

High Reliability 1.0-inch Dual-Digits 7-Segment Numeric LED Displays

SND-1020 SND-1027

GENERAL DESCRIPTION

The SND-1020 and the SND-1027 series are high performance epoxy resin molded dual-digits 7-segment LED displays of which character height is 1.0 inch (25.4mm) and there is a choice of three emitting colors; red, orange and yellow-green. These series provide two configurations; single chip per segment for an economical grade and two chips in series per segment for a standard unit.

The standard units are constructed with black face and milky white segment color.

PACKAGE DIMENSIONS

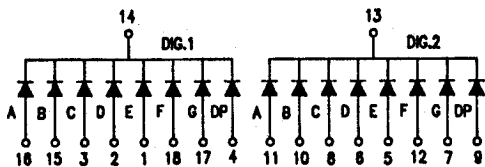
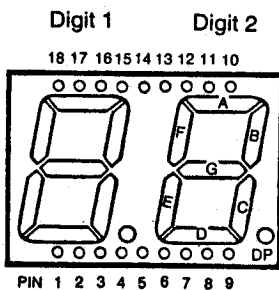
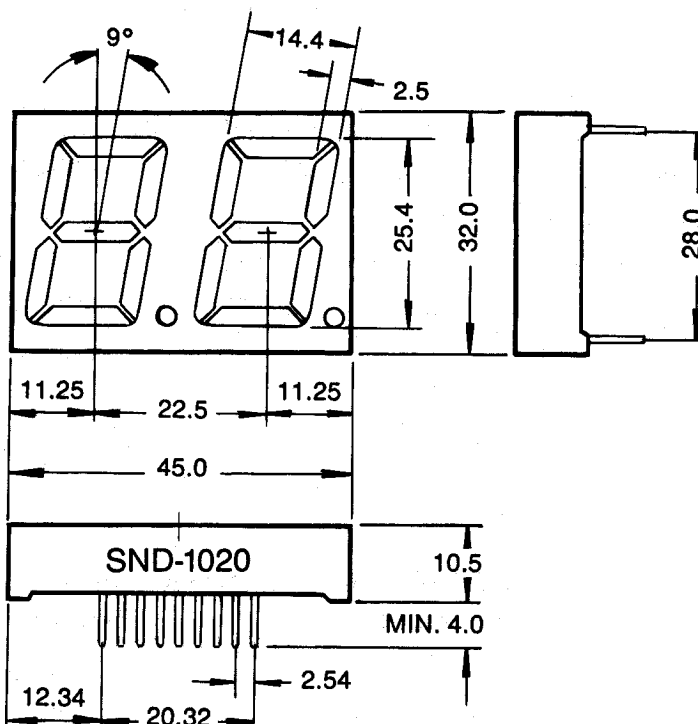
SCALE 1:1 (mm)

FEATURES

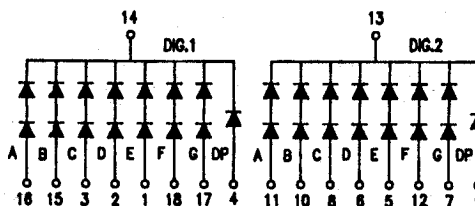
1. High brightness with high contrast
2. Uniform brightness and wide angle viewing
3. Low power consumption
4. Solid state stability and long operation life
5. Cathode-common (SND-1020) and anode-common (SND-1027) types available

PIN CONNECTIONS

(Top View)



SND-1020 (Cathode Common)



SND-1020-2 (Cathode Common)

SND-1027 (Anode Common)
All diodes are reversed polarity

SND-1027-2 (Anode Common)
All diodes are reversed polarity



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Red SND 1020/1027UR (GaAlAs)

Absolute Maximum Ratings (T_a=25°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	°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	—	1.9	2.1	V
Reverse current/Seg	I _R	V _R = 4V	—	—	10	μA
Luminous intensity/digit	I _v	I _F = 10mA	1000	2000	—	μcd
Peak wavelength	λ _P	I _F = 10mA	—	660	—	nm
Spectral line halfwidth	Δλ	I _F = 10mA	—	20	—	nm

Orange SND 1020/1027SR (GaAsP/GaP)

Absolute Maximum Ratings (T_a=25°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	°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	500	1000	—	μcd
Peak wavelength	λ _P	I _F = 10mA	—	635	—	nm
Spectral line halfwidth	Δλ	I _F = 10mA	—	35	—	nm

Orange SND 1020SR2/1027SR2 (GaAsP/GaP)

Absolute Maximum Ratings (T_a=25°C)

Power dissipation/Total	1280	mW
Power dissipation/Seg	80	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	10	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	—	4.0	4.4	V
Reverse current/Seg	I _R	V _R = 10V	—	—	10	μA
Luminous intensity/digit	I _v	I _F = 10mA	800	1500	—	μcd
Peak wavelength	λ _P	I _F = 10mA	—	635	—	nm
Spectral line halfwidth	Δλ	I _F = 10mA	—	35	—	nm

Yellow-green SND 1020UG2/1027UG2 (GaP)

Absolute Maximum Ratings (T_a=25°C)

Power dissipation/Total	1280	mW
Power dissipation/Seg	80	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	10	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	—	4.2	4.6	V
Reverse current/Seg	I _R	V _R = 10V	—	—	10	μA
Luminous intensity/digit	I _v	I _F = 10mA	700	1500	—	μcd
Peak wavelength	λ _P	I _F = 10mA	—	565	—	nm
Spectral line halfwidth	Δλ	I _F = 10mA	—	30	—	nm

* Pulse Width 1 ms
Duty Cycle 1/5