

Red GaAsP 0.5-Inch 7-Segment Numeric LED Displays

Optoelectronic Products

FND500, FND507 FND560, FND567

General Description

The FND500, FND507, FND560 and FND567 are red GaAsP single-digit 7-segment LED displays with a 0.5-inch character height. These displays are designed for applications in which the viewer is within twenty feet of the display.

Low Forward Voltage—Typically $V_F = 1.7$ V

Fits Standard DIP Sockets with 0.6-Inch Pin Row

Maximized Contrast Ratio With Integral Lens Cap

Horizontal Stacking 0.6-Inch Minimum,

1-Inch Typical

FND560/567 Suitable For Use In High Ambient Light

FND500 Common Cathode, Right-Hand Decimal Point

FND507 Common Anode, Right-Hand Decimal Point

FND560 Common Cathode, Right-Hand Decimal Point, High Brightness

FND567 Common Anode, Right-Hand Decimal Point, High Brightness

Absolute Maximum Ratings

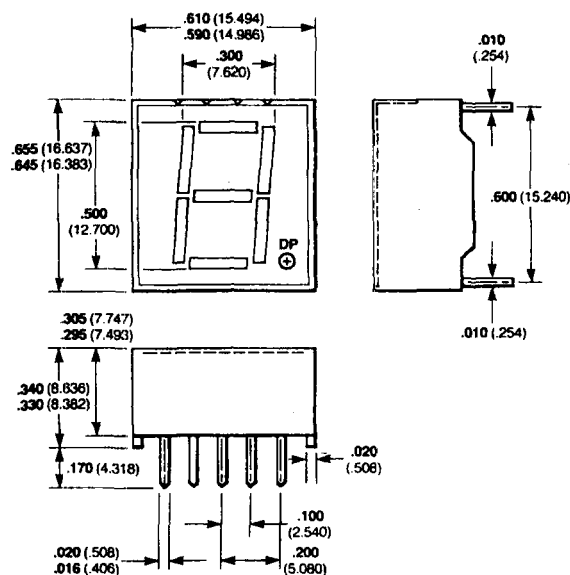
Maximum Temperature and Humidity

Storage Temperature	-25°C to +85°C
Operating Temperature	-25°C to +85°C
Pin Temperature (Soldering, 5 s)	260°C
Relative Humidity at 65°C	98%

Maximum Voltage and Currents

V_R	Reverse Voltage	3.0 V
I_F	Average Forward dc Current/Segment or Decimal Point	25 mA
	Derate from 25°C	
	Ambient Temperature	0.3 mA/°C
I_{pk}	Peak Forward Current Segment or Decimal Point (100 μ s pulse width)	
	1000 pps, $T_A = 25^\circ\text{C}$	200 mA

Package Outline



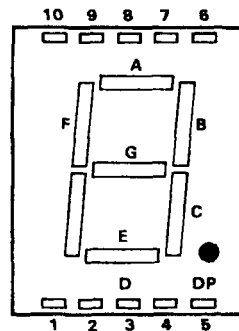
Notes

All dimensions in inches bold and millimeters (parentheses)
Tolerance unless specified = $\pm .015$ ($\pm .381$)

Connection Diagram Typical Electrical Characteristics

FND500, FND507 FND560, FND567

Pin Connections
(Front View)



Pin	FND507/567	FND500/560
1	Segment E	Segment E
2	Segment D	Segment D
3	Common Anode	Common Cathode
4	Segment C	Segment C
5	Decimal Point	Decimal Point
6	Segment B	Segment B
7	Segment A	Segment A
8	Common Anode	Common Cathode
9	Segment F	Segment F
10	Segment G	Segment G

Electrical and Radiant Characteristics $T_A = 25^\circ\text{C}$

Symbol	Characteristic	Min	Typ	Max	Units	Test Conditions
V_F	Forward Voltage	1.5	1.7	2.0	V	$I_F = 20 \text{ mA}$
BV_R	Reverse Breakdown Voltage	3.0	12		V	$I_R = 1.0 \text{ mA}$
I_O	Axial Luminous Intensity, Average Each Segment					
	FND500, FND507	300	600		μcd	$I_F = 20 \text{ mA}$
	FND560, FND567	740	1200		μcd	$I_F = 20 \text{ mA}$
ΔI_O	Intensity Matching, Segment-to-Segment		± 33		%	$I_F = 20 \text{ mA}$
	Intensity Matching Within One Intensity Class		± 20		%	$I_F = 20 \text{ mA}$, all segments at once
L_O	Average Segment Luminance					
	FND500, FND507		35		ftL	$I_F = 20 \text{ mA}$
	FND560, FND567		70		ftL	$I_F = 20 \text{ mA}$
$\theta_{1/2}$	Viewing Angle to Half Intensity		± 27		degrees	
λ_{pk}	Peak Wavelength		665		nm	$I_F = 20 \text{ mA}$