

# Red GaAsP 0.3-Inch 7-Segment Digit

Optoelectronic Products

# MAN71A, MAN72A MAN73A, MAN74A

### General Description

The MAN71A, MAN72A, MAN73A and MAN74A are red GaAsP 7-segment LED displays with 0.3-inch character height. They can be mounted in arrays with 0.400-inch center-to-center spacing.

### Low Power Consumption

### Solid State Reliability—Long Operation Life

### Impact Resistant Plastic Case

### Standard 14-Pin DIP Configuration

### Wide Viewing Angle

### Intensity Coding for Uniform Display

**MAN71A**—Common Anode Digit, Right-Hand  
Decimal Point

**MAN72A**—Common Anode Digit, Left-Hand  
Decimal Point

**MAN73A**—Common Anode Overflow ± Digit,  
Left-Hand Decimal Point

**MAN74A**—Common Cathode Digit, Right-Hand  
Decimal Point

### Absolute Maximum Ratings

#### Maximum Temperature and Humidity

Storage Temperature	-40°C to +85°C
Operating Temperature	-40°C to +85°C
Pin Temperature (Soldering, 5 s)	260°C
Relative Humidity at 65°C	98%

#### Maximum Voltage and Currents

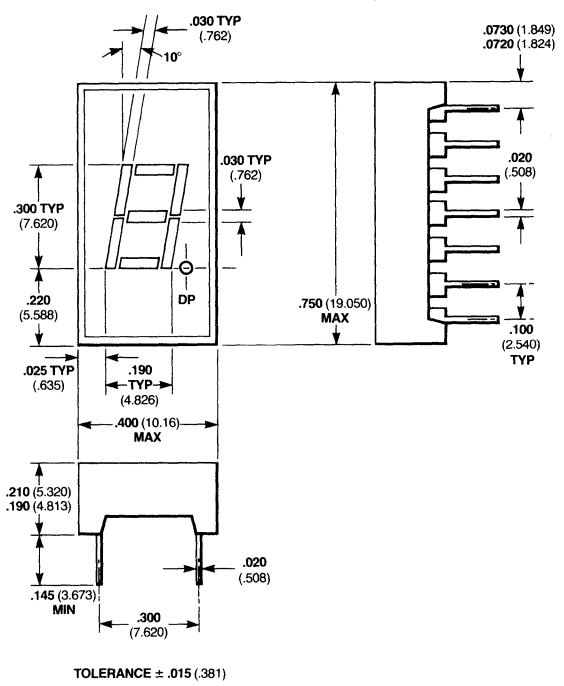
$V_R$	Reverse Voltage	5.0 V
$I_F$	Average Forward dc Current / Segment or Decimal Point	30 mA
	Derate from 25°C Ambient Temperature	0.5 mA / °C
$I_{pk}$	Peak Forward Current / Segment or Decimal Point (100 $\mu$ s pulse)	
	1000 pps, $T_A = 25^\circ\text{C}$	200 mA

### Electrical and Radiant Characteristics $T_A = 25^\circ\text{C}$

Symbol	Characteristic	Min	Typ	Max	Units	Test Conditions
$V_F$	Forward Voltage, Each Segment		1.7	2.0	V	$I_F = 20$ mA
$I_R$	Reverse Current, Each Segment			100	$\mu$ A	$V_R = 5.0$ V
$I_O$	Axial Luminous Intensity, Each Segment	125	250		$\mu$ cd	$I_F = 10$ mA
$\Delta I_O$	Intensity Matching, Segment-to-Segment		$\pm 33$		%	$I_F = 20$ mA
	Intensity Matching Within One Intensity Class		$\pm 20$		%	$I_F = 20$ mA, all segments at once
$\lambda_{pk}$	Peak Wavelength		660		nm	$I_F = 20$ mA

### Package Outline

#### MAN71A



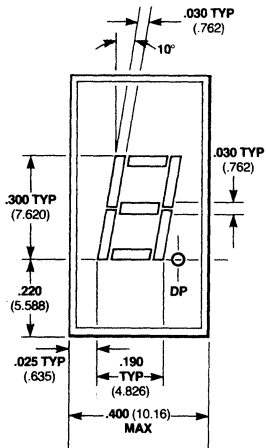
#### Notes

All dimensions in inches **bold** and millimeters (parentheses)  
Tolerance unless specified =  $\pm .015$  ( $\pm .381$ )  
Other packages following

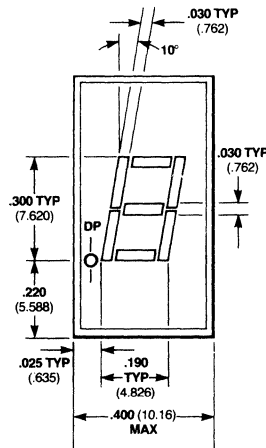
# Connection Diagrams

## MAN71A, MAN72A MAN73A, MAN74A

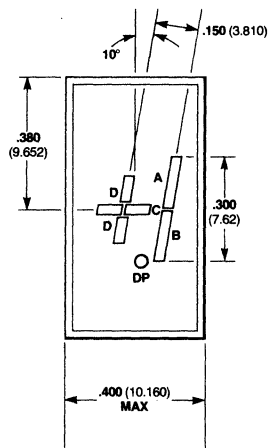
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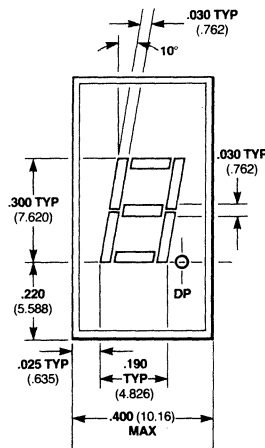
- Pin MAN71A**
- 1 Cathode A
  - 2 Cathode F
  - 3 Common Anode
  - 4 No Pin
  - 5 No Pin
  - 6 NC
  - 7 Cathode E
  - 8 Cathode D
  - 9 Cathode DP
  - 10 Cathode C
  - 11 Cathode G
  - 12 No Pin
  - 13 Cathode B
  - 14 Common Anode



- Pin MAN72A**
- 1 Cathode A
  - 2 Cathode F
  - 3 Common Anode
  - 4 No Pin
  - 5 No Pin
  - 6 Cathode DP
  - 7 Cathode E
  - 8 Cathode D
  - 9 NC
  - 10 Cathode C
  - 11 Cathode G
  - 12 No Pin
  - 13 Cathode B
  - 14 Common Anode



- Pin MAN73A**
- 1 Anode C, D
  - 2 No Pin
  - 3 Anode C, D
  - 4 No Pin
  - 5 No Pin
  - 6 No Pin
  - 7 Cathode D
  - 8 Cathode C
  - 9 NC
  - 10 Cathode B
  - 11 Cathode A
  - 12 No Pin
  - 13 No Pin
  - 14 Anode A, B

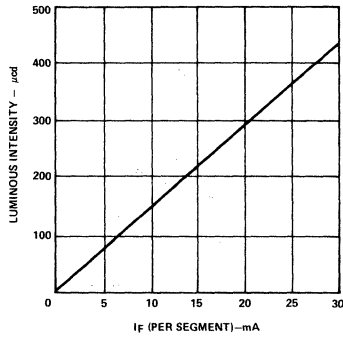


- Pin MAN74A**
- 1 Anode F
  - 2 Anode G
  - 3 No Pin
  - 4 Common Cathode
  - 5 No Pin
  - 6 Anode E
  - 7 Anode D
  - 8 Anode C
  - 9 Anode DP
  - 10 No Pin
  - 11 No Pin
  - 12 Common Cathode
  - 13 Anode B
  - 14 Anode A

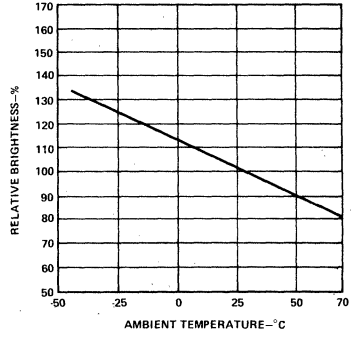
# Typical Electrical Characteristic Curves

# MAN71A, MAN72A MAN73A, MAN74A

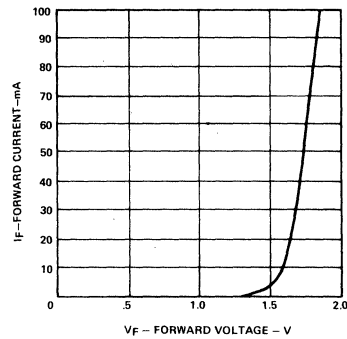
**Luminous Intensity vs Forward Current**



**Luminous Intensity vs Temperature**



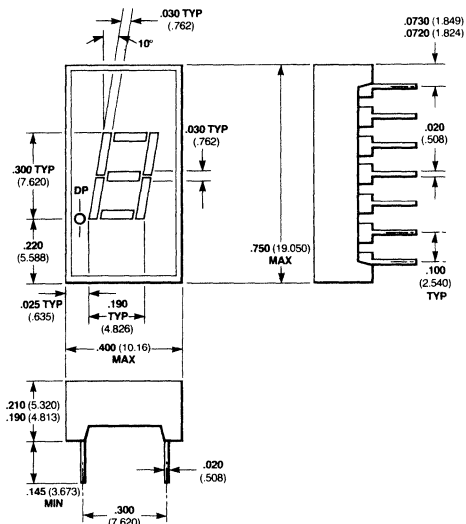
**Forward Current vs Forward Voltage**



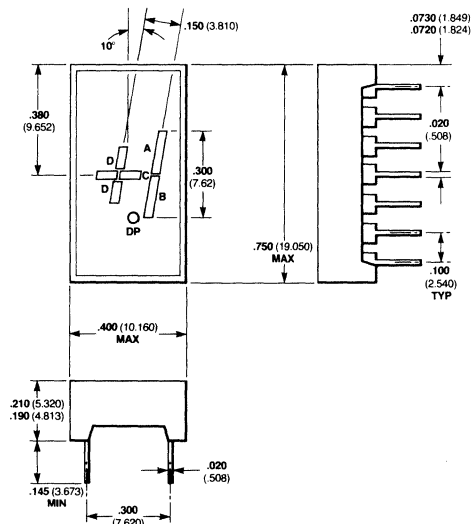
# Package Outlines

# MAN71A, MAN72A MAN73A, MAN74A

**MAN72A**

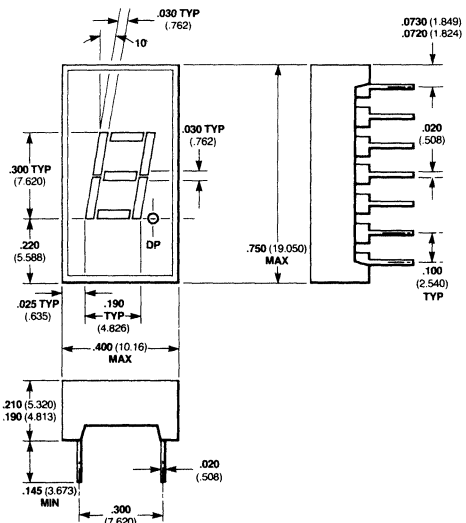


**MAN73A**



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**MAN74A**



**Notes**

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