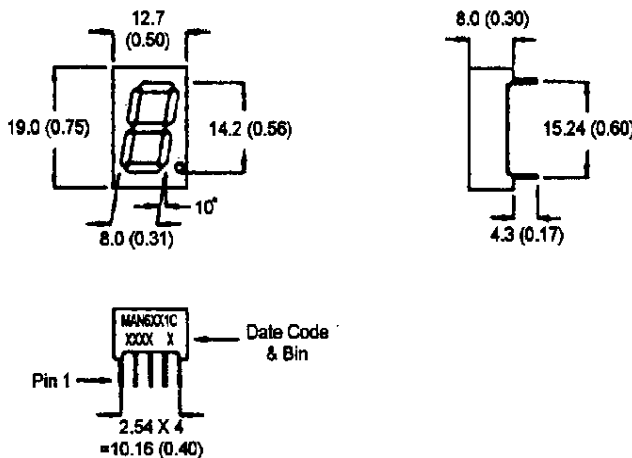




0.56 INCH (14.2 MM) SINGLE DIGIT STICK DISPLAY DIAMOND Font

BRIGHT RED MAN6161C, MAN6181C
GREEN MAN6461C, MAN6481C
HIGH EFF. RED MAN6961C, MAN6981C

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 digit
- Common anode or cathode
- Low power consumption
- Highly visible bold segments
- High brightness with high contrast
- White segments on a grey face for MAN64X1C and MAN61X1C.
- Red segments and red face for MAN69X1C
- 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>
MAN6161C	Bright Red	Common Anode; right hand decimal
MAN6181C	Bright Red	Common Cathode; right hand decimal
MAN6461C	Green	Common Anode; right hand decimal
MAN6481C	Green	Common Cathode; right hand decimal
MAN6961C	High efficiency red	Common Anode; right hand decimal
MAN6981C	High efficiency red	Common Cathode; right hand decimal

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



0.56 INCH (14.2 MM) SINGLE DIGIT STICK DISPLAY DIAMOND Font

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

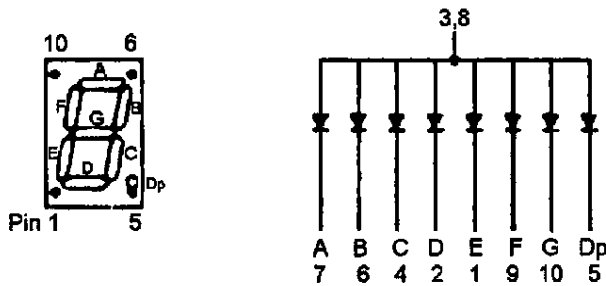
	B.Red MAN 6161C 6181C	Green MAN 6461C 6481C	High Eff. Red MAN 6961C 6981C	Unit
Part number				
Continuous forward current (I _f) Per Segment	15	30	30	mA
Peak forward current per die (I _p) (at f = 10.0 KHz, Duty factor = 1/10)	60	90	90	mA
Power dissipation (P _D)	40*	70*	70*	mW
*Derate Linearly from 25°C	0.17	0.33	0.33	mW/°C
Reverse voltage per dice.....				5V
Operating and Storage temperature range.....				- 25°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)

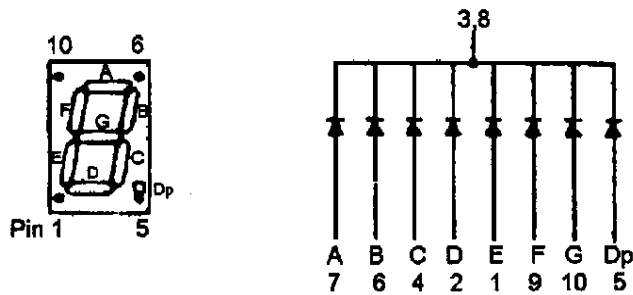
	Bright Red MAN 6161C 6181C	Green MAN 6461C 6481C	High Eff. Red MAN 6961C 6981C	Test Condition
Part number				
Luminous intensity (ucd)				
minimum	300	800	900	I _f = 20mA
typical	700	2200	2200	I _f = 20mA
Forward voltage (V _f)				
typical	2.1	2.1	2.0	I _f = 20mA
maximum	2.6	2.8	2.8	
Peak wavelength (nm)	697	570	635	I _f = 20mA
Spectral line half width (nm)	90	30	45	I _f = 20mA
Reverse breakdown voltage (V _R)	5	5	5	I _r = 100uA

PINOUT

MAN6X61C - Common Anode



MAN6X81C - Common Cathode





0.56 INCH (14.2 MM) SINGLE DIGIT STICK DISPLAY DIAMOND Font

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

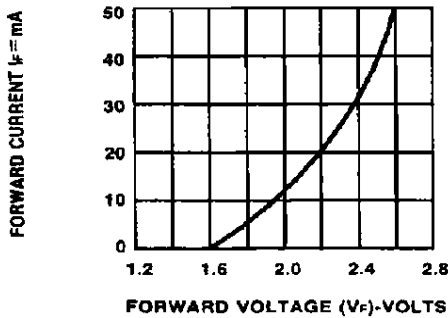


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

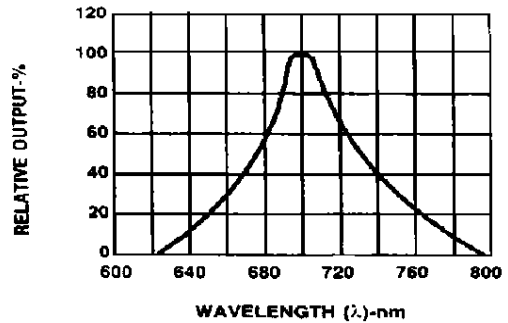


Fig.2 SPECTRAL RESPONSE

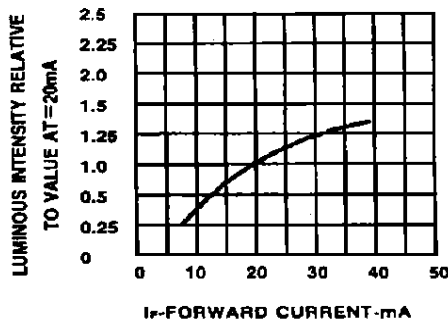


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

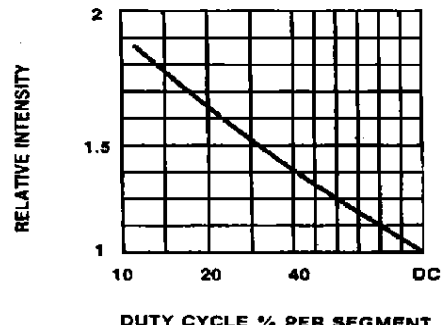


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

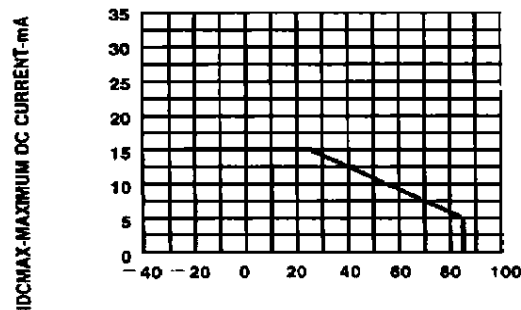


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE.

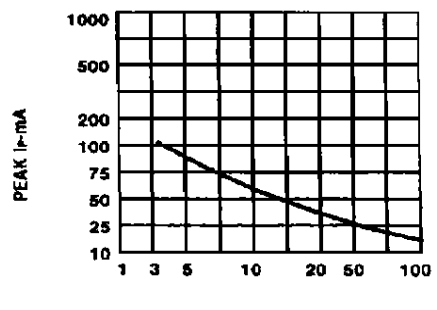
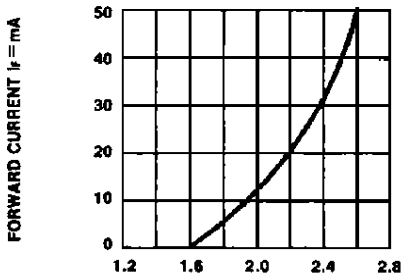


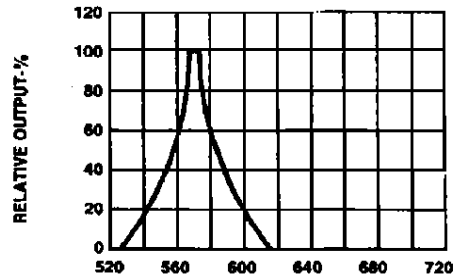
Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE $f = 1\text{ KHz}$)

0.56 INCH (14.2 MM) SINGLE DIGIT STICK DISPLAY DIAMOND Font

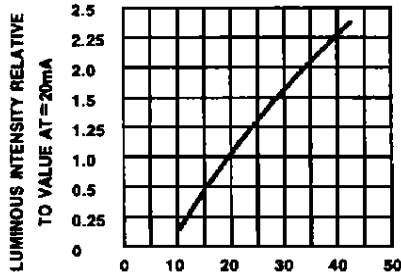
GRAPHICAL DATA - Green ($T_A = 25^\circ\text{C}$ unless otherwise specified)



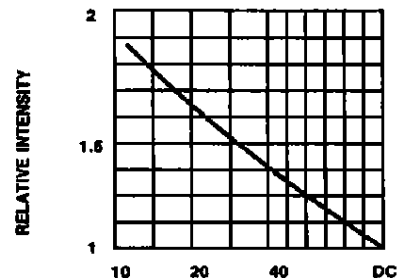
FORWARD VOLTAGE (V_f)-VOLTS
Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.



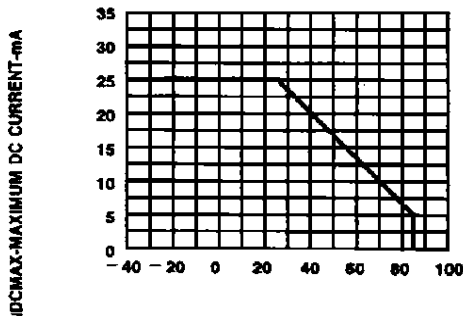
WAVELENGTH (λ)-nm
Fig.2 SPECTRAL RESPONSE



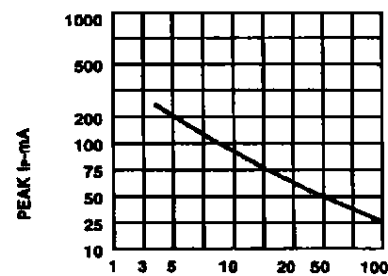
I_f -FORWARD CURRENT-mA
Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



DUTY CYCLE % PER SEGMENT
(AVERAGE $I_f = 10\text{mA}$)
Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE



T_A AMBIENT TEMPERATURE $^\circ\text{C}$
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 $f = 1\text{ KHz}$)



0.56 INCH (14.2 MM) SINGLE DIGIT STICK DISPLAY DIAMOND Font

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

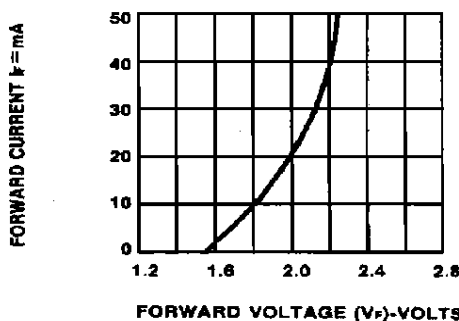


Fig.1 FORWARD CURRENT vs. FORWARD VOLTAGE.

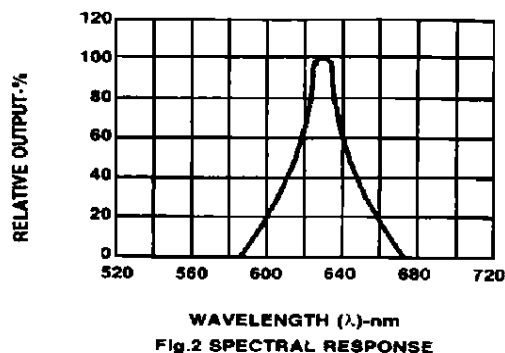


Fig.2 SPECTRAL RESPONSE

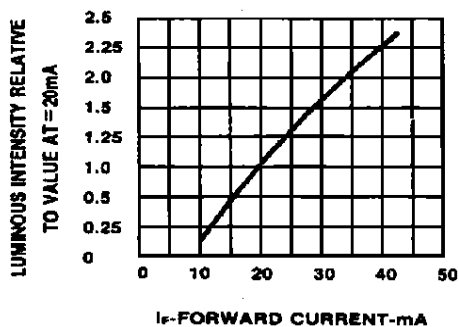


Fig.3 RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT

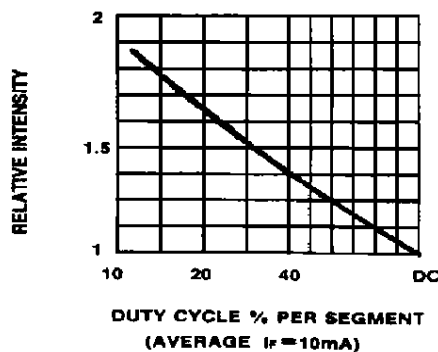


Fig.5 LUMINOUS INTENSITY vs. DUTY CYCLE

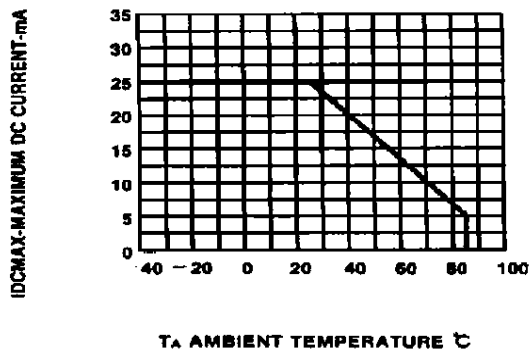


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT vs. A FUNCTION OF AMBIENT TEMPERATURE.

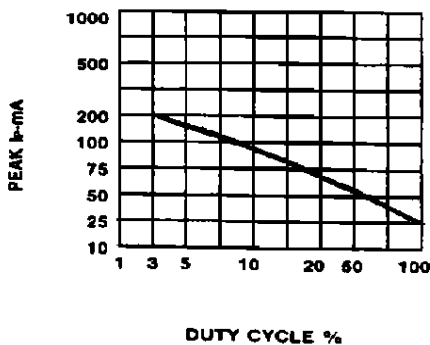


Fig.6 MAX PEAK CURRENT vs. DUTY CYCLE % (REFRESH RATE f = 1 KHz)