

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

SND-1012 SND-1019

GENERAL DESCRIPTION

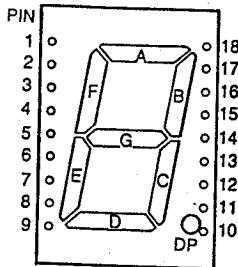
The SND-1012 and SND-1019 are high performance dual color 7 segment numeric LED displays of which character height 1.0 inch (25.4 mm). Two red and green chips are contained in each segment and it could be displayed in red or green color separately and appears in amber color when drive to red and green side in the same time.

FEATURES

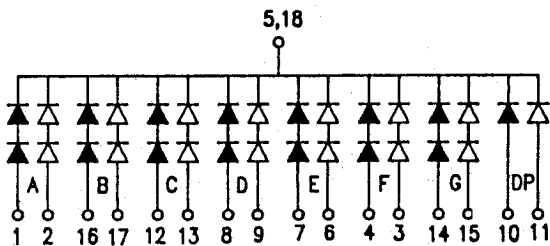
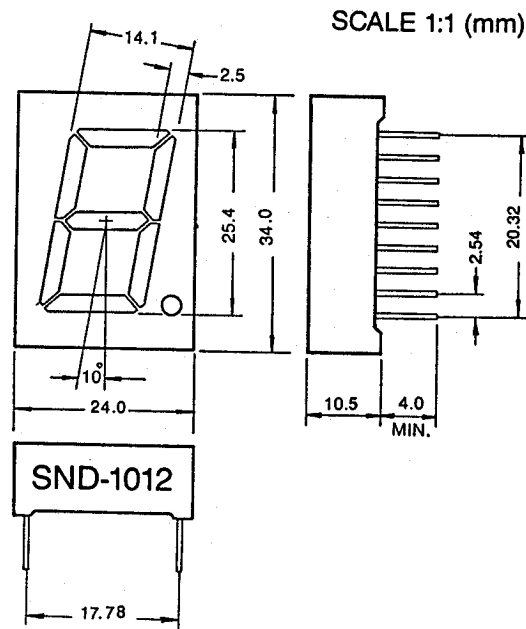
1. High brightness with high contrast
2. Uniform brightness and wide angle viewing
3. Low power consumption
4. Solid state stability and long operation life
5. Cathode common (SND-1012) and anode common (SND-1019) types available

CONNECTIONS GUIDE

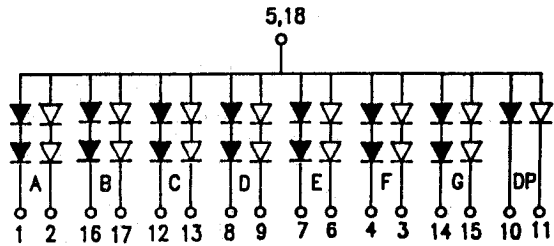
(Top View)



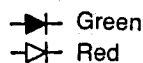
PACKAGE DIMENSIONS



SND-1012 (Cathode Common)



SND-1019 (Anode Common)





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SND 1012/1019SR-UG (GaAsP/GaP-GaP)

Orange SR SIDE (GaAsP/GaP)

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

Power dissipation/Total	600	mW
Power dissipation/Seg	80	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	10	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	$I_F = 10\text{mA}$	—	4.0	4.4	V
Reverse current/Seg	I_R	$V_R = 10\text{V}$	—	—	10	μA
Luminous intensity/digit	I_V	$I_F = 10\text{mA}$	800	1500	—	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 UG SIDE (GaP)

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

Power dissipation/Total	600	mW
Power dissipation/Seg	80	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	10	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	$I_F = 10\text{mA}$	—	4.2	4.6	V
Reverse current/Seg	I_R	$V_R = 10\text{V}$	—	—	10	μA
Luminous intensity/digit	I_V	$I_F = 10\text{mA}$	700	1500	—	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

■ Characteristics Diagrams

