

Green GaP Yellow Super GaAsP Amber Super GaAsP 0.5-Inch 7-Segment LED Displays

Optoelectronic Products

FND530, FND537 FND540, FND547 FND550, FND557

General Description

The FND530 and FND537 are green GaP 7-segment LED displays; the FND540 and FND547 are yellow Super GaAsP 7-segment LED displays; and the FND550 and FND557 are amber Super GaAsP 7-segment LED displays. All have a 0.50-inch nominal character height. These displays are for applications where the viewer is within 20 feet of the display.

Fits Standard Sockets With 0.6-Inch Pin Row
Intensity Code Marking For Uniform Displays
Maximized Contrast Ratio With Integral Lens Cap
Maximized Use Of Digit Face

FND550/FND557—Suitable For Use In High Ambient Light

FND530—Common Cathode, Right-Hand Decimal Point, Green

FND537—Common Anode, Right-Hand Decimal Point, Green

FND540—Common Cathode, Right-Hand Decimal Point, Yellow

FND547—Common Anode, Right-Hand Decimal Point, Yellow

FND550—Common Cathode, Right-Hand Decimal Point, Amber

FND557—Common Anode, Right-Hand Decimal Point, Amber

Absolute Maximum Ratings

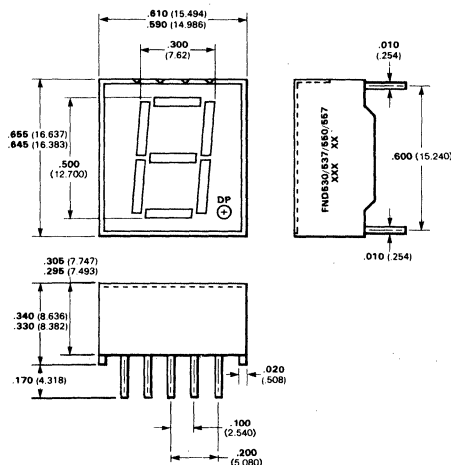
Maximum Temperature and Humidity

Storage Temperature	-25°C to +85°C
Operating Temperature	-25°C to +85°C
Pin Temperature (Soldering, 5 s)	260°C
Relative Humidity at 60°C	90%

Maximum Voltage and Currents

V_R	Reverse Voltage	3.0 V
I_F	Average Forward dc Current / Segment or Decimal Point	20 mA
I_{pk}	Peak Forward Current / Segment or Decimal Point (100 μ s pulse width)	80 mA
	1000 pps, $T_A = 25^\circ\text{C}$	

Package Outline



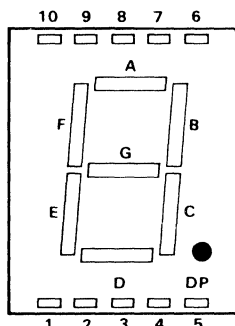
Notes

All dimensions in inches **bold** and millimeters (parentheses)
For polarity indication the surface is ribbed
The unit LED segments cannot necessarily be seen through the lens cap
Lens cap color is red for red LED
Pins 3 and 8 are common
All dimensions are $\pm .015$ ($\pm .381$)

Connection Diagram Typical Electrical Characteristics

FND530, FND537 FND540, FND547 FND550, FND557

Pin Connections
(Front View)



	FND530/540/550	FND537/547/557
Pin		
1	Segment E	Segment E
2	Segment D	Segment D
3	Common Cathode	Common Anode
4	Segment C	Segment C
5	Decimal Point	Decimal Point
6	Segment B	Segment B
7	Segment A	Segment A
8	Common Cathode	Common Anode
9	Segment F	Segment F
10	Segment G	Segment G

3

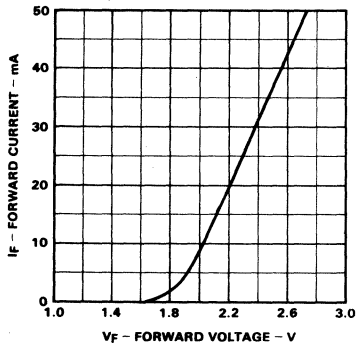
Electrical and Radiant Characteristics $T_A = 25^\circ\text{C}$

Symbol	Characteristic	Min	Typ	Max	Units	Test Conditions
V_F	Forward Voltage		2.2	3.2	V	$I_F = 20\text{ mA}$
BV_R	Reverse Breakdown Voltage	3.0			V	$I_R = 1.0\text{ mA}$
I_O	Axial Luminous Intensity					
	Average Each Segment					
	FND530, FND537		600	2000	μcd	$I_F = 20\text{ mA}$
	FND540, FND547		600	1000	μcd	$I_F = 20\text{ mA}$
	FND550, FND557		700	2000	μcd	$I_F = 20\text{ mA}$
$\theta_{1/2}$	Viewing Angle to Half Intensity		± 30		degrees	$I_F = 20\text{ mA}$
λ_{pk}	Peak Wavelength					
	FND530, FND537		565		nm	$I_F = 20\text{ mA}$
	FND540, FND547		585		nm	$I_F = 20\text{ mA}$
	FND550, FND557		635		nm	$I_F = 20\text{ mA}$
L_O	Average Segment Luminance					
	FND530, FND537		104		ftL	$I_F = 20\text{ mA}$
	FND540, FND547		52		ftL	$I_F = 20\text{ mA}$
	FND550, FND557		104		ftL	$I_F = 20\text{ mA}$
ΔI_O	Intensity Matching Segment-to-Segment		± 33		%	$I_F = 20\text{ mA}$
	Intensity Matching Within One Intensity Class		± 20		%	$I_F = 20\text{ mA}$

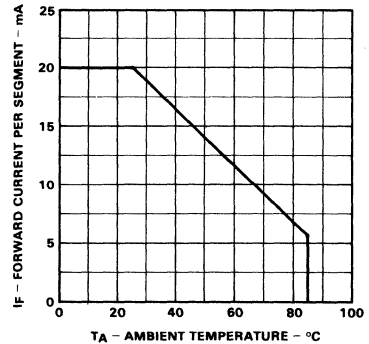
Typical Electrical Characteristic Curves

**FND530, FND537
FND540, FND547
FND550, FND557**

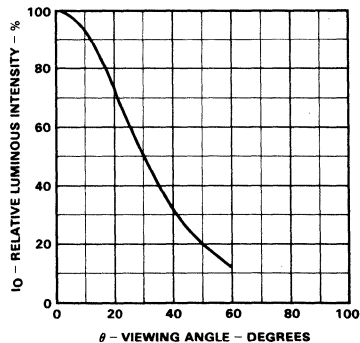
Forward Current vs Forward Voltage



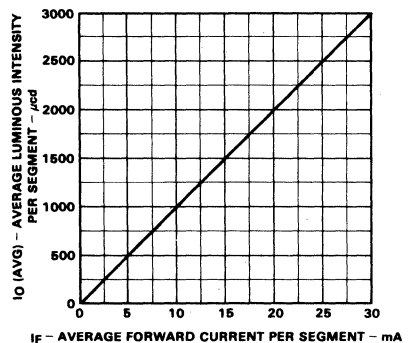
**Maximum Average Current Rating
vs Ambient Temperature**



Angular Distribution Of Luminous Intensity



**Average Luminous Intensity
vs Average Forward Current**



Emission Spectrum

