

**3.0 inch ( 76.2mm )**

**5X7 DOT MATRIX LED DISPLAY**

**UVP-3X57 SERIES**

**DESCRIPTION**

The UVP-3X57SERIES is 3.0 inch (76.2mm) height 5X7 dot matrix display.

Single color display have the 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-3157A/3257AA	Column Anode	Fig. 1	Fig. 2
UVP-3157A/3357AA	Column Cathode		

**ABSOLUTE MAXIMUM RATINGS**

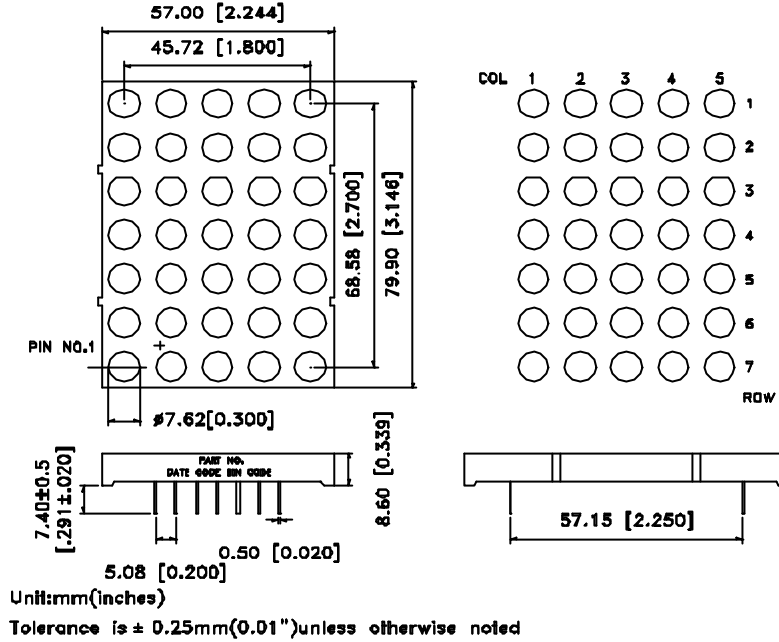
@ T<sub>A</sub>=25 °C

PARAMETER	AlGaAs RED	GREEN	RED ORANGE	UNIT
Power Dissipation Per Dot	64	64	36	mW
Peak Forward Current Per Dot	110	90	100	mA
Continuous Forward Current Per Dot	14	11	13	mA
Derating Linear From 25°C Per Dot	0.19	0.15	0.17	mA/°C
Reverse Voltage Per Dot	10	10	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				

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## PACKAGE DIMENSIONS



## INTERNAL CIRCUIT DIAGRAM

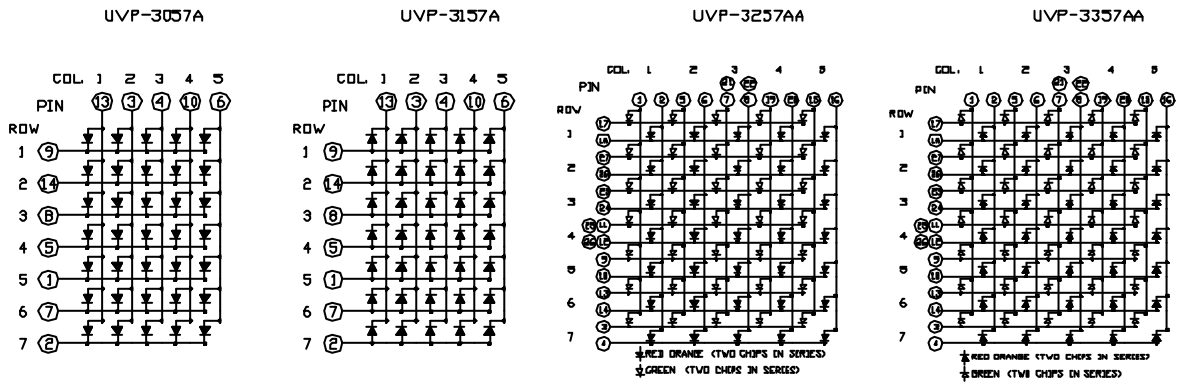


Fig. 2

**3.0 inch ( 76.2mm )**

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**PIN CONNECTION**

Pin No.	CONNECTION	
	UVP-3257AA	UVP-3357AA
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

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**PIN CONNECTION**

PIN	CONNECTION	
	UVP-3057	UVP-3157
1	CATHODE ROW 5	ANODE ROW 5
2	CATHODE ROW 7	ANODE ROW 7
3	ANODE COL. 2	CATHODE COL. 2
4	ANODE COL. 3	CATHODE COL. 3
5	CATHODE ROW 4	ANODE ROW 4
6	ANODE COL.5	CATHODE COL. 5
7	CATHODE ROW 6	ANODE ROW 6
8	CATHODE ROW 3	ANODE ROW 3
9	CATHODE RWO 1	ANODE ROW 1
10	ANODE COL. 4	CATHODE COL. 4
11	NO CONNECTION	NO CONNECTION
12	NO CONNECTION	NO CONNECTION
13	ANODE COL. 1	CATHODE COL. 1
14	CATHODE ROW 2	ANODE ROW 2

**ELECTRICAL/OPTICAL CHARACTERISTICS**

**AlGaAs RED (UVP-3057AC/3157AC)**

@ T<sub>A</sub>=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I <sub>V</sub>	11500	20000		μcd	I <sub>p</sub> = 80 mA 1/16 Duty
Peak Emission Wavelength	λ <sub>p</sub> /Hue		660/638		nm	I <sub>F</sub> = 20 mA
Spectral Line Half-Width	Δλ		35		nm	I <sub>F</sub> = 20 mA
Forward Voltage, any Dot	V <sub>F</sub>		3.6	4.8	V	I <sub>F</sub> = 20 mA
Reverse Current, any Dot	I <sub>R</sub>			100	μA	V <sub>R</sub> = 10V
Luminous Intensity Matching Ratio	I <sub>V</sub> -m			2:1		I <sub>F</sub> = 10 mA

**GREEN (UVP-3057AG/3157AG) & (UVP-3257AA/3357AA)**

@ T<sub>A</sub>=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I <sub>V</sub>	3000	9600		μcd	I <sub>p</sub> = 80 mA 1/16 Duty
Peak Emission Wavelength	λ <sub>p</sub> /Hue		565/569		nm	I <sub>F</sub> = 20 mA
Spectral Line Half-Width	Δλ		30		nm	I <sub>F</sub> = 20 mA
Forward Voltage, any Dot	V <sub>F</sub>		4.2	5.2	V	I <sub>F</sub> = 20 mA
Reverse Current, any Dot	I <sub>R</sub>			100	μA	V <sub>R</sub> = 10 V
Luminous Intensity Matching Ratio	I <sub>V</sub> -m			2:1		I <sub>F</sub> = 10 mA

**RED ORANGE (UVP-3057AE/3157AE) & (UVP-3257AA/3357AA)**

@ T<sub>A</sub>=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I <sub>V</sub>	3000	9600		μcd	I <sub>p</sub> = 80 mA 1/16 Duty
Peak Emission Wavelength	λ <sub>p</sub> /Hue		630/621		nm	I <sub>F</sub> = 20 mA
Spectral Line Half-Width	Δλ		35		nm	I <sub>F</sub> = 20 mA
Forward Voltage, any Dot	V <sub>F</sub>		4.2	5.2	V	I <sub>F</sub> = 20 mA
Reverse Current, any Dot	I <sub>R</sub>			100	μA	V <sub>R</sub> = 10 V
Luminous Intensity Matching Ratio	I <sub>V</sub> -m			2:1		I <sub>F</sub> = 10 mA



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**TYPICAL ELECTRICAL/OPTICAL CHARACTERISTIC CURVES**

( Ambient Temperature =25°C Unless Otherwise Noted )

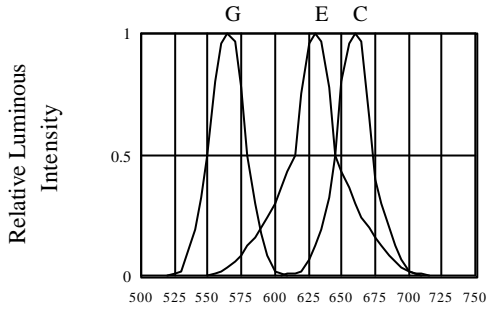


FIG.1 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH

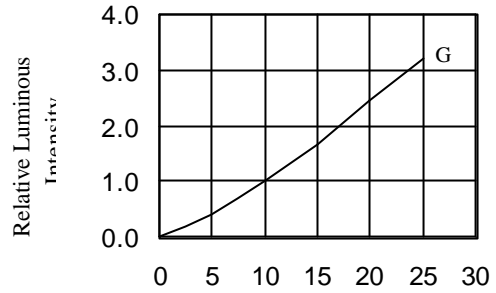


FIG.2 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

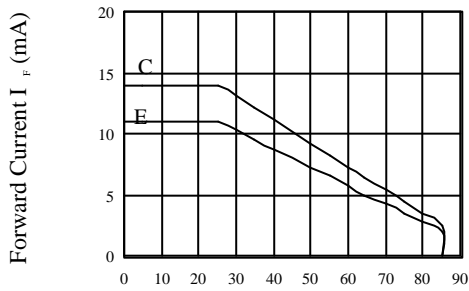


FIG.3 ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE

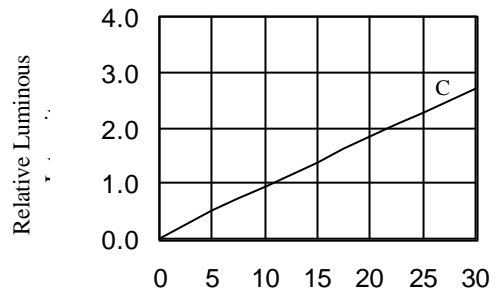


FIG.2 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

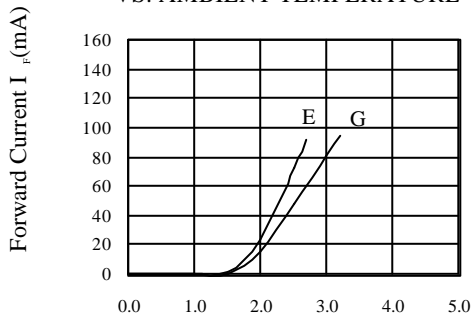


FIG.4 FORWARD CURRENT VS. FORWARD VOLTAGE

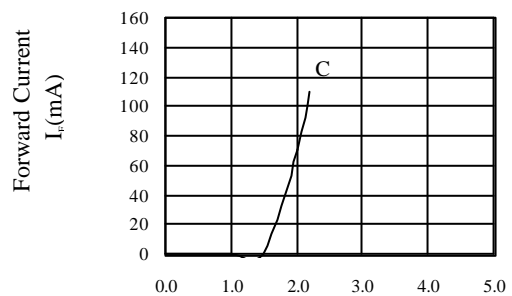


FIG.4 FORWARD CURRENT VS. FORWARD VOLTAGE