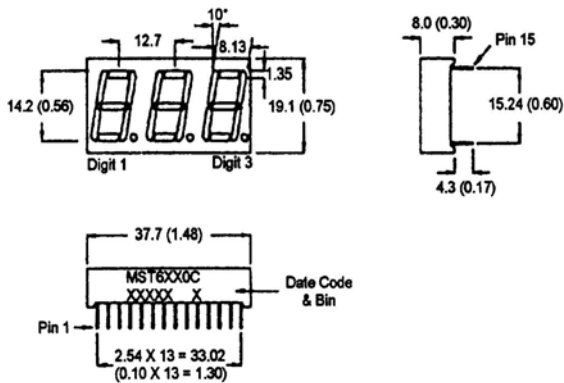




**0.56 INCH (14.2 MM)  
THREE DIGIT STICK DISPLAY**

**BRIGHT RED MST6110C, MST6140C  
GREEN MST6410C, MST6440C  
HIGH EFF. RED MST6910C, MST6940C**

**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 MST64X0C and MST61X0C.
- Red segments and red face for MST69X0C
- 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>
MST6110C	Bright Red	Common Anode; right hand decimal
MST6140C	Bright Red	Common Cathode; right hand decimal
MST6410C	Green	Common Anode; right hand decimal
MST6440C	Green	Common Cathode; right hand decimal
MST6910C	High Efficiency Red	Common Anode; right hand decimal
MST6940C	High Efficiency Red	Common Cathode; right hand decimal

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



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

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

	B.Red MST 6110C 6140C	Green MST 6410C 6440C	High Eff. Red MST 6910C 6940C	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 $25^{\circ}\text{C}$	0.17	0.33	0.33	mW/ $^{\circ}\text{C}$
Reverse voltage per dice.....				5V
Operating and Storage temperature range.....				$-25^{\circ}\text{C}$ to $+85^{\circ}\text{C}$
Lead soldering time (at 1/16 inch from the bottom of lamp).....				5 seconds @ $230^{\circ}\text{C}$

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

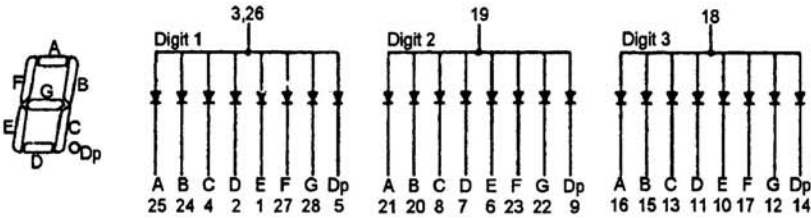
	Bright Red MST 6110C 6140C	Green MST 6410C 6440C	High Eff. Red MST 6910C 6940C	Test Condition
<u>Part number</u>				
Luminous intensity (ucd)				
minimum	300	800	900	$I_f = 20\text{mA}$
typical	700	2200	2200	$I_f = 20\text{mA}$
Forward voltage ( $V_f$ )				
typical	2.1	2.1	2.0	$I_f = 20\text{mA}$
maximum	2.6	2.8	2.8	
Peak wavelength (nm)	697	570	635	$I_f = 20\text{mA}$
Spectral line half width (nm)	90	30	45	$I_f = 20\text{mA}$
Reverse breakdown voltage ( $V_R$ )	5	5	5	$I_r = 100\mu\text{A}$



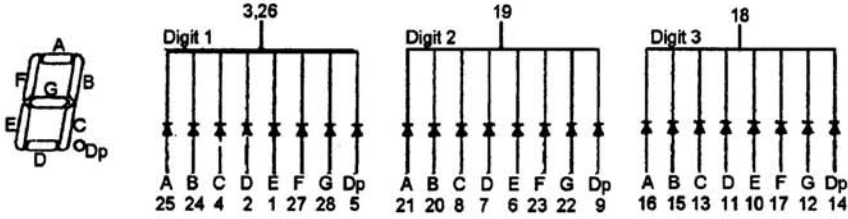
**0.56 INCH (14.2 MM)  
THREE DIGIT STICK DISPLAY**

**PINOUT**

**MST6X10C - Common Anode**



**MST6X40C - Common Cathode**





# 0.56 INCH (14.2 MM) THREE DIGIT STICK DISPLAY

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

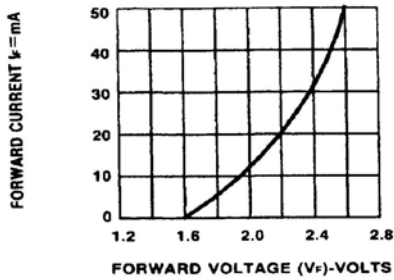


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

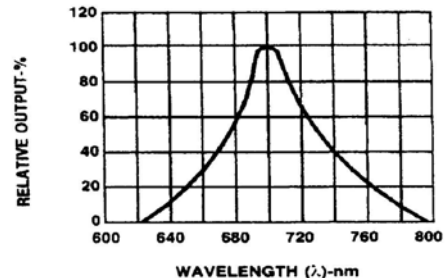


Fig.2 SPECTRAL RESPONSE

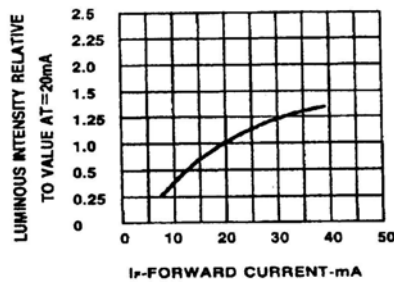


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

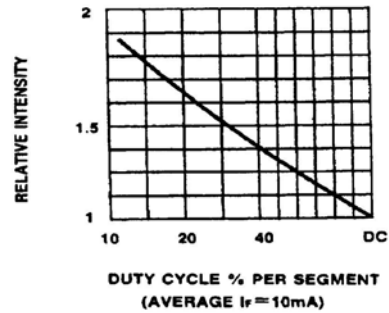


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

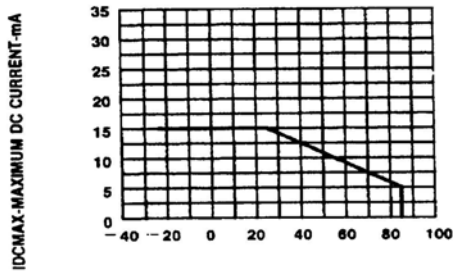


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE.

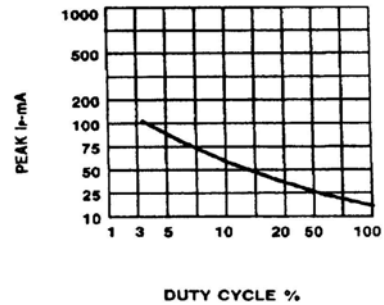


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE  $f = 1 \text{ KHz}$ )



# 0.56 INCH (14.2 MM) THREE DIGIT STICK DISPLAY

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

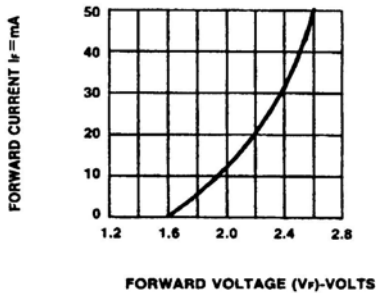


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

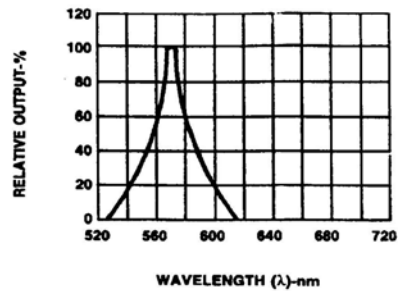


Fig.2 SPECTRAL RESPONSE

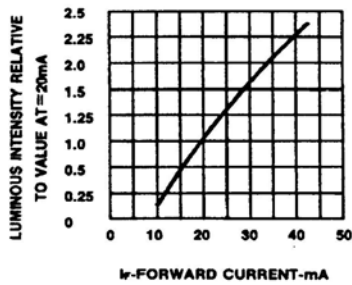


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

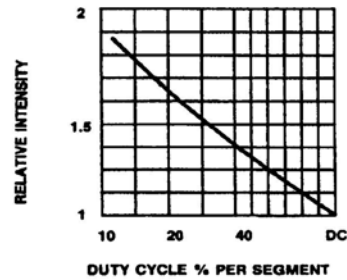


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

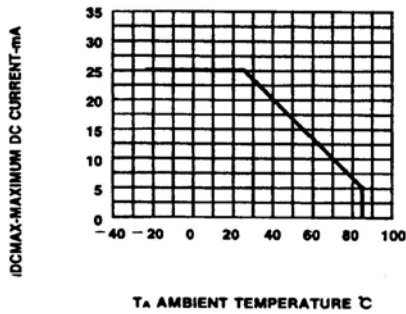


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT CS. A FUNCTION OF AMBIENT TEMPERATURE.

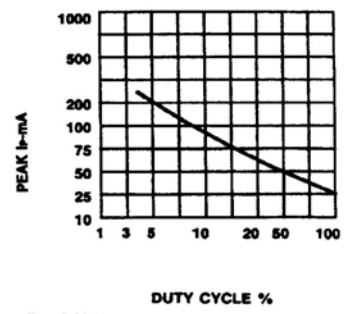


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE  $f = 1$  KHz)



# 0.56 INCH (14.2 MM) THREE DIGIT STICK DISPLAY

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

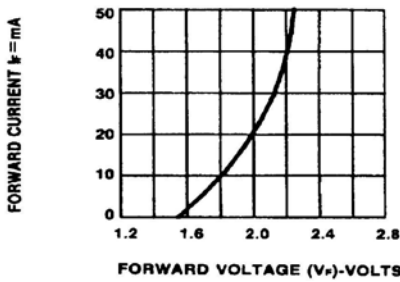


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

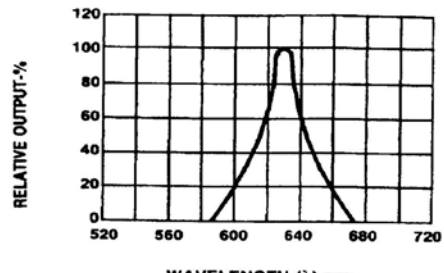


Fig.2 SPECTRAL RESPONSE

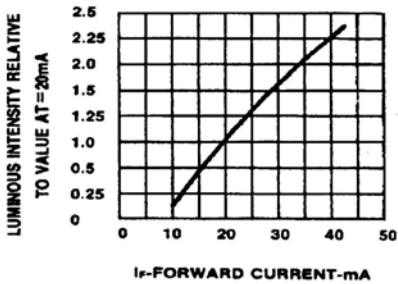


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

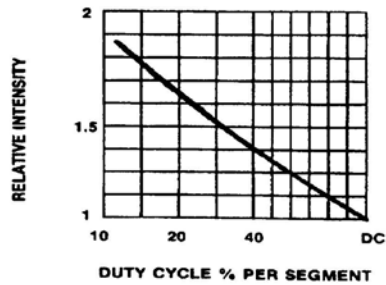


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

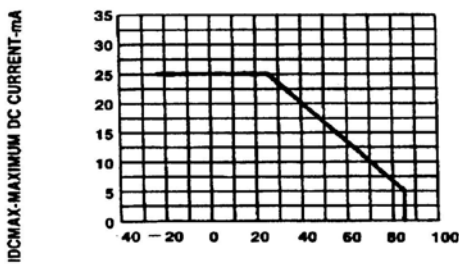


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE.

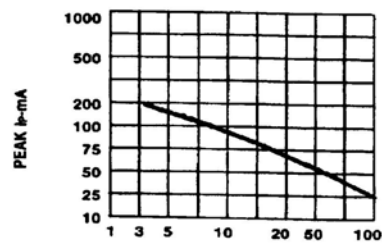


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE  $f = 1\text{ KHz}$ )



## 0.56 INCH (14.2 MM) THREE DIGIT STICK DISPLAY

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