

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 $+85^{\circ}\text{C}$

Operating Temperature -40°C to $+85^{\circ}\text{C}$

Pin Temperature (Soldering, 5 s) 260°C

Relative Humidity at 65°C 98%

Maximum Voltage and Currents

V_R Reverse Voltage 5.0 V

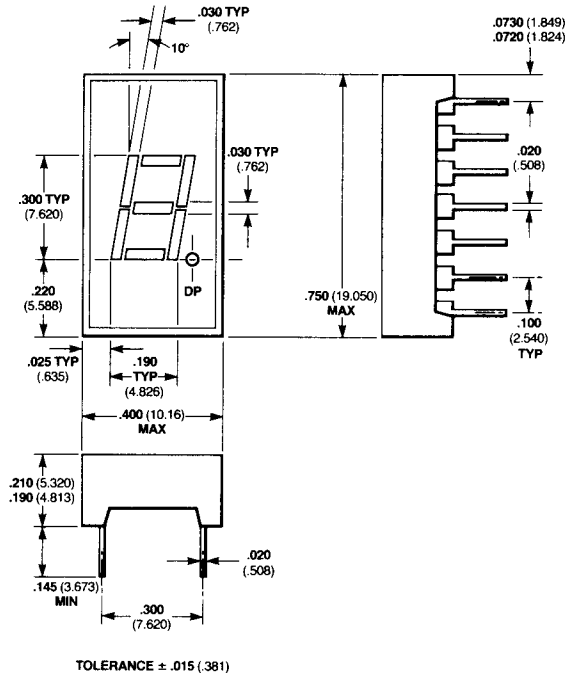
I_F Average Forward dc
Current/Segment or
Decimal Point 30 mA
Derate from 25°C

Ambient Temperature $0.5\text{ mA}/^{\circ}\text{C}$

I_{pk} Peak Forward Current/
Segment or Decimal Point
(100 μs pulse)

1000 pps, $T_A = 25^{\circ}\text{C}$ 200 mA

Package Outline MAN71A



Notes

All dimensions in inches **bold** and millimeters (parentheses)

Tolerance unless specified = ± 0.015 ($\pm .381$)

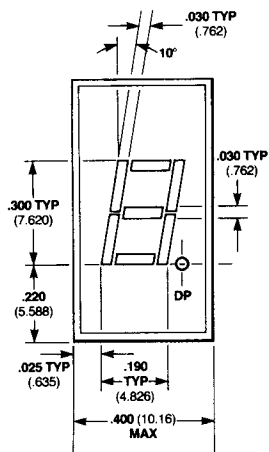
Other packages following

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

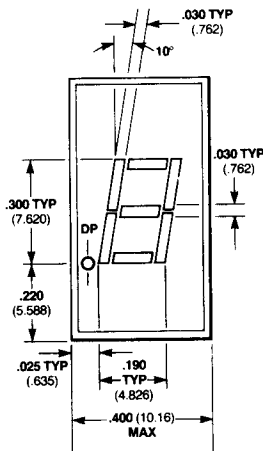
| Symbol | Characteristic | Min | Typ | Max | Units | Test Conditions |
|----------------|---|-----|----------|-----|----------------|---|
| V_F | Forward Voltage, Each Segment | | 1.7 | 2.0 | V | $I_F = 20\text{ mA}$ |
| I_R | Reverse Current, Each Segment | | | 100 | μA | $V_R = 5.0\text{ V}$ |
| I_O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

Connection Diagrams

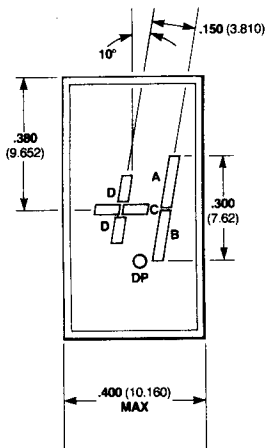
MAN71A, MAN72A MAN73A, MAN74A



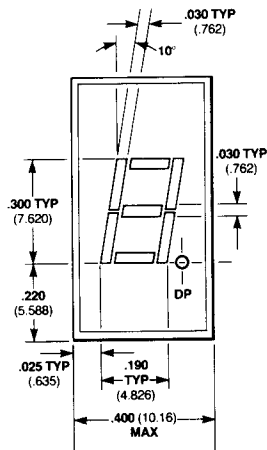
- Pin MAN71A**
- 1 Cathode A
 - 2 Cathode F
 - 3 Common Anode
 - 4 No Pin
 - 5 No Pin
 - 6 NC
 - 7 Cathode E
 - 8 Cathode D
 - 9 Cathode DP
 - 10 Cathode C
 - 11 Cathode G
 - 12 No Pin
 - 13 Cathode B
 - 14 Common Anode



- 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

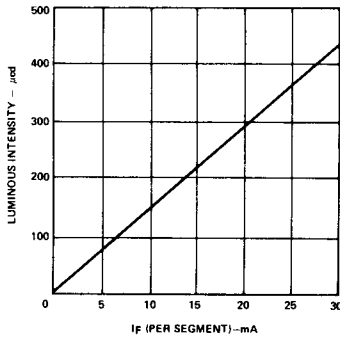


- Pin MAN74A**
- 1 Anode F
 - 2 Anode G
 - 3 No Pin
 - 4 Common Cathode
 - 5 No Pin
 - 6 Anode E
 - 7 Anode D
 - 8 Anode C
 - 9 Anode DP
 - 10 No Pin
 - 11 No Pin
 - 12 Common Cathode
 - 13 Anode B
 - 14 Anode A

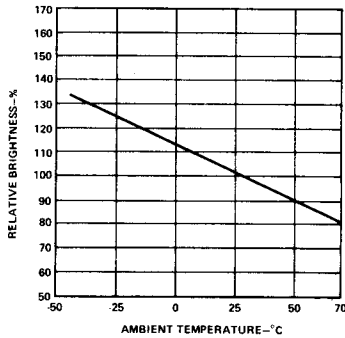
Typical Electrical Characteristic Curves

MAN71A, MAN72A MAN73A, MAN74A

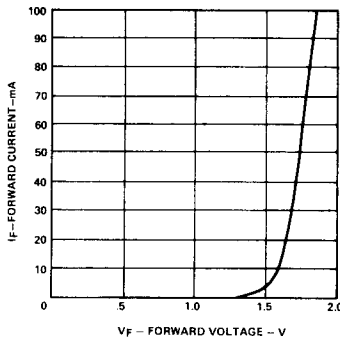
Luminous Intensity vs Forward Current



Luminous Intensity vs Temperature



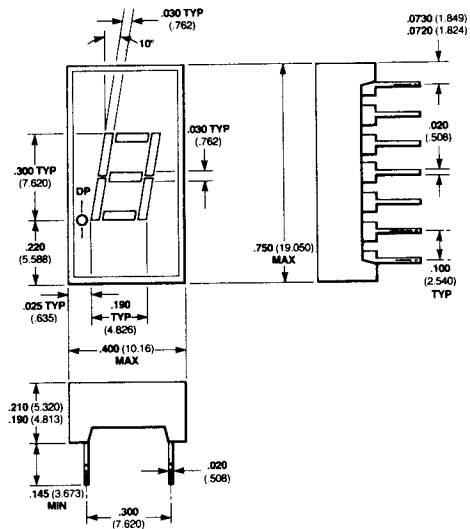
Forward Current vs Forward Voltage



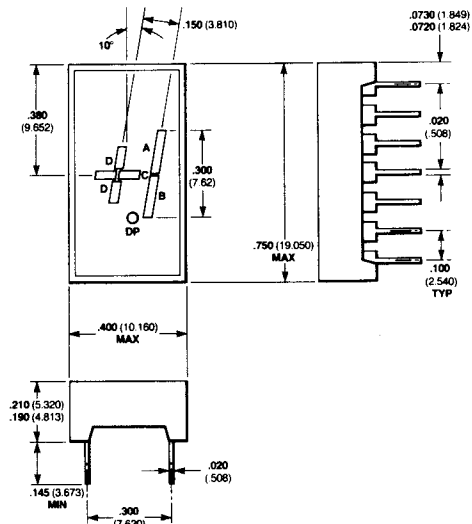
Package Outlines

MAN71A, MAN72A MAN73A, MAN74A

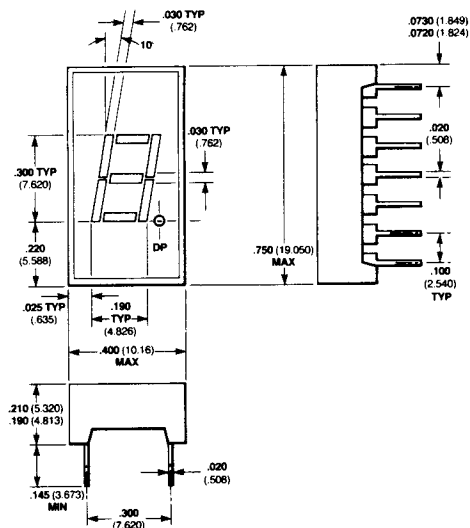
MAN72A



MAN73A



MAN74A



Notes

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