2.0 inch (50.80mm)
5X7 DOT MATRIX LED DISPLAY UVP-2X57A SERIES

DESCRIPTION

The UVP-2057/2157 is 2.0 inch (50.80mm) height 5X7 dot matrix display.

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

Multicolor display 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-2057A	Column Anode	Fig. 1	Fig. 2
UVP-2157A	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				

TYPICAL ELECTRICAL/OPTICAL CHARACTERISTIC CURVES

(Ambient Temperature =25°C Unless Otherwise Noted)

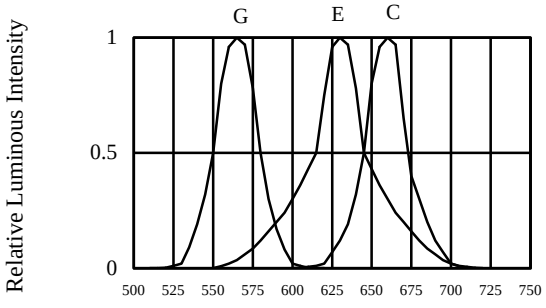
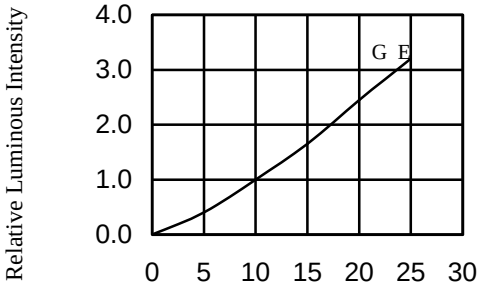
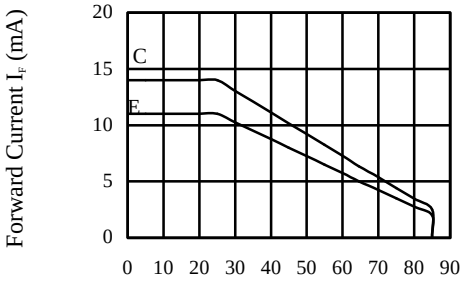


FIG.1 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH



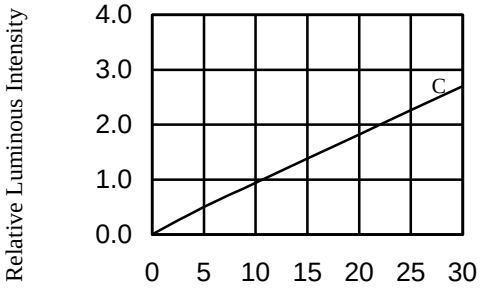
Forward Current I_F (mA)

FIG.2 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



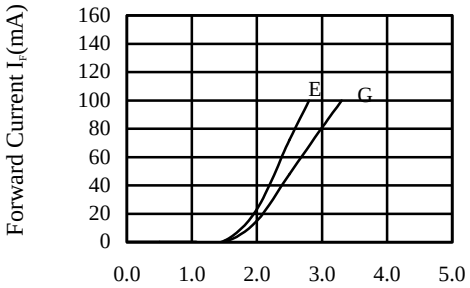
Ambient Temperature (°C)

FIG.3 ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



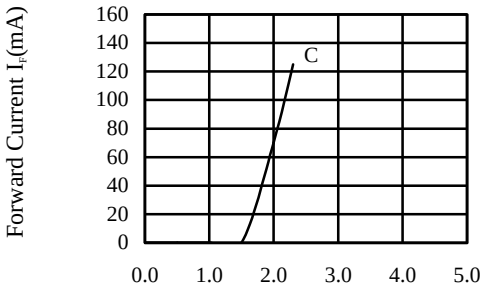
Forward Current I_F (mA)

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

2.0 inch (50.80mm)
5X7 DOT MATRIX LED DISPLAY **UVP-2X57A SERIES**

PACKAGE DIMENSIONS

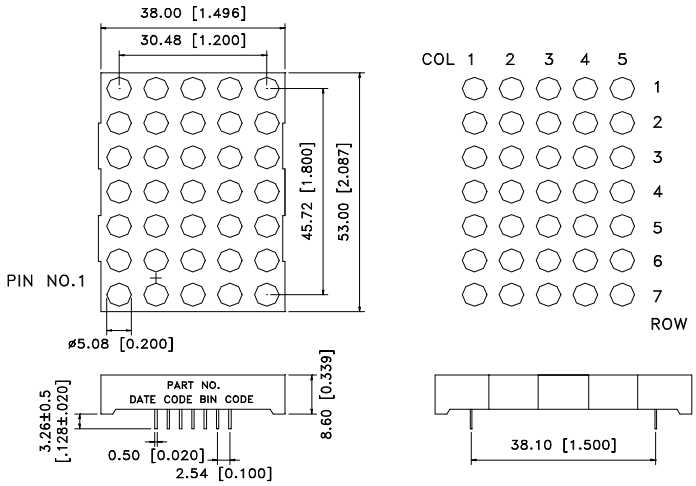


Fig. 1

INTERNAL CIRCUIT DIAGRAM

UVP-2057 UVP-2157 UVP-2657AA UVP-2757AA

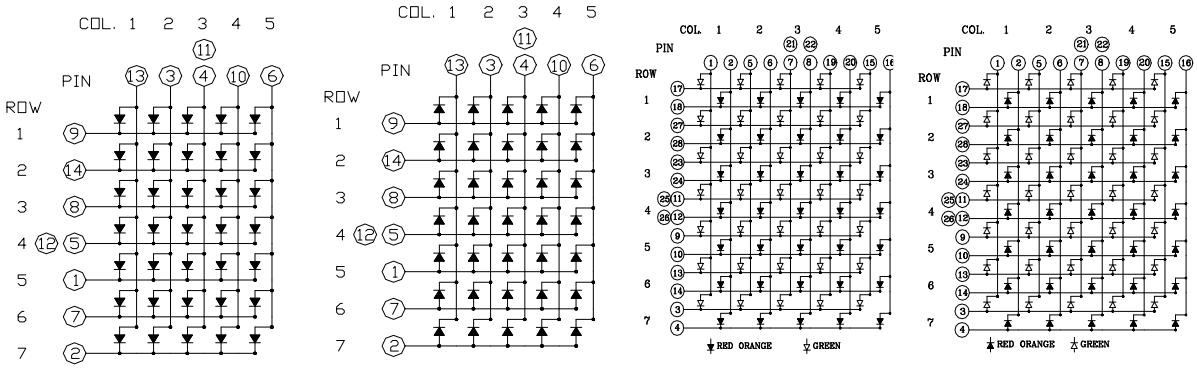


Fig. 2

PIN CONNECTION

Pin No.	CONNECTION	
	UVP-2657AA	UVP-2757AA
1	ANODE COLUMN 1 GREEN	CATHODE COLUMN 1 GREEN
2	ANODE COLUMN 1 RED ORANGE	CATHODE COLUMN 1 RED ORANGE
3	CATHODE ROW 7 GREEN	ANODE ROW 7 GREEN
4	CATHODE ROW 7 RED ORANGE	ANODE ROW 7 RED ORANGE
5	ANODE COLUMN 2 GREEN	CATHODE COLUMN 2 GREEN
6	ANODE COLUMN 2 RED ORANGE	CATHODE COLUMN 2 RED ORANGE
7	ANODE COLUMN 3 GREEN	CATHODE COLUMN 3 GREEN
8	ANODE COLUMN 3 RED ORANGE	CATHODE COLUMN 3 RED ORANGE
9	CATHODE ROW 5 GREEN	ANODE ROW 5 GREEN
10	CATHODE ROW 5 RED ORANGE	ANODE ROW 5 RED ORANGE
11	CATHODE ROW 4 GREEN	ANODE ROW 4 GREEN
12	CATHODE ROW 4 RED ORANGE	ANODE ROW 4 RED ORANGE
13	CATHODE ROW 6 GREEN	ANODE ROW 6 GREEN
14	CATHODE ROW 6 RED ORANGE	ANODE ROW 6 RED ORANGE
15	ANODE COLUMN 5 GREEN	CATHODE COLUMN 5 GREEN
16	ANODE COLUMN 5 RED ORANGE	CATHODE COLUMN 5 RED ORANGE
17	CATHODE ROW 1 GREEN	ANODE ROW 1 GREEN
18	CATHODE ROW 1 RED ORANGE	ANODE ROW 1 RED ORANGE
19	ANODE COLUMN 4 GREEN	CATHODE COLUMN 4 GREEN
20	ANODE COLUMN 4 RED ORANGE	CATHODE COLUMN 4 RED ORANGE
21	ANODE COLUMN 3 GREEN	CATHODE COLUMN 3 GREEN
22	ANODE COLUMN 3 RED ORANGE	CATHODE COLUMN 3 RED ORANGE
23	CATHODE ROW 3 GREEN	ANODE ROW 3 GREEN
24	CATHODE ROW 3 RED ORANGE	ANODE ROW 3 RED ORANGE
25	CATHODE ROW 4 GREEN	ANODE ROW 4 GREEN
26	CATHODE ROW 4 RED ORANGE	ANODE ROW 4 RED ORANGE
27	CATHODE ROW 2 GREEN	ANODE ROW 2 GREEN
28	CATHODE ROW 2 RED ORANGE	ANODE ROW 2 RED ORANGE

Pin No.	CONNECTION	
	UVP-2057	UVP-2157
1	CATHODE ROW 5	ANODE ROW5
2	CATHODE ROW 7	ANODE ROW 7
3	ANODE COL. 2	CATHODE COL. 2
4	ANODE COL. 3*1	CATHODE COL. 3*1
5	CATHODE ROW 4*2	ANODE ROW 4*2
6	ANODE COL. 5	CATHODE COL. 5
7	CATHODE ROW 6	ANODE ROW 6
8	CATHODE ROW 3	ANODE ROW 3
9	CATHODE ROW 1	ANODE ROW 1
10	ANODE COL. 4	CATHODE COL. 4
11	ANODE COL. 3*1	CATHODE COL. 3*1
12	CATHODE ROW 4*2	ANODE ROW 4*2
13	ANODE COL. 1	CATHODE COL. 1
14	CATHODE ROW 2	ANODE ROW 2

ELECTRICAL/OPTICAL CHARACTERISTICS

AlGaAs RED (UVP-2057AC/2157AC)

@ T_A=25ºC

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	6300	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-2057AG/2157AG) & (UVP-2657AA/2757AA GREEN)

@ T_A=25ºC

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	1780	4800		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-2057E/2157E)&(UVP-2657AA/2757AA RED ORANGE)

@ T_A=25ºC

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	3000	9600		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		35		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