### Fairchild Semiconductors

## **Semiconductors**

Opto-electronics - LED Displays

# FND 500, FND 507 ½in. Single Digit Numeric Display

#### GENERAL DESCRIPTION

The FND500 and FND507 are Red GaAsP Single Digit, 7-segment LED Displays with a nominal in. character height. The FND500 has common cathode configuration. The FND507 has common anode configuration. These display devices are for applications where the viewer is within twenty feet of the display. Each digit has a brightness code (05, 06, 07 . . .) for constructing arrays with closely matched digits.

#### ABSOLUTE MAXIMUM RATINGS

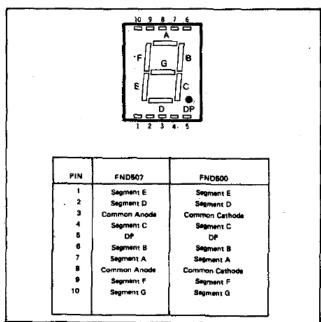
Storage temperature Solder temperature (5 seconds)		-25°C to +85°C -25°C to +85°C 260°C					
					Relative	humidity @ 65°C 98%	
					V <sub>R</sub> F	Reverse voltage	3.0V
I <sub>F</sub> (Avg)	Average forward current/segment or decimal point Derate from 25°C ambient temperature	25mA 0.3mA/*C					
lp .	Peak current/ segment or decima point (100µs pulse width) 1000 PPS,	<b>1</b> .					

200mA

## ELECTRICAL AND RADIANT CHARACTERISTICS ( $T_A = 25$ °C)

 $T_A = 25^{\circ}C$ 

#### PIN CONNECTIONS



#### **FEATURES**

Low current requirements of typically 5.0 mA/segment
Low voltage of typically 1.7 V<sub>F</sub>
Fits standard dip sockets with 0.6" pin row Decimal point on lower right-hand side

Decimal point on lower right-hand side Overflow point on upper left-hand side with digit reversed

Maximised contrast ratio with integral lens cap Horizontal stacking 0.6" minimum, 1" typical Common cathode or common anode

#### REFERENCE TABLE

Code	Stock No.
FND500	35449X
FND507	35450C

Symbol	Characteristic	Min.	Тур.	Max.	Units	Test Conditions
l <sub>o</sub>	Axial Luminous Intensity, Each Segment	240	600		μcd	I <sub>F</sub> = 20 mA
V <sub>F</sub> BV <sub>ft</sub>	Forward Voltage Reverse Breakdown Voltage	1.5 3.0	1.7 12	2.0	V	I <sub>F</sub> = 20 mA I <sub>R</sub> = 1.0 mA
Ø1/2	Viewing Angle to Half Intensity	_	±25		degrees	
Lo	Average Segment Luminance	-	35	_	ftL	1 <sub>F</sub> ≈ 20 mA
лрk	Peak Wavelength	_	650		nm	I <sub>F</sub> = 20 mA
ΔΙο	Intensity Matching, Segment to Segment		±33	_	%	I <sub>F</sub> = 20 mA
	Intensity Matching, Within One Intensity Class		±20	-	%	I <sub>F</sub> = 20 mA on all segments at once