



The MAN4900A Series provides superior brightness High Efficiency Red LED display. Standard units are also available in Red, Green, and Orange. They can be mounted in arrays with 0.400-inch (10.16 mm) center-tocenter spacing. Units are constructed with Red face and segment color.

HIGH EFFICIENCY RED MAN4900A SERIES

FEATURES

- Common anode or common cathode models
- High Efficiency Red
- Fast switching—excellent for multiplexing
- Low power consumption
- Bold solid segments that are highly legible
- Solid state reliability—long operation life
- Impact resistant plastic construction
- Directly compatible with integrated circuits
- High brightness with high contrast
- Categorized for Luminous Intensity (See Note 6)
- Standard dual-in-line package configuration
- Wide angle viewing . . . 150°
- Package size and lead configuration is the same as MAN3600A/70A Series
- These devices have a Red face and Red segments

APPLICATIONS

For industrial and consumer applications such as:

- Digital readout displays
- Instrument panels
- Point of sale equipment
- Calculators
- Digital clocks
- High ambient light conditions

MODEL	NUMBERS			
PART NUMBER	COLOR	DESCRIPTION	PACKAGE DRAWING	PIN OUT SPECIFICATION
MAN4910A	High Efficiency Red	Common Anode; Right Hand Decimal	A	Α
MAN4940A	High Efficiency Red	Common Cathode; Right Hand Decimal	А	В

RECOMMENDED OPTICAL FILTERS

For optimum ON and OFF contrast, one of the following filters or equivalents should be used over the display:

DEVICE TYPE	<u> </u>
MAN4910A	Panelgrap
MAN4940A	Homalite 1

FILTER Igraphic Scarlet 65 alite 100-1670



SEMICONDUCTOR

	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
MAN4910A/4940A Luminous Intensity, digit average (See Note 1 and 3)	450	1900		μcd	I _F =10 mA
Peak emission wavelength	ak	635		nm	
Forward voltage Segment Decimal point		2.2 2.2	2.5 2.5	V V	I₅=20 mA I₅=20 mA
Dynamic resistance Segment Decimal point		26 26		$\Omega \Omega$	l _F =20 mA I _F =20 mA
Capacitance Segment Decimal point		35 35	a.	pF pF	V=0 V=0
Reverse current Segment Decimal point			100 100	μA μA	V _n =5.0 V V _n =5.0 V

ABSOLUTE MAXIMUM RATINGS	
Power dissipation at 25°C ambient	
Derate linearly from 50°C	
Storage and operating temperature	-40°C to +85°C
Continuous forward current	
Total	
Per segment Decimal point	
Decimal point	30 mA
Reverse voltage	
Per segment	60V
Decimal point	6.0 V
Soldering time at 260°C (See Notes 4 and 5)	

TYPICAL THERMAL CHARACTERISTICS	
Thermal resistance junction to free air Φ_{μ} Wavelength temperature coefficient (case temperature)	160°C/W
Forward voltage temperature coefficient	-2.0 mV/°C

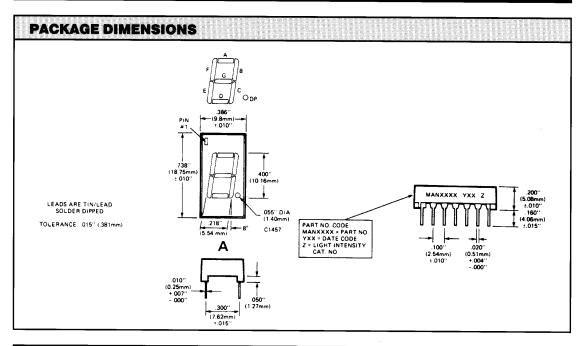
NOTES

- 1. The digit average Luminous Intensity is obtained by summing the Luminous Intensity of each segment and dividing by the total number of segments. Intensity will not vary more than ±33.3% between all segments within a digit.
- 2. The curve in Figure 3 is normalized to the brightness at 25°C to indicate the relative Luminous Intensity over the operating temperature range.

3. The decimal point is designed to have the same surface brightness as the segments, therefore, the Luminous Intensity of the decimal point is .3 times the Luminous Intensity of the segments, since the area of the decimal point is .3 times the area of the average segment.

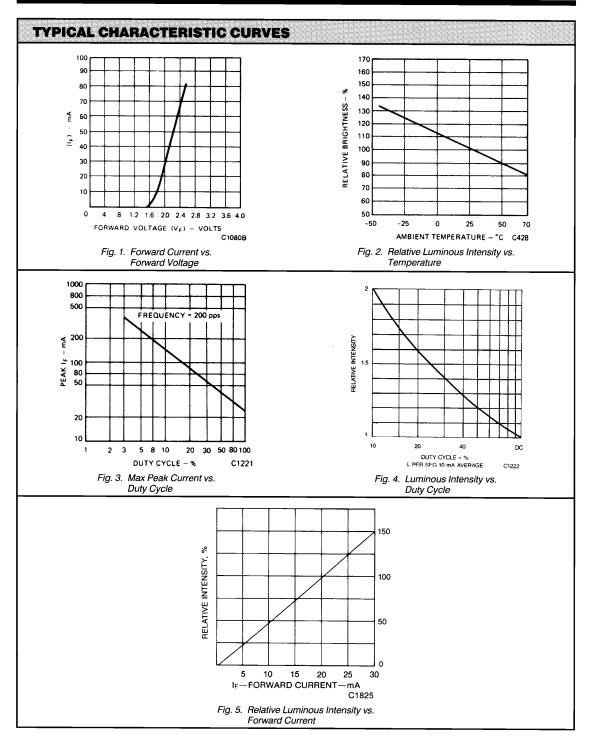
- 4. Leads of the device immersed to 1/16 inch from the body. Maximum device surface temperature is 140°C.
- For flux removal, Freon TF, Freon TE, Isoproponal or water may be used up to their boiling points.
 All displays are categorized for Luminous Intensity. The Intensity category is marked on each part as a suffix letter to the part number.





	ELECTRI	CAL CONNECTIONS
PIN NO.	A MAN4910A	B MAN4940A
1	Cathode A	Anode F
2	Cathode F	Anode G
3	Common Anode	No Pin
4	No Pin	Common Cathode
5	No Pin	No Pin
6	No Connection	Anode E
7	Cathode E	Anode D
8	Cathode D	Anode C
9	Cathode D.P.	Anode D.P.
10	Cathode C	No Pin
11	Cathode G	No Connection
12	No Pin	Common Cathode
13	Cathode B	Anode B
14	Common Anode	Anode A







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