

Excellent Integrated System Limited

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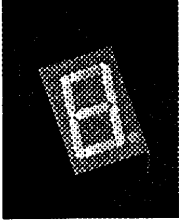
[Fairchild Semiconductor](#)
[MAN6160E](#)

For any questions, you can email us directly:

sales@integrated-circuit.com

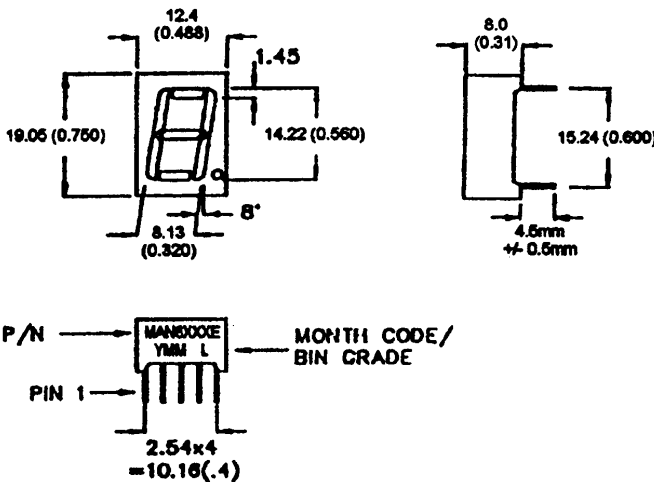
FAIRCHILD
SEMICONDUCTOR™

**0.56 INCH (14.2 MM)
SINGLE DIGIT STICK DISPLAY**



**BRIGHT RED MAN6160E, MAN6180E
 GREEN MAN6460E, MAN6480E
 HIGH EFF. RED MAN6960E, MAN6980E**

PACKAGE DIMENSIONS



FEATURES

- Easy to read digit
- Common anode or cathode
- Low power consumption
- Highly visible bold segments
- High brightness with high contrast
- White segments on a grey face for MAN64X0E and MAN61X0E.
- Red segments and red face for MAN69X0E
- Directly compatible with integrated circuits
- Rugged plastic/epoxy construction

APPLICATIONS

- Digital readout displays
- Instrument panels

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

MODEL NUMBERS

<u>Part number</u>	<u>Color</u>	<u>Description</u>
MAN6160E	Bright Red	Common Anode; right hand decimal
MAN6180E	Bright Red	Common Cathode; right hand decimal
MAN6460E	Green	Common Anode; right hand decimal
MAN6480E	Green	Common Cathode; right hand decimal
MAN6960E	High efficiency red	Common Anode; right hand decimal
MAN6980E	High efficiency red	Common Cathode; right hand decima

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

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

	B.Red MAN 6160E 6180E	Green MAN 6460E 6480E	High Eff. Red MAN 6960E 6980E	Unit
Part number				
Continuous forward current (I _f) Per Segment	15	30	30	mA
Peak forward current per die (I _p) (at f = 1.0 KHz, Duty factor = 1/10)	50	160	160	mA
Power dissipation (P _D)	45*	100*	100*	mW
*Derate linearly from 25°C	See graphical data attached			
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)

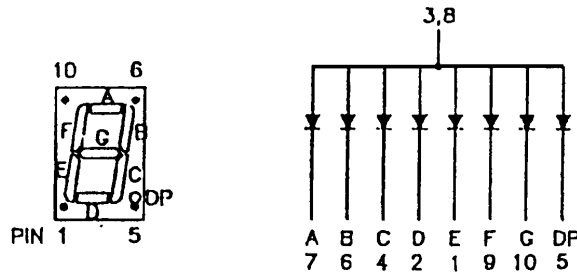
	Bright Red MAN 6160E 6180E	Green MAN 6460E 6480E	High Eff. Red MAN 6960E 6980E	Test Condition
<u>Part number</u>				
Luminous intensity (ucd)				I _f = 10 mA
minimum	300	800	900	
typical	700	2200	2200	
Forward voltage (V _f)				I _f = 20 mA
typical	2.1	2.1	2.0	
maximum	2.8	2.8	2.8	
Peak wavelength (nm)	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



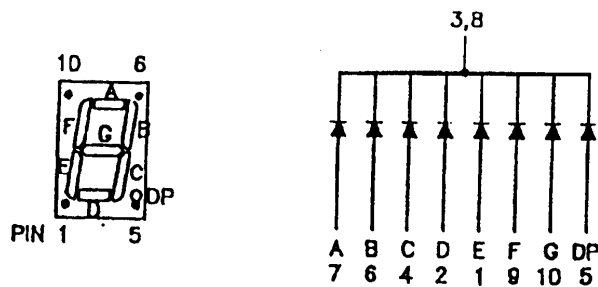
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PINOUT

MAN6X60E - Common Anode



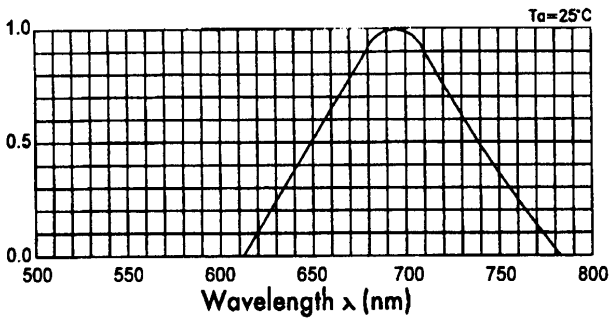
MAN6X80E - Common Cathode



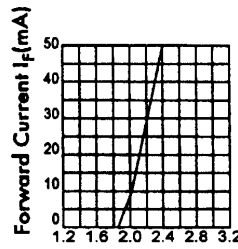
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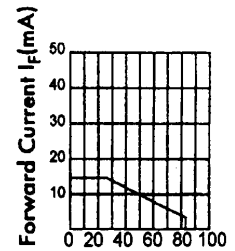
GRAPHICAL DETAIL: Bright Red ($T_A = 25^\circ\text{C}$ unless otherwise specified)



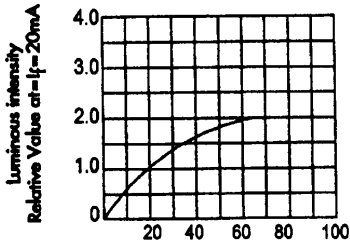
RELATIVE INTENSITY VS. WAVELENGTH



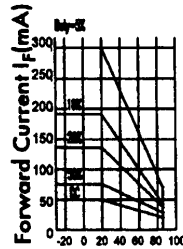
FORWARD VOLTAGE (V_f)-volts
FORWARD CURRENT VS.
FORWARD VOLTAGE



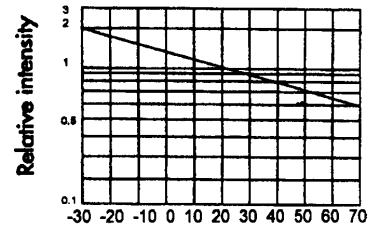
AMBIENT TEMPERATURE T_A ($^\circ\text{C}$)



I_f -Forward current-mA
RELATIVE LUMINOUS INTENSITY
VS. FORWARD CURRENT



AMBIENT TEMPERATURE ($^\circ\text{C}$)
VS. FORWARD CURRENT CAPACITY

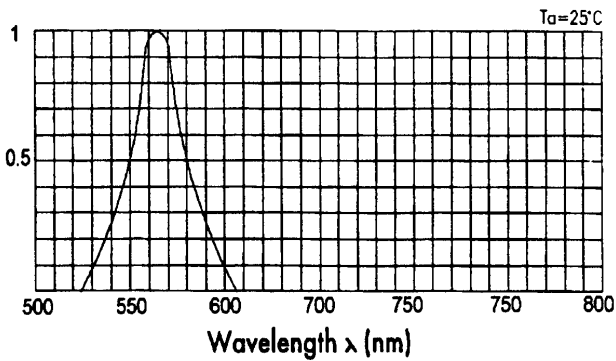


AMBIENT TEMPERATURE T_A ($^\circ\text{C}$)

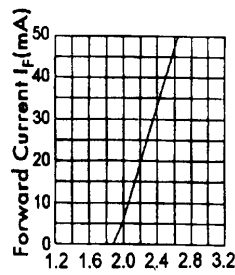
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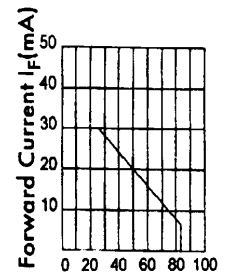
GRAPHICAL DETAIL: Green ($T_A = 25^\circ\text{C}$ unless otherwise specified)



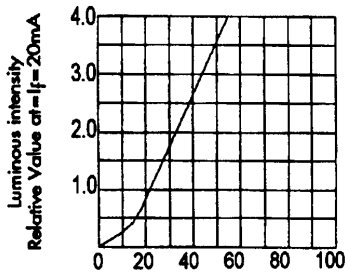
RELATIVE INTENSITY VS. WAVELENGTH



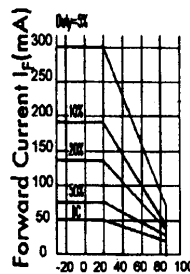
FORWARD VOLTAGE (V_f)-volts
FORWARD CURRENT VS.
FORWARD VOLTAGE



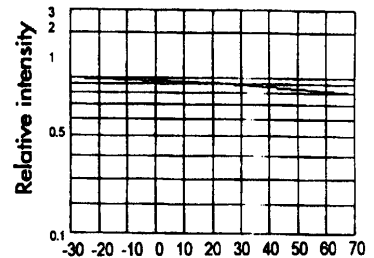
AMBIENT TEMPERATURE T_A ($^\circ\text{C}$)



I_f -Forward current-mA
RELATIVE LUMINOUS INTENSITY
VS. FORWARD CURRENT



AMBIENT TEMPERATURE ($^\circ\text{C}$)
VS. FORWARD CURRENT CAPACITY

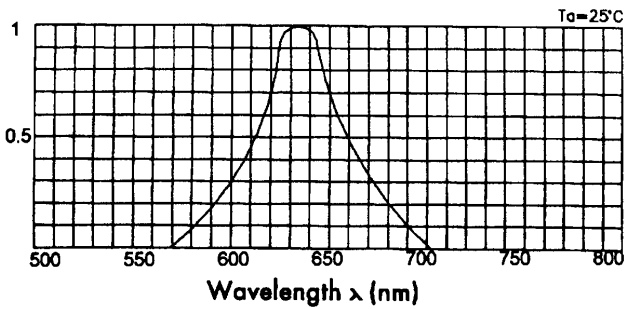


AMBIENT TEMPERATURE T_A ($^\circ\text{C}$)

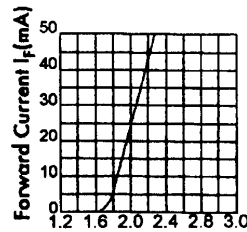
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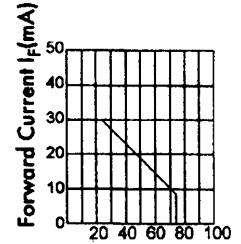
GRAPHICAL DETAIL: High Efficiency Red ($T_A = 25^\circ\text{C}$ unless otherwise specified)



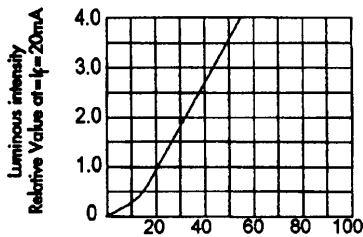
RELATIVE INTENSITY VS. WAVELENGTH



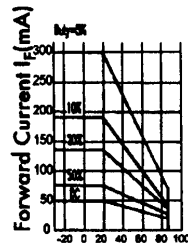
FORWARD VOLTAGE (V_f)-volts
FORWARD CURRENT VS.
FORWARD VOLTAGE



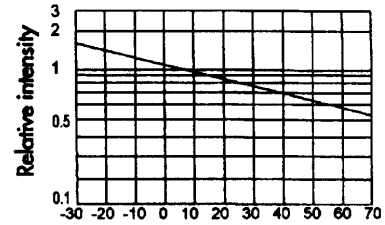
AMBIENT TEMPERATURE T_A ($^\circ\text{C}$)



I_f -Forward current-mA
RELATIVE LUMINOUS INTENSITY
VS. FORWARD CURRENT



AMBIENT TEMPERATURE ($^\circ\text{C}$)
VS. FORWARD CURRENT CAPACITY



AMBIENT TEMPERATURE T_A ($^\circ\text{C}$)



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