2.0 inch (50.80mm)
4X4 DOT MATRIX LED DISPLAY UVP-2X44 SERIES

DESCRIPTION

The UVP-2X44 is 2.0 inch (50.80mm) height 4X4 dot matrix display.

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

Multicolor display are applicable to two colors -green/red/orange.

All device have black 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 yellow and 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-2344	Column Cathode	Fig. 1	Fig. 2

ABSOLUTE MAXIMUM RATINGS

@ T_A=25 ºC

PARAMETER	AlGaAs RED	GREEN	YELLOW	RED ORANGE	UNIT
Power Dissipation Per Dot	96	96	96	96	mW
Peak Forward Current Per Dot	110	90	80	80	mA
Continuous Forward Current Per Dot	14	11	8	8	mA
Derating Linear From 25ºC Per Dot	0.19	0.15	0.08	0.08	mA/ºC
Reverse Voltage Per Dot	15	15	15	15	V
Operating Temperature Range	-35ºCto+85ºC				
Storage Temperature Range	-35ºCto+85ºC				
Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 260ºC					

2.0 inch (50.80mm)
4X4 DOT MATRIX LED DISPLAY **UVP-2X44 SERIES**

PACKAGE DIMENSIONS

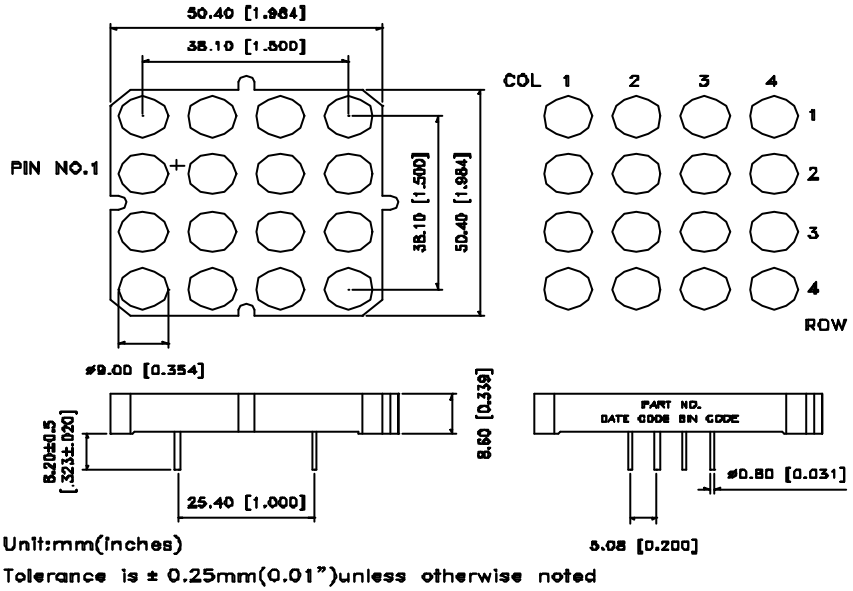
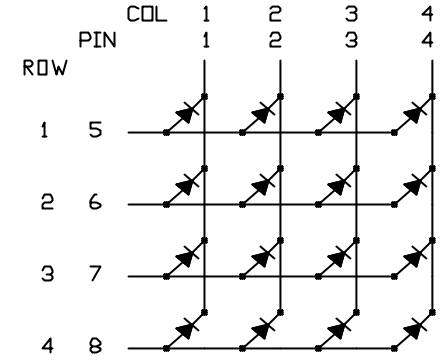


Fig. 1

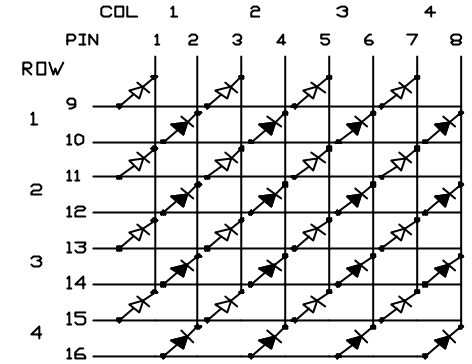
INTERNAL CIRCUIT DIAGRAM

A. UVP-2344XX



3 CHIPS IN SERIES

B. UVP-2844A3



STANDS FOR 3 RED ORANGE CHIPS IN SERIES.

STANDS FOR 3 GREEN CHIPS IN SERIES.

Fig. 2

PIN CONNECTION

Pin No.	CONNECTION	
	UVP-2344XX	UVP-2844A_3
1	CATHODE COLUMN 1	CATHODE COLUMN 1 RED ORANGE
2	CATHODE COLUMN 2	CATHODE COLUMN 1 GREEN
3	CATHODE COLUMN 3	CATHODE COLUMN 2 RED ORANGE
4	CATHODE COLUMN 4	CATHODE COLUMN 2 GREEN
5	ANODE ROW 1	CSTHODE COLUMN 3 RED ORANGE
6	ANODE ROW 2	CATHODE COLUMN 3 GREEN
7	ANODE ROW 3	CATHODE COLUMN 4 ORANGE
8	ANODE ROW 4	CATHODE COLUMN 4 GREEN
9		ANODE ROW 1 RED ORANGE
10		ANODE ROW 1 GREEN
11		ANODE ROW 2 RED ORANGE
12		ANODE ROW 2 GREEN
13		ANODE ROW 3 RED ORANGE
14		ANODE ROW 3 GREEN
15		ANODE ROW 4 RED ORANGE
16		ANODE ROW 4 GREEN

ELECTRICAL/OPTICAL CHARACTERISTICS

AlGaAs RED (UVP-2344C)

@ T_A=25 °C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	15100	28000		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		5.4	7.2	V	I_F = 20 mA
Reverse Current, any Dot	I_R			100	μA	V_R = 15 V
Luminous Intensity Matching Ratio	I_V-m			2:1		I_F = 10 mA

GREEN (UVP-2344G) & (UVP-2844A_3 GREEN)

@ T_A=25 °C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	5000	11000		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		6.3	7.8	V	I_F = 20 mA
Reverse Current, any Dot	I_R			100	μA	V_R = 15 V
Luminous Intensity Matching Ratio	I_V-m			2:1		I_F = 10 mA

YELLOW (UVP-2344Y)

@ T_A=25 °C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	5000	11000		μcd	I_p = 80 mA 1/16 Duty
Peak Emission Wavelength	λp/Hue		585/588		nm	I_F = 20 mA
Spectral Line Half-Width	Δλ		35		nm	I_F = 20 mA
Forward Voltage, any Dot	V_F		6.0	7.8	V	I_F = 20 mA
Reverse Current, any Dot	I_R			100	μA	V_R = 15 V
Luminous Intensity Matching Ratio	I_V-m			2:1		I_F = 10 mA

RED ORANGE (UVP-2844A_3 RED ORANGE)

@ T_A=25 °C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	5000	11000		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		6.0	7.8	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)

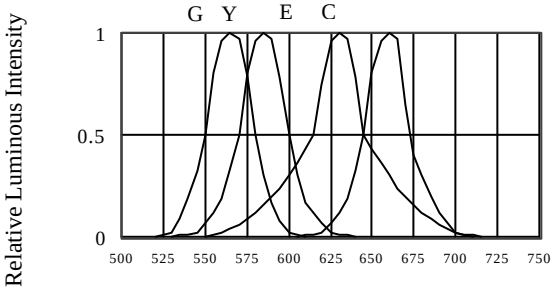
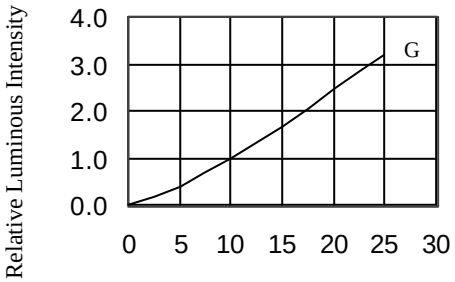
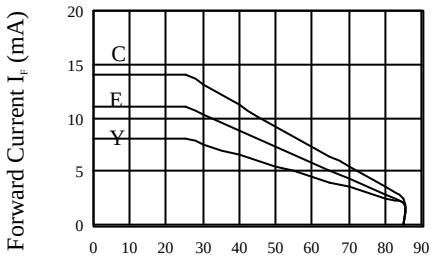


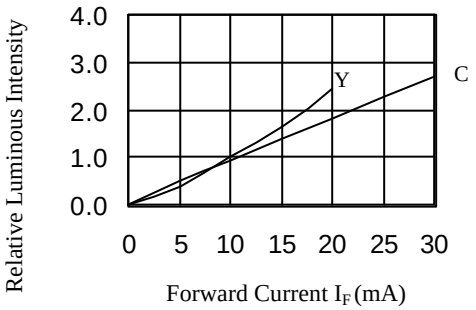
FIG.1 RELATIVE LUMINOUS
INTENSITY VS. WAVELENGTH



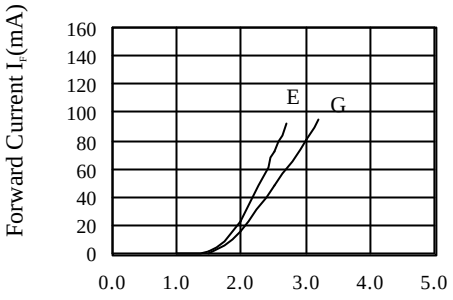
Forward Current I_F (mA)
FIG.2 RELATIVE LUMINOUS INTENSIT
VS. FORWARD CURRENT



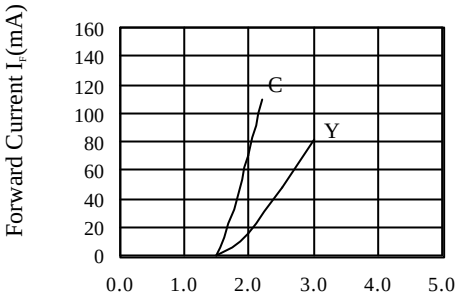
Ambient Temperature (°C)
FIG.3 FORWARD CURRENT
DERATING CURVE



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 Voltage (V)
FIG.4 FORWARD CURRENT VS.
FORWARD VOLTAGE