1.2 inch (30.42mm)
5X7 DOT MATRIX LED DISPLAY UVP-1X57A SERIES

DESCRIPTION

The UVP-1257AA/1357AA/1457A/1557A is 1.2 inch (30.42mm) height 5X7 dot matrix display.

Single color displays have the choices of three bright colors-AlGaAs red/green/red orange.

Multicolor displays are applicable to two colors green and red orange.

All device have gray face and white dot.

The AlGaAs red LED chip are made from AlGaAs on a non-transparent GaAs substrate.

The green LED chip are made from GaP on a transparent GaP substrate.

The red orange LED chip are made from GaAsP on a transparent GaP substrate.

FEATURES

- Industuy standard size
- Wide viewing angle
- Continuous uniform dot matrix.
- Excellent characters appearance
- Low power requirement

DEVICES

PART NO.	DESCRIPTION	PACKAGE DIMENSION	INTERNAL CIRCUIT DIAGRAM
UVP-1257AA	Column Anode	Fig. 1	Fig. 2
UVP-1357AA	Column Cathode		
UVP-1457A	Column Anode		
UVP-1557A	Column Cathode		

ABSOLUTE MAXIMUM RATINGS

@ T_A=25 °C

PARAMETER	AlGaAs RED	GREEN	RED ORANGE	UNIT
Power Dissipation Per Dot	36	36	36	mW
Peak Forward Current Per Dot	125	100	100	mA
Continuous Forward Current Per Dot	15	13	13	mA
Derating Linear From 25°C Per Dot	0.20	0.17	0.17	mA/°C
Reverse Voltage Per Dot	5	5	5	V
Operating Temperature Range	-35°Cto+85°C			
Storage Temperature Range	-35°Cto+85°C			
Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 260°C				

1.2 inch (30.42mm)
5X7 DOT MATRIX LED DISPLAY **UVP-1X57A SERIES**

PACKAGE DIMENSIONS

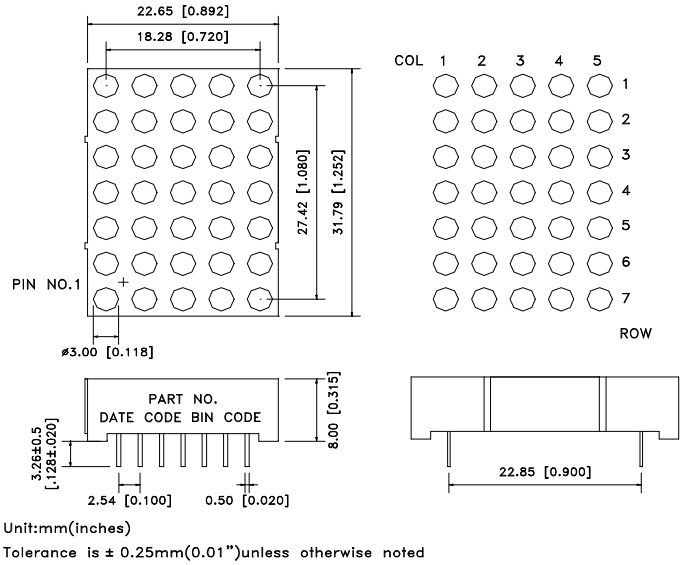
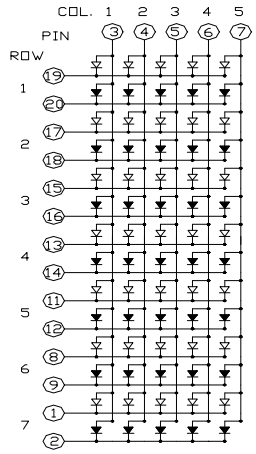


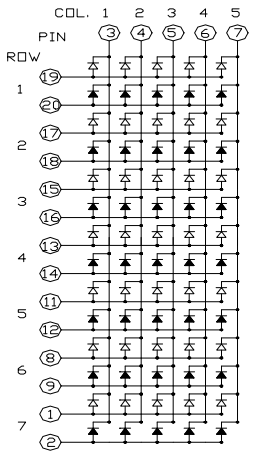
Fig. 1

INTERNAL CIRCUIT DIAGRAM

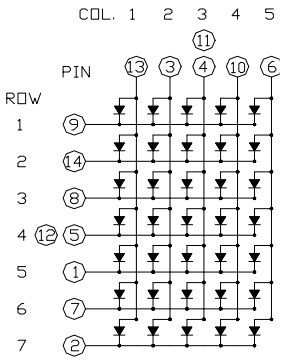
UVP-1257AA



UVP-1357AA



UVP-1457A



UVP-1557A

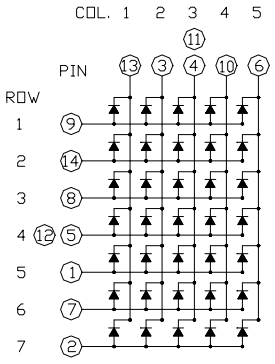


Fig. 2

PIN CONNECTION

PIN	CONNECTION			
	UVP-1257AA	UVP-1357AA	UVP-1457A	UVP-1557A
1	CATHODE ROW 7G	ANODE ROW 7G	CATHODE ROW 5	ANODE ROW 5
2	CATHODE ROW 7R	ANODE ROW 7R	CATHODE ROW 7	ANODE ROW 7
3	ANODE COL. 1	CATHODE COL. 1	ANODE COL. 2	CATHODE COL. 2
4	ANODE COL. 2	CATHODE COL. 2	ANODE COL. 3*1	CATHODE COL. 3*1
5	ANODE COL. 3	CATHODE COL. 3	CATHODE ROW 4*2	ANODE ROW 4*2
6	ANODE COL. 4	CATHODE COL. 4	ANODE COL. 5	CATHODE COL. 5
7	ANODE COL.5	CATHODE COL. 5	CATHODE ROW 6	ANODE ROW 6
8	CATHODE ROW 6G	ANODE ROW 6G	CATHODE ROW 3	ANODE ROW 3
9	CATHODE ROW 6R	ANODE ROW 6R	CATHODE ROW 1	ANODE ROW 1
10	NO CONNECTION	NO CONNECTION	ANODE COL. 4	CATHODE COL. 4
11	CATHODE ROW 5G	ANODE ROW 5G	ANODE COL. 3*1	CATHODE COL. 3*1
12	CATHODE ROW 5R	ANODE ROW 5R	CAHTODE ROW 4*2	ANODE ROW 4*2
13	CATHODE ROW 4G	ANODE ROW 4G	ANODE COL. 1	CATHODE COL. 1
14	CATHODE ROW 4R	ANODE ROW 4R	CATHODE ROW 2	ANODE ROW 2
15	CATHODE ROW 3G	ANODE ROW 3G		
16	CATHODE ROW 3R	ANODE ROW 3R		
17	CATHODE ROW 2G	ANODE ROW 2G		
18	CATHODE ROW 2R	ANODE ROW 2R		
19	CATHODE ROW 1G	ANODE ROW 1G		
20	CATHODE ROW 1R	ANODE ROW 1R		

Notes : 1.Pin 4 & 11 are internally connected

2.Pin 5 & 12 are internally connected

ELECTRICAL/OPTICAL CHARACTERISTICS

AlGaAs RED (UVP-1457AC/1557AC)

@ T_A=25ºC

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	5400	12000		μcd	I_p = 80 mA 1/16 Duty
Peak Emission Wavelength	λp/Hue		660/638		nm	I_F = 20 mA
Spectral Line Half-Width	Δλ		35		nm	I_F = 20 mA
Forward Voltage, any Dot	V_F		1.8	2.4	V	I_F = 20 mA
Reverse Current, any Dot	I_R			100	μA	V_R = 5 V
Luminous Intensity Matching Ratio	I_V-m			2:1		I_F = 10 mA

GREEN (UVP-1457AG/1557AG) & (UVP-1257AA/1357AA GREEN)

@ T_A=25ºC

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	1780	4000		μcd	I_p = 80 mA 1/16 Duty
Peak Emission Wavelength	λp/Hue		565/569		nm	I_F = 20 mA
Spectral Line Half-Width	Δλ		30		nm	I_F = 20 mA
Forward Voltage, any Dot	V_F		2.1	2.6	V	I_F = 20 mA
Reverse Current, any Dot	I_R			100	μA	V_R = 5 V
Luminous Intensity Matching Ratio	I_V-m			2:1		I_F = 10 mA

RED ORANGE (UVP-1457AE/1557AE)&(UVP-1257AA/1357AA RED ORANGE)

@ T_A=25ºC

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	1780	4000		μcd	I_p = 80 mA 1/16 Duty
Peak Emission Wavelength	λp/Hue		630/621		nm	I_F = 20 mA
Spectral Line Half-Width	Δλ		40		nm	I_F = 20 mA
Forward Voltage, any Dot	V_F		2.0	2.6	V	I_F = 20 mA
Reverse Current, any Dot	I_R			100	μA	V_R = 5 V
Luminous Intensity Matching Ratio	I_V-m			2:1		I_F = 10 mA

TYPICAL ELECTRICAL/OPTICAL CHARACTERISTIC CURVES

(Ambient Temperature =25°C Unless Otherwise Noted)

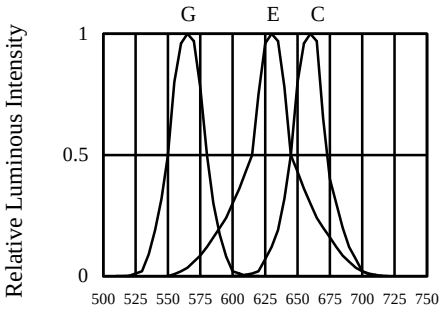
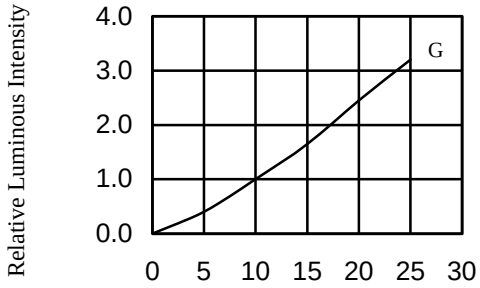
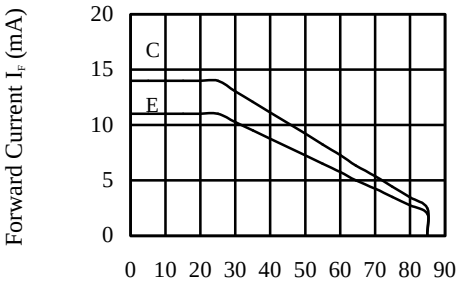


FIG.1 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH



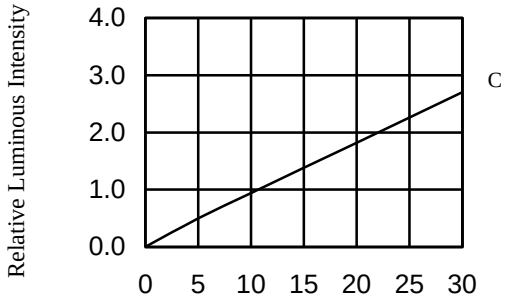
Forward Current I_F (mA)

FIG.2 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



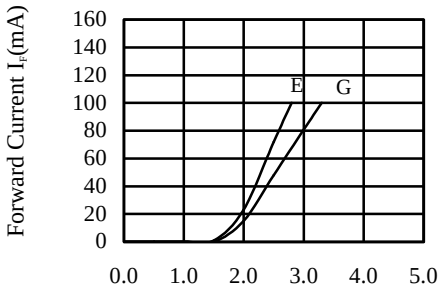
Ambient Temperature (°C)

FIG.3 ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



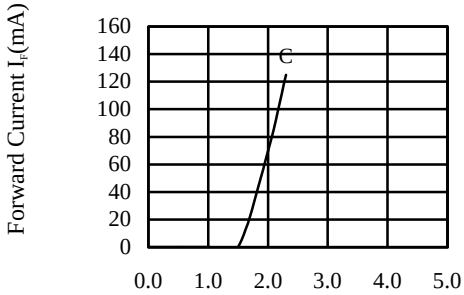
Forward Current I_F (mA)

FIG.2 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



Forward Voltage (V)

FIG.4 FORWARD CURRENT VS. FORWARD VOLTAGE



Forward Voltage (V)

FIG.4 FORWARD CURRENT VS. FORWARD VOLTAGE