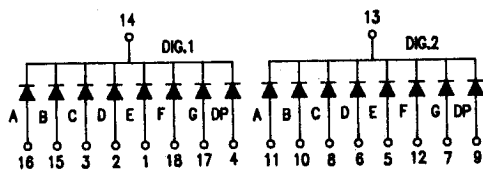
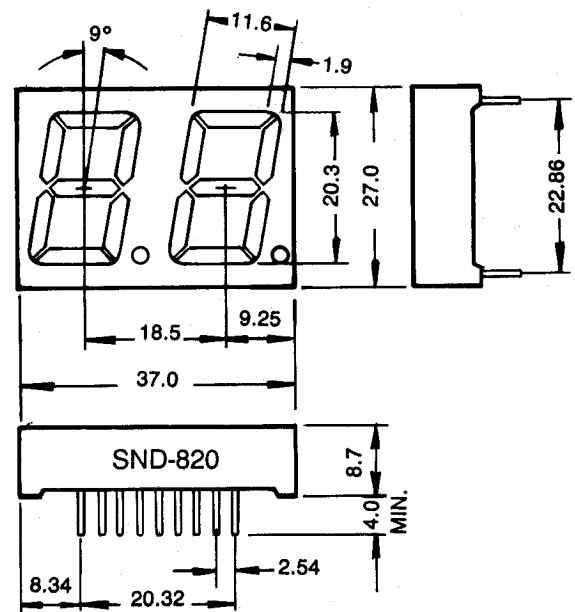
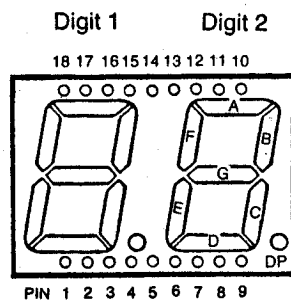
SCALE 1:1 (mm)

FEATURES

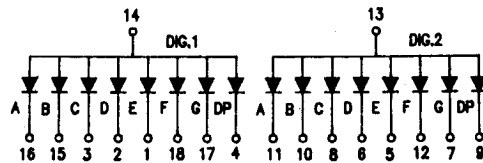
1. High brightness with high contrast
2. Uniform brightness and wide angle viewing
3. Low power consumption; Directly drive with I.C
4. Solid state reliability and long operation life
5. Cathode-common (SND-820) and anode-common (SND-827) types available

PIN ARRANGEMENT

(Top View)



SND-820 (Cathode Common)



SND-827 (Anode Common)

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Red SND 820/827UR (GaAIAs)

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

| | | |
|-------------------------|------------|------------------|
| Power dissipation/Total | 640 | 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 | $I_F = 10\text{mA}$ | — | 1.9 | 2.1 | V |
| Reverse current/Seg | I_R | $V_R = 4\text{V}$ | — | — | 10 | μA |
| Luminous intensity/digit | I_V | $I_F = 10\text{mA}$ | 1300 | 2500 | — | μcd |
| Peak wavelength | λ_P | $I_F = 10\text{mA}$ | — | 660 | — | nm |
| Spectral line halfwidth | $\Delta\lambda$ | $I_F = 10\text{mA}$ | — | 20 | — | nm |

Orange SND 820/827SR (GaAsP/GaP)

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

| | | |
|-------------------------|------------|------------------|
| Power dissipation/Total | 640 | 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 | $I_F = 10\text{mA}$ | 500 | 1000 | — | 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 820/827UG (GaP)

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

| | | |
|-------------------------|------------|------------------|
| Power dissipation/Total | 640 | 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 |

* Pulse Width 1 ms
Duty Cycle 1/5

