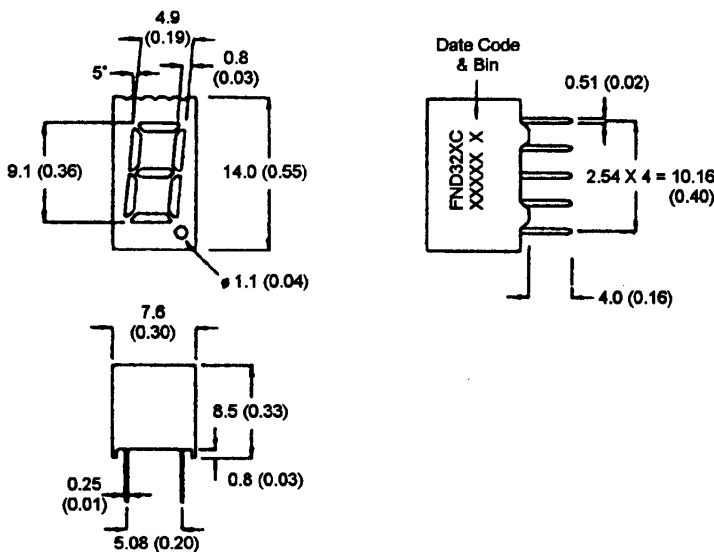


**S/H AlGaAs Red FND320C, FND327C, and FND328C
(UP-GRADE FOR THE FND35XC and FND36XC)**

PACKAGE DIMENSIONS



NOTES: Dimensions are in mm (inch).
All pins are 0.5 (0.02) diameter
Tolerances are ± 0.25 (0.1) unless otherwise noted.

FEATURES

- Easy to read digits.
- Common anode or cathode.
- Low power consumption.
- Bold segments that are highly visible.
- High brightness with high contrast
- White segments on a grey face.
- Directly compatible with integrated circuits.
- Rugged plastic/epoxy construction.

APPLICATIONS

- Digital readout displays.
- Instrument panels.

MODEL NUMBERS

| <u>Part number</u> | <u>Color</u> | <u>Description</u> |
|--------------------|----------------|--|
| FND320C | S/H AlGaAs Red | 1 Digit, Common Anode, Rt. Hand Decimal |
| FND327C | S/H AlGaAs Red | 1 Digit, Common Cathode, Rt Hand Decimal. |
| FND328C | S/H AlGaAs Red | Overflow, Common Cathode, Rt Hand Decimal. |

(For other color options, contact your local area Sales Office)

ABSOLUTE MAXIMUM RATING ($T_A=25^\circ\text{C}$ unless otherwise specified)

AlGaAs Red
FND32XC

| Part number | | Units |
|---|------|---|
| Continuous forward current (I_f) | | |
| Per Segment..... | 30 | mA |
| Peak forward current per die (I_f)..... | 200 | mA |
| (at $f = 10.0$ KHz, Duty factor = 1/10) | | |
| Power dissipation (P_D)..... | 100* | mW |
| *Derate Linearly from 25°C | 0.50 | mW/ $^\circ\text{C}$ |
| Reverse voltage per dice..... | | 5V |
| Operating and Storage temperature range..... | | - 20°C to $+80^\circ\text{C}$ |
| Lead soldering time (at 1/16 inch from the bottom of lamp)..... | | 5 seconds @ 230°C |

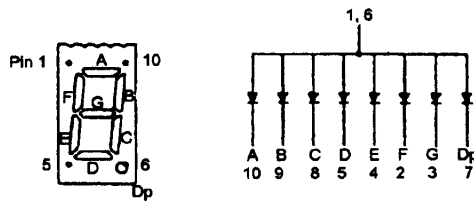
ELECTRO - OPTICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

AlGaAs Red
FND
32XC

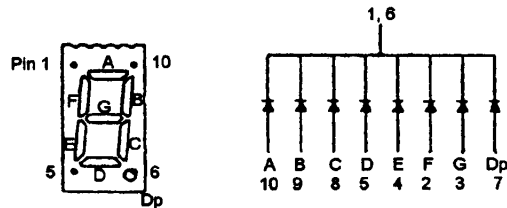
| Part number | | Test Condition |
|-------------------------------------|------|----------------|
| Luminous intensity (ucd) | | |
| minimum | 1500 | $I_f = 20$ mA |
| typical | 3000 | $I_f = 20$ mA |
| Forward voltage (V_f) | | |
| typical | 1.8 | $I_f = 20$ mA |
| maximum | 2.5 | $I_f = 20$ mA |
| Peak wavelength (nm) | 660 | $I_f = 20$ mA |
| Spectral line half width (nm) | 30 | $I_f = 20$ mA |
| Reverse breakdown voltage (V_R) | 5 | $I_r = 100$ uA |

PINOUT

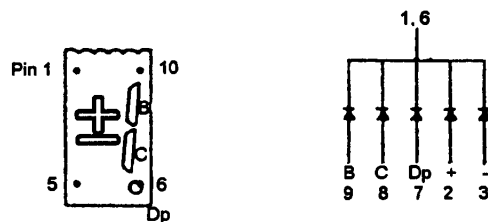
FND320C - Common Anode



FND327C - Common Cathode



FND328C - Overflow, Common Cathode



GRAPHICAL DETAIL: AlGaAs Red ($T_A = 25^\circ\text{C}$ unless otherwise specified)

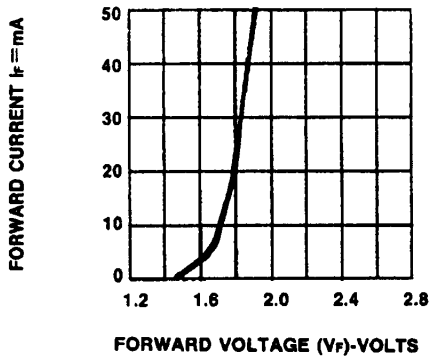


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

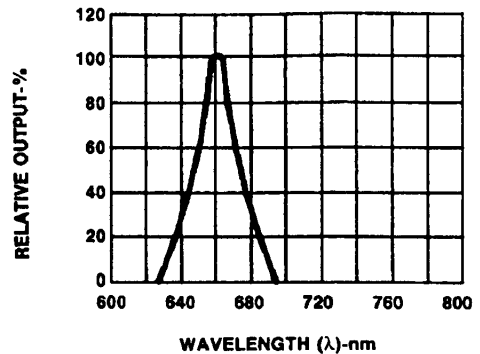


Fig.2 SPECTRAL RESPONSE

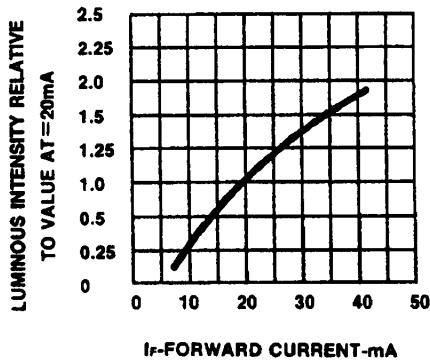


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

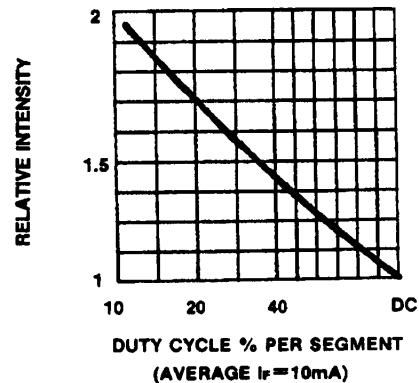


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

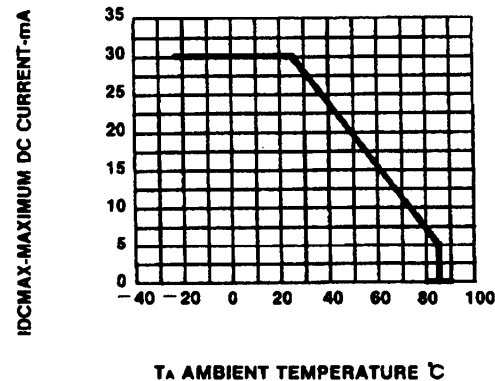


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE.

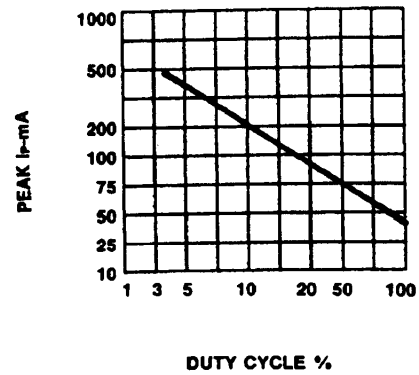


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE $f = 1 \text{ KHz}$)

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
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.