Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

Fairchild Semiconductor
MAN412C

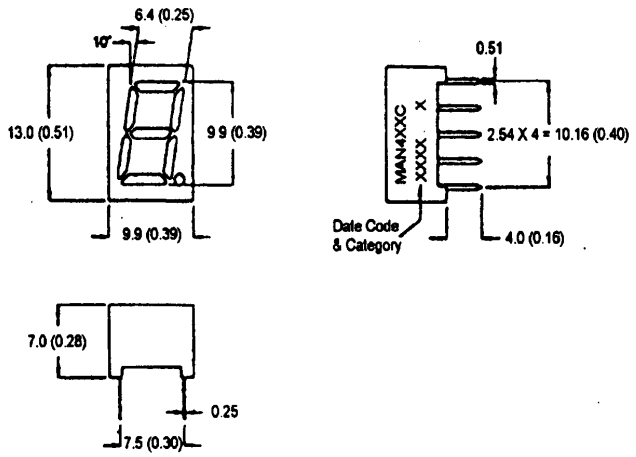
For any questions, you can email us directly:
sales@integrated-circuit.com

FAIRCHILD
SEMICONDUCTOR™

0.39 INCH (9.9MM) SINGLE DIGIT STICK DISPLAY

BRIGHT RED MAN412C, MAN413C
GREEN MAN442C, MAN443C
HIGH EFF. RED MAN492C, MAN493C

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

Part number	Color	Description
MAN412C	Bright Red	1 Digit, Common Anode, Rt. Hand Decimal
MAN413C	Bright Red	1 Digit, Common Cathode, Rt Hand Decimal.
MAN442C	Green	1 Digit, Common Anode, Rt Hand Decimal.
MAN443C	Green	1 Digit, Common Cathode, Rt Hand Decimal.
MAN492C	High Eff. Red	1 Digit, Common Anode, Rt Hand Decimal.
MAN493C	High Eff. Red	1 Digit, Common Cathode, Rt Hand Decimal.

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

FAIRCHILD SEMICONDUCTOR™

0.39 INCH (9.9MM) SINGLE DIGIT STICK DISPLAY

ABSOLUTE MAXIMUM RATING (T_A=25°C unless otherwise specified)

Part number	B.Red MAN 412C 413C	Green MAN 442C 443C	High Eff. Red MAN 492C 493C	Units
Continuous forward current (I_f)				
Per Segment.....	15	25	25	mA
Peak forward current per die (I_f)..... (at f = 10.0 KHz, Duty factor = 1/10)	60	90	90	mA
Power dissipation (P_D).....	40*	70*	70*	mW
*Derate Linearly from 25°C.....	0.17	0.33	0.33	mW/°C

Reverse voltage per dice.....5V
Operating and Storage temperature range.....- 40°C to +85°C
Lead soldering time (at 1/16 inch from the bottom of lamp).....5 seconds @ 230°C

ELECTRO - OPTICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

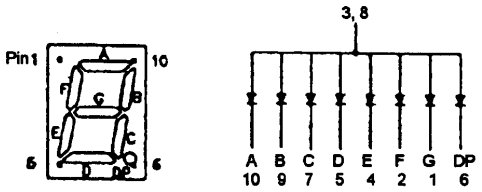
Part number	B. Red MAN 412C 413C	Green MAN 442C 443C	High Eff. Red MAN 492C 493C	Test Condition
Luminous intensity (ucd)				
minimum	300	800	900	I_f = 20 mA
typical	700	2000	2200	I_f = 20 mA
Forward voltage (V_f)				
typical	2.1	2.1	2.0	I_f = 20 mA
maximum	2.6	2.8	2.8	I_f = 20 mA
Peak wavelength (nm)	697	570	635	I_f = 20 mA
Spectral line half width (nm)	90	30	45	I_f = 20 mA
Reverse breakdown voltage (V_R)	5	5	5	I_R =100 uA

FAIRCHILD
SEMICONDUCTOR™

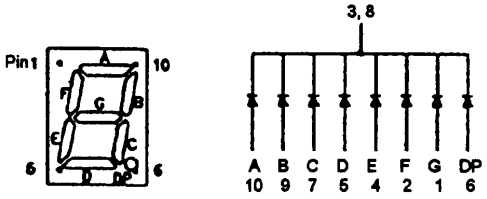
0.39 INCH (9.9MM) SINGLE DIGIT STICK DISPLAY

PINOUT

MAN4X2C - Common Anode



MAN4X3C - Common Cathode



FAIRCHILD SEMICONDUCTOR™

0.39 INCH (9.9MM) SINGLE DIGIT STICK DISPLAY

GRAPHICAL DETAIL: Bright Red (T_A = 25°C unless otherwise specified)

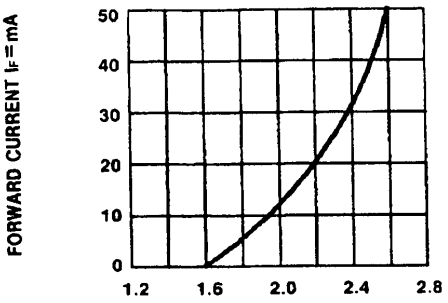


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

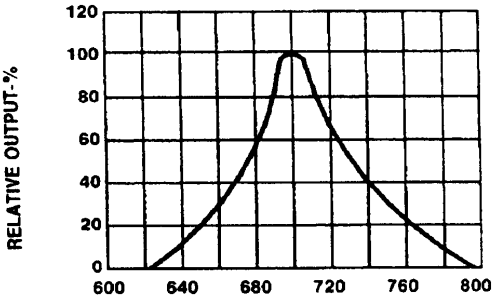


Fig.2 SPECTRAL RESPONSE

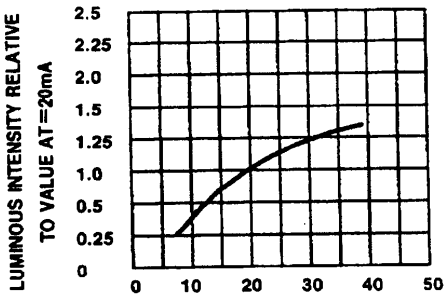


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

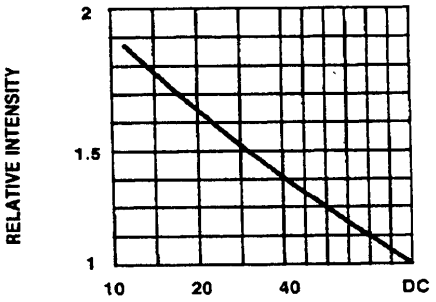


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

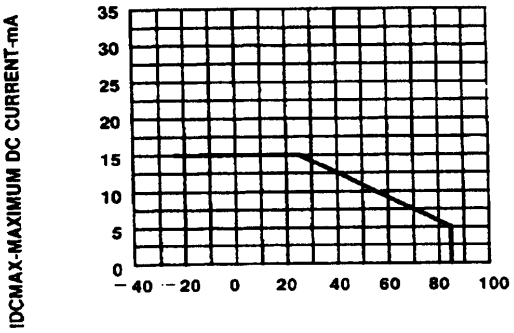


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE.

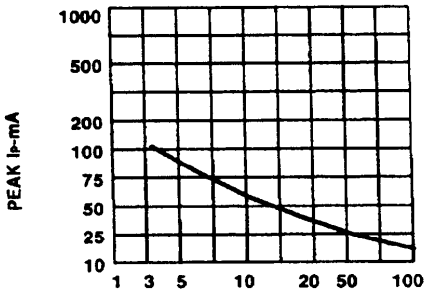
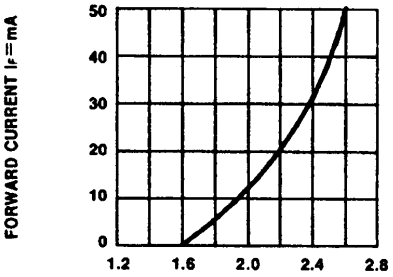


Fig. 6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE f=1 KHz)

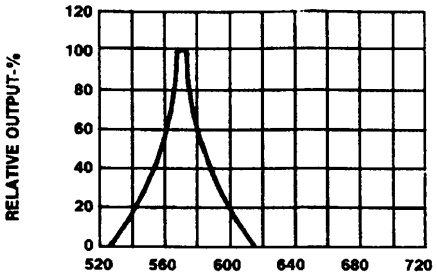
FAIRCHILD SEMICONDUCTOR™

0.39 INCH (9.9MM) SINGLE DIGIT STICK DISPLAY

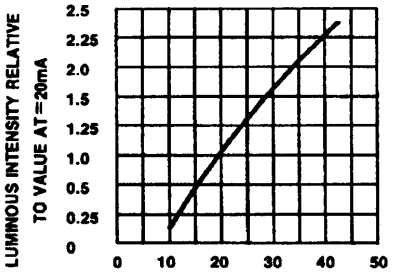
GRAPHICAL DETAIL: Green (T_A = 25°C unless otherwise specified)



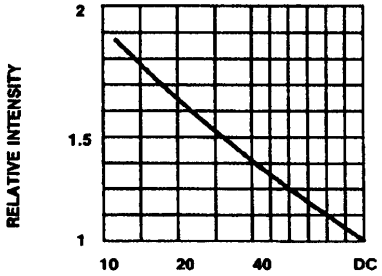
FORWARD VOLTAGE (V_F)-VOLTS
Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.



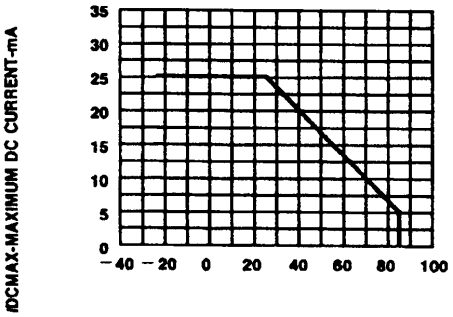
WAVELENGTH (λ)-nm
Fig.2 SPECTRAL RESPONSE



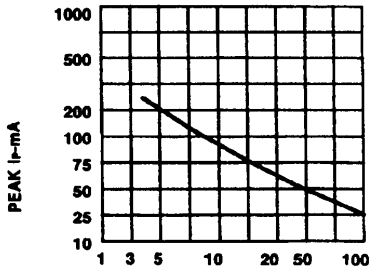
I_F-FORWARD CURRENT-mA
Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



DUTY CYCLE % PER SEGMENT (AVERAGE I_F=10mA)
Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE



T_A AMBIENT TEMPERATURE °C
Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT CS. A FUNCTION OF AMBIENT TEMPERATURE.

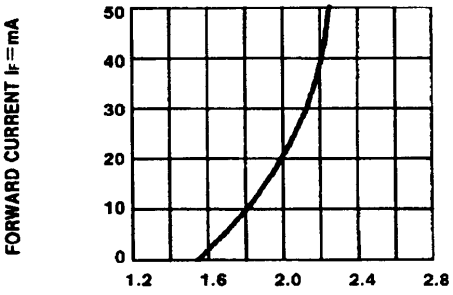


DUTY CYCLE %
Fig. 6 MAX PEAK CURRENT VS. DUTY CYCLE %
(REFRESH RATE f=1 KHz)

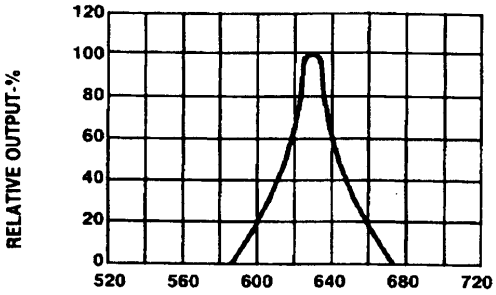
FAIRCHILD SEMICONDUCTOR™

0.39 INCH (9.9MM) SINGLE DIGIT STICK DISPLAY

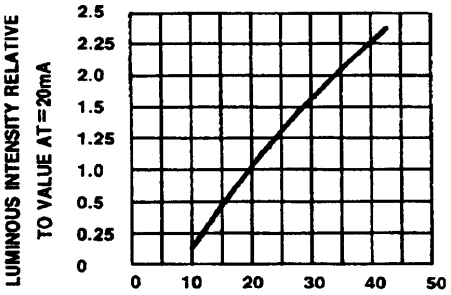
GRAPHICAL DETAIL: High Efficiency Red (T_A = 25°C unless otherwise specified)



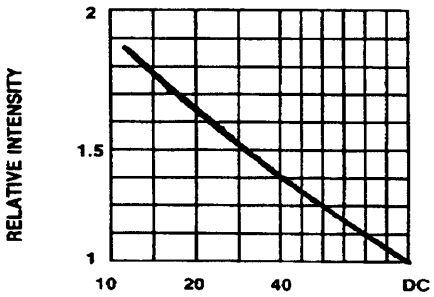
FORWARD VOLTAGE (V_F)-VOLTS
Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.



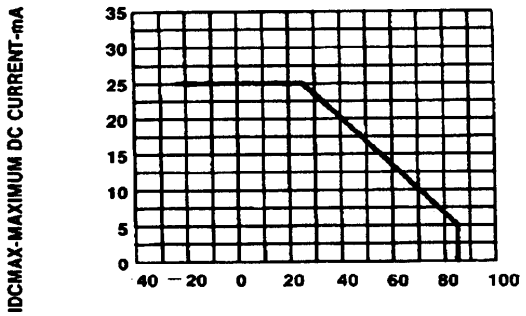
WAVELENGTH (λ)-nm
Fig.2 SPECTRAL RESPONSE



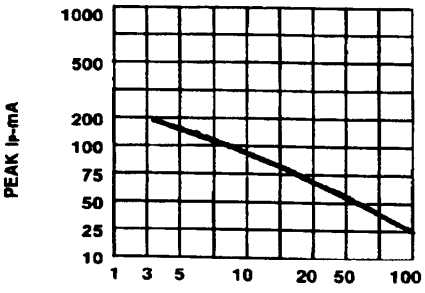
I_F-FORWARD CURRENT-mA
Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



DUTY CYCLE % PER SEGMENT
(AVERAGE I_F=10mA)
Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE



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



DUTY CYCLE %
Fig. 6 MAX PEAK CURRENT VS. DUTY CYCLE %
(REFRESH RATE f=1 KHz)

FAIRCHILD SEMICONDUCTOR™

0.39 INCH (9.9MM) SINGLE DIGIT STICK DISPLAY

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.