

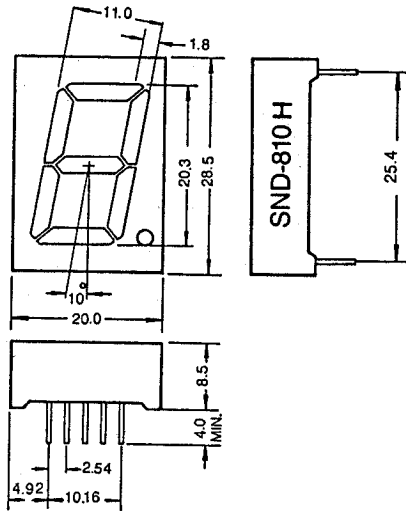
High Reliability 0.8-inch 7-Segment Numeric LED Displays

SND-810 SND-817

GENERAL DESCRIPTION

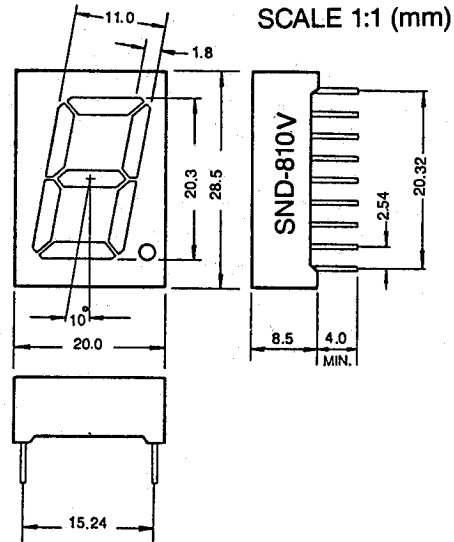
The SND-810 and the SND-817 series are high performance 7 segment numeric LED displays which character height is 0.8 inch (20.3mm). These single digit displays provide excellent readability in bright ambients and available in red, orange and yellow-green emitting colors. There is a choice of the two popular types of the pin arrangements; the horizontal pin arrangement as H and the vertical pin arrangement as V which is enable to use in a wide range of applications.

PACKAGE DIMENSIONS

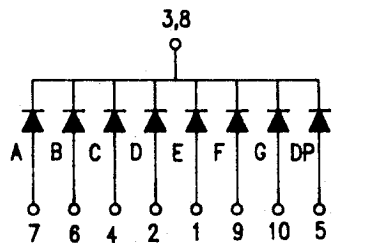
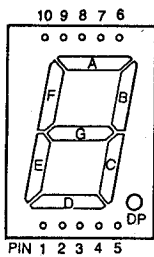


FEATURES

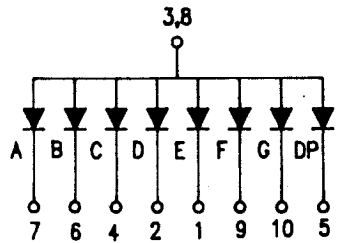
1. High brightness with high contrast
2. Uniform brightness and wide angle viewing
3. Low power consumption; directly drive with I.C
4. Solid state reliability and long operation life
5. Cathode common (SND-810) and anode common (SND-817) types available



PIN CONNECTIONS



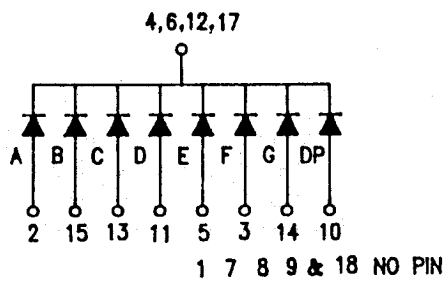
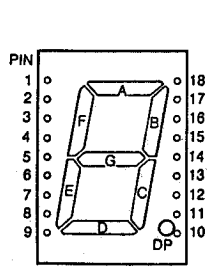
SND-810 H (Cathode Common)



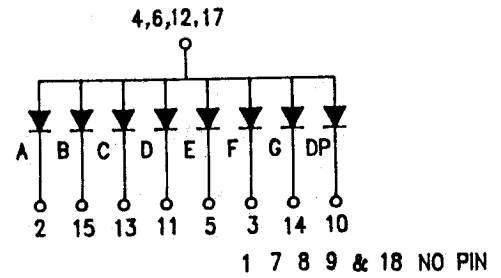
SND-817 H (Anode Common)



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



SND-810 V (Cathode Common)



SND-817 V (Anode Common)

Red SND 810/817UR (GaAlAs)

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

| | | |
|-------------------------|------------|------------------|
| Power dissipation/Total | 320 | 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 | 2000 | — | 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 810/817SR (GaAsP/GaP)

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

| | | |
|-------------------------|------------|------------------|
| Power dissipation/Total | 320 | 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 810/817UG (GaP)

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

| | | |
|-------------------------|------------|------------------|
| Power dissipation/Total | 320 | 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