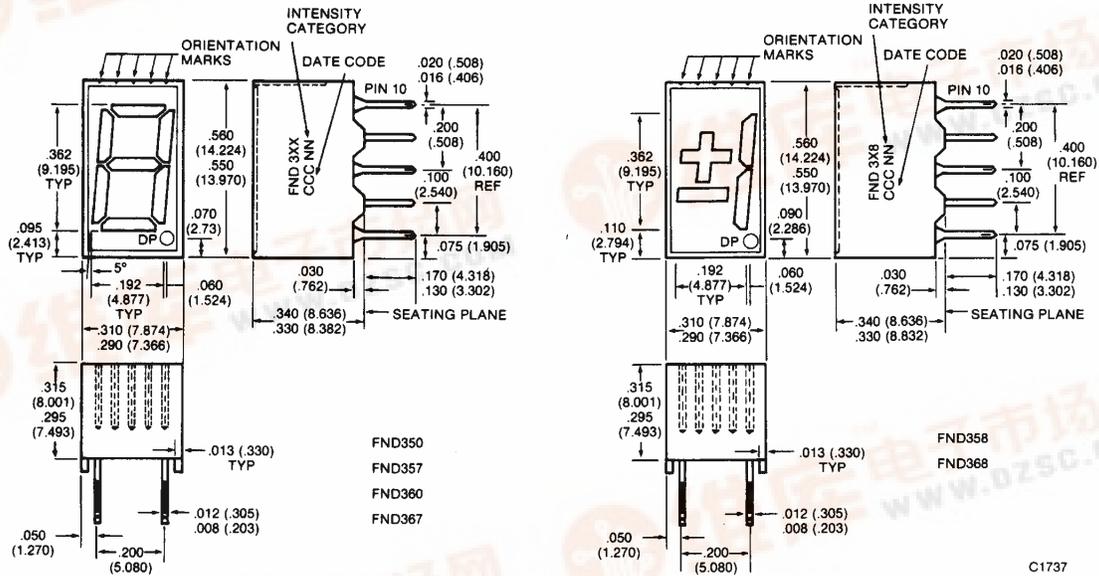


**FAIRCHILD**  
SEMICONDUCTOR™

**0.362 - INCH  
7 - SEGMENT DISPLAY**

**HIGH EFFICIENCY RED FND310C FND317C FND318C**

**PACKAGE DIMENSIONS**



NOTES:  
1. ALL DIMENSIONS ARE IN MM (INCH)  
2. TOLERANCE ARE  $\pm 0.010$  INCH UNLESS OTHERWISE SPECIFIED

**DESCRIPTION**

The FND310C, FND317C and FND318D are high efficiency red GaP 7-segment displays with nominal 0.362" digit height. Reflector cap, PCB and encapsulant are used in the construction of these FND3XXCs.

**FEATURES**

- Exactly pin and package compatible with FND3XX
- Compact — 10 digits in 3-inch panel width
- Wide viewing angle
- Right-hand decimal configuration
- Categorized for luminous intensity
- Rugged encapsulated plastic construction

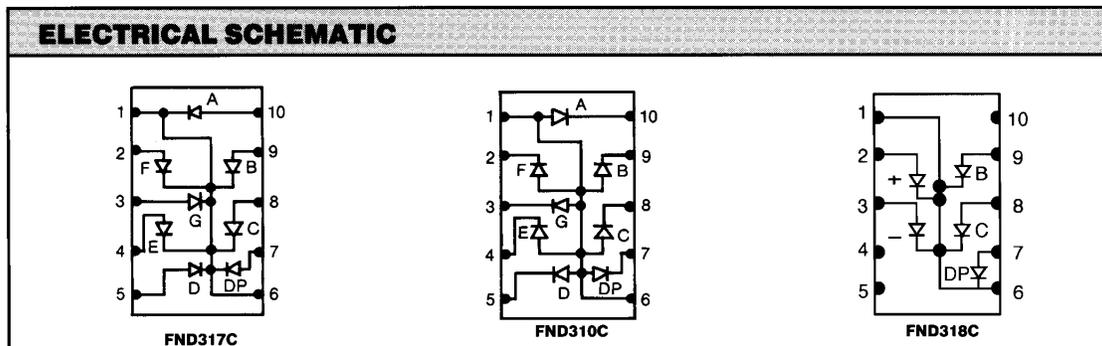
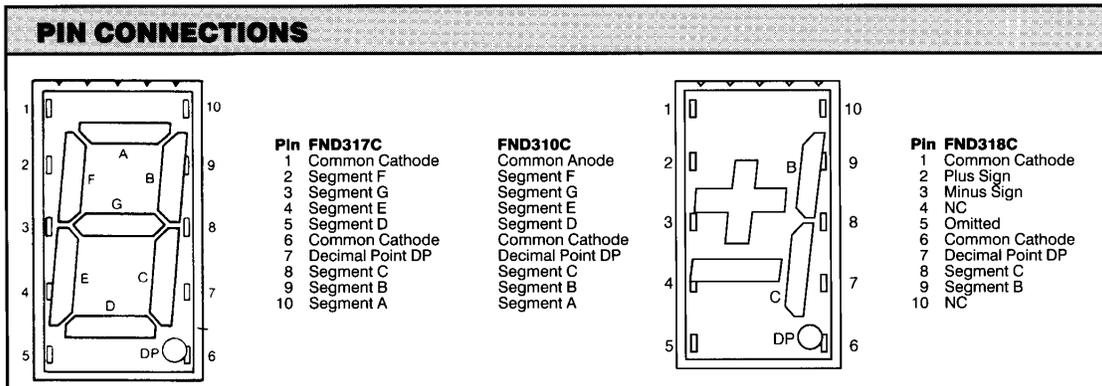
**MODEL NUMBERS**

PART NUMBER	COLOR	DESCRIPTION
FND310C	Hi. Eff. Red	Common anode seven segment display
FND317C	Hi. Eff. Red	Common cathode seven segment display
FND318C	Hi. Eff. Red	Common cathode $\pm 1$ overflow display



<b>ABSOLUTE MAXIMUM RATINGS</b>		
	<b>FND310C/317C</b>	<b>FND318C</b>
Power dissipation at 25°C ambient .....	500 mW	320 mW
Continuous forward current		
Total .....	200 mA	125 mA
Per segment or decimal point .....	25 mA	25 mA
Reverse voltage		
Per segment or decimal point .....	6 V	6 V
Storage and operating temperature .....	-25°C to +85°C	-25°C to +85°C
Soldering time at 250°C (1/16 inch from the seating plane) ...	3 sec	3 sec

<b>ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C Unless Otherwise Specified)</b>					
<b>PARAMETER</b>	<b>MIN.</b>	<b>TYP.</b>	<b>MAX.</b>	<b>UNIT</b>	<b>TEST CONDITIONS</b>
Forward voltage - V (per diode)		2.0	2.5	V	I <sub>f</sub> =20 mA
Luminous intensity - I <sub>v</sub>	1800	2700		μcd	I <sub>f</sub> =20 mA
Peak wavelength		655		nm	I <sub>f</sub> =20 mA
Spectrum radiation bandwidth		45		nm	I <sub>f</sub> =20 mA
Reverse voltage-V <sub>r</sub>	5			V	I <sub>r</sub> =100 μA
Capacitance - C		35		pF	V=0, F=1 MHz



**TYPICAL ELECTRO - OPTICAL CHARACTERISTIC CURVES**

( $T_A=25^\circ\text{C}$  Unless otherwise specified)

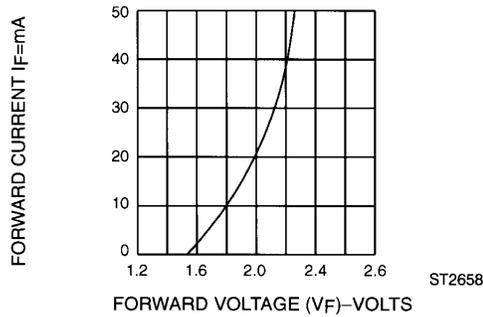


Fig. 1 Forward Current vs. Forward Voltage

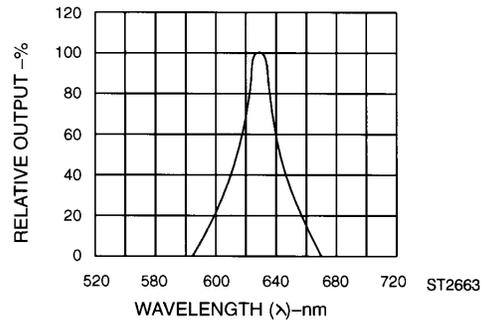


Fig. 2 Spectral Response

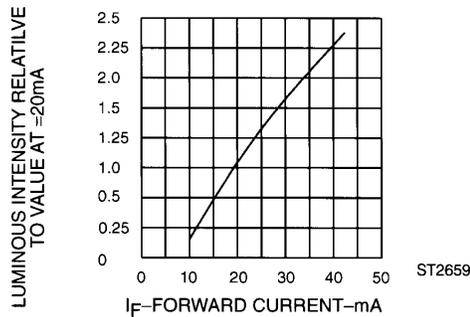


Fig. 3 Relative Luminous Intensity vs. Forward Current

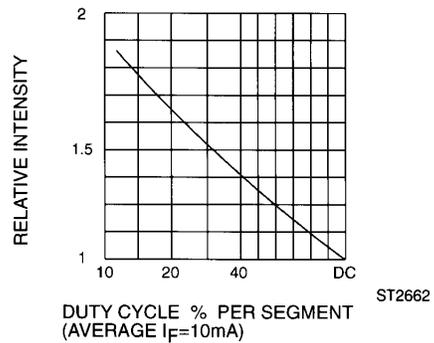


Fig. 5 Luminous Intensity vs. Duty Cycle

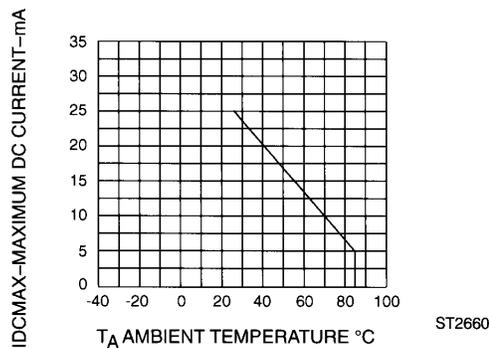


Fig. 4 Maximum Allowable DC Current Per Segment vs. a Function of Ambient Temperature

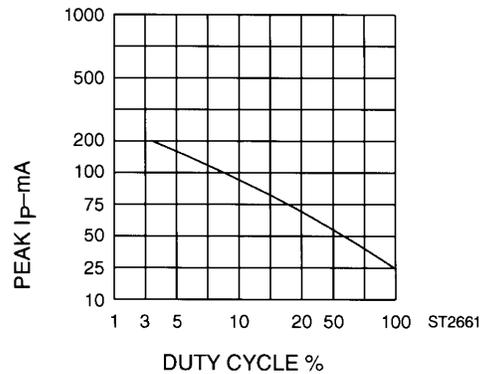


Fig. 6 Max Peak Current vs. Duty Cycle % (Refresh Rate  $f=1\text{KHz}$ )

Clean the displays only in water, isopropanol, ethanol, freon TF or TE (or equivalent)



## 0.362-INCH 7-SEGMENT DISPLAY

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2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.