7-Segment Numeric Displays

Device No.	Character Height Inches	Polarity	Color	Description	Decimal Point	V_F I_F = 20 mA/Seg V	Luminous/Typ Intensity/Seg I_F = 20 mA µcd	Data Sheet Page No.
FND350	.362	CA	Red	7-Segment Display	RH	1.7	450	3-5
FND357	.362	CC	Red	7-Segment Display	RH	1.7	450	3-5
FND358	.362	CC	Red	Overflow ± 1 Digit	RH	1.7	450	3-9
FND360	.362	CA	Red	7-Segment Display	RH	1.7	900	3-5
FND367	.362	CC	Red	7-Segment Display	RH	1.7	900	3-5
FND368	.362	CC	Red	Overflow ± 1 Digit	RH	1.7	900	3-9
FND500	.500	CC	Red	7-Segment Display	RH	1.7	600	3-12
FND501	.500	CC	Red	Overflow ± 1 Digit	RH	1.7	600	3-15
FND507	.500	CA	Red	7-Segment Display	RH	1.7	600	3-12
FND508	.500	CA	Red	Overflow ± 1 Digit	RH	1.7	600	3-15
FND530	.500	CC	Grn	7-Segment Display	RH	2.2	2000	3-18
FND531	.500	CC	Grn	Overflow ± 1 Digit	RH	2.2	2000	3-21
FND537	.500	CA	Grn	7-Segment Display	RH	2.2	2000	3-18
FND538	.500	CA	Grn	Overflow ± 1 Digit	RH	2.2	2000	3-21
FND540	.500	CC	Yel	7-Segment Display	RH	2.2	1000	3-18
FND541	.500	CC	Yel	Overflow ± 1 Digit	RH	2.2	2000	3-21
FND547	.500	CA	Yel	7-Segment Display	RH	2.2	1000	3-18
FND548	.500	CA	Yel	Overflow ± 1 Digit	RH	2.2	2000	3-21
FND550	.500	CC	Amb	7-Segment Display	RH	2.2	2000	3-18
FND551	.500	CC	Amb	Overflow ± 1 Digit	RH	2.2	2000	3-21
FND557	.500	CA	Amb	7-Segment Display	RH	2.2	2000	3-18
FND558	.500	CA	Amb	Overflow ± 1 Digit	RH	2.2	2000	3-21
FND560	.500	CC	Red	7-Segment Display	RH	2.2	1200	3-12
FND561	.500	CC	Red	Overflow ± 1 Digit	RH	1.7	1200	3-15
FND567	.500	CA	Red	7-Segment Display	RH	1.7	1200	3-12
FND568	.500	CA	Red	Overflow ± 1 Digit	RH	1.7	1200	3-15
FND800	.800	CC	Red	7-Segment Display	RH	1.7	1100	3-24
FND807	.800	CA	Red	7-Segment Display	RH	1.7	1100	3-24
MAN71A	.300	CA	Red	7-Segment Display	RH	1.6	250	3-28
MAN72A	.300	CA	Red	7-Segment Display	LH	1.6	250	3-28
MAN73A	.300	CA	Red	Overflow ± 1 Digit	None	1.7	450	3-28
MAN74A	.300	CC	Red	7-Segment Display	RH	1.6	250	3-28

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

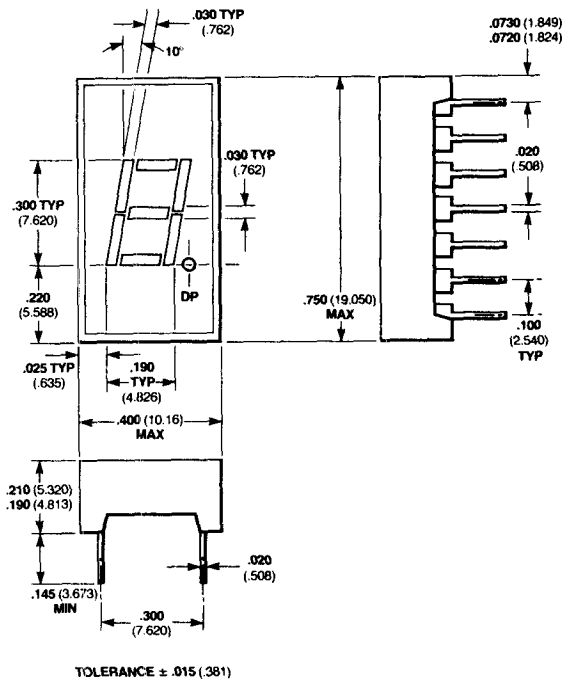
Maximum Temperature and Humidity

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 μs pulse) 1000 pps, T_A = 25°C	200 mA

Package Outline
MAN71A



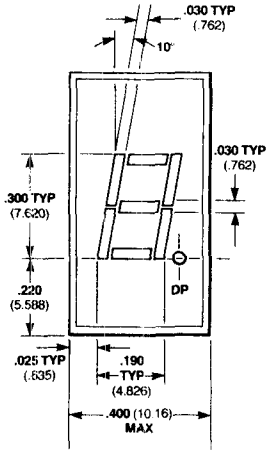
Notes
All dimensions in inches **bold** and millimeters (parentheses)
Tolerance unless specified = ±.015 (±.381)
Other packages following

Electrical and Radiant Characteristics T_A = 25°C

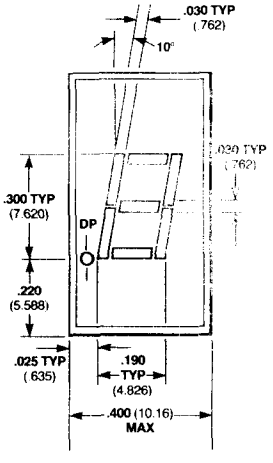
Symbol	Characteristic	Min	Typ	Max	Units	Test Conditions
V_F	Forward Voltage, Each Segment		1.7	2.0	V	I_F = 20 mA
I_R	Reverse Current, Each Segment			100	μA	V_R = 5.0 V
I_O	Axial Luminous Intensity, Each Segment	125	250		μcd	I_F = 10 mA
ΔI_O	Intensity Matching, Segment-to-Segment		±33		%	I_F = 20 mA
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

Connection Diagrams

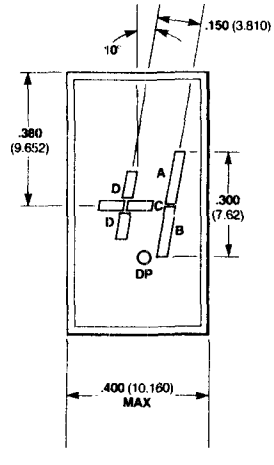
MAN71A, MAN72A MAN73A, MAN74A



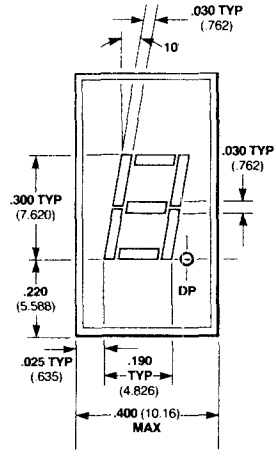
Pin	MAN71A
1	Cathode A
2	Cathode F
3	Common Anode
4	No Pin
5	No Pin
6	NC
7	Cathode E
8	Cathode D
9	Cathode DP
10	Cathode C
11	Cathode G
12	No Pin
13	Cathode B
14	Common Anode



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

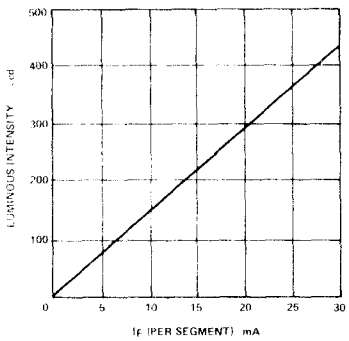


Pin	MAN74A
1	Anode F
2	Anode G
3	No Pin
4	Common Cathode
5	No Pin
6	Anode E
7	Anode D
8	Anode C
9	Anode DP
10	No Pin
11	No Pin
12	Common Cathode
13	Anode B
14	Anode A

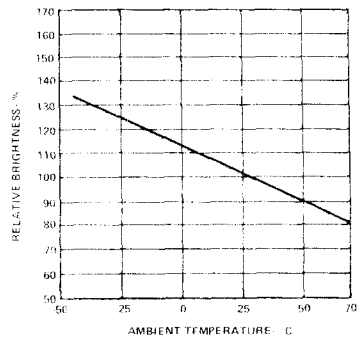
Typical Electrical Characteristic Curves

MAN71A, MAN72A MAN73A, MAN74A

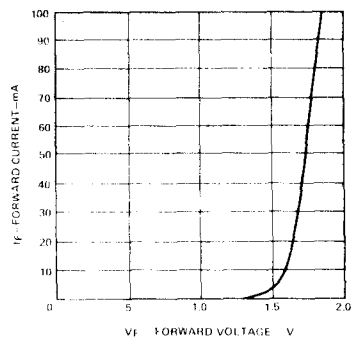
Luminous Intensity vs Forward Current



Luminous Intensity vs Temperature



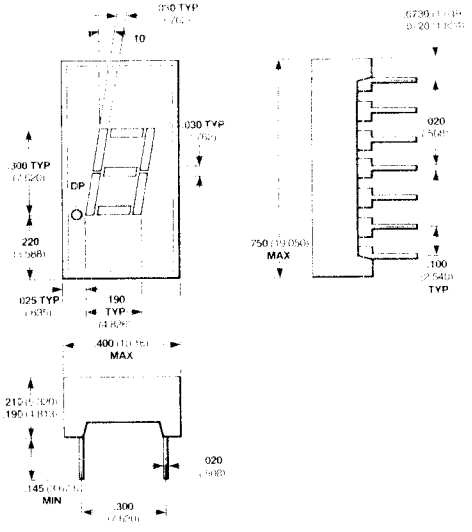
Forward Current vs Forward Voltage



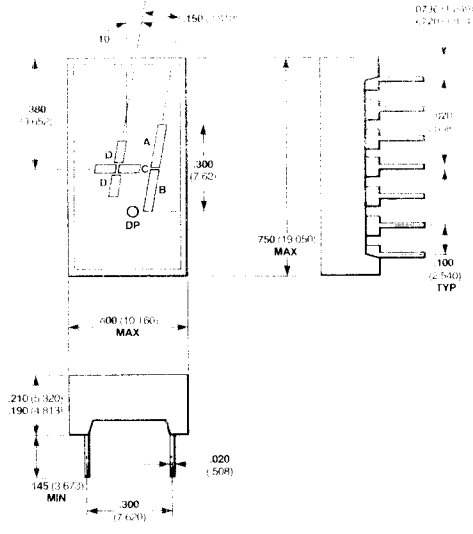
Package Outlines

MAN71A, MAN72A MAN73A, MAN74A

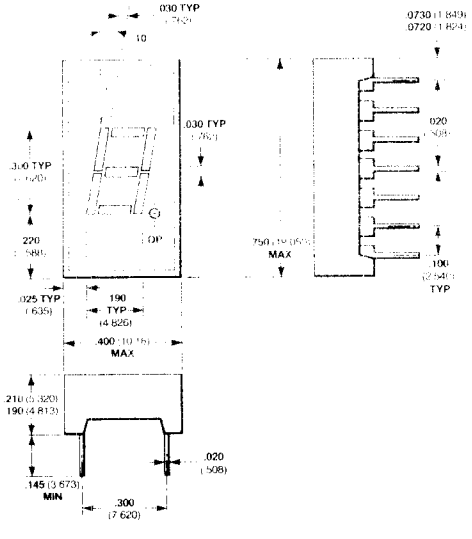
MAN72A



MAN73A



MAN74A



Notes
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Tolerance unless specified = ± .015 (± .381)