0.3 inch (7.62 mm)
DUAL DIGIT NUMERIC LED DISPLAYS UVD-32X SERIES

DESCRIPTION

The UVD-322/323 is 0.3 inch (7.62 mm) height dual digit display.
Choices of five colors-high efficiency red/bright red/green/yellow/red orange.
High efficirncy red display has red face and red segment.
Bringht red ,green, yellen and red orange displays have black face and white segments.
The bright red and 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 segments.
- Excellent characters appearance
- Low power requirement

DEVICES

PART NO.	DESCRIPTION	PACKAGE DIMENSION	INTERNAL CIRCUIT DIAGRAM
UVD-322	Common Cathode	Fig. 1	Fig. 2
UVD-323	Common Anode		

ABSOLUTE MAXIMUM RATINGS

@ T_A=25 ºC

PARAMETER	HI.EFF. RED	BRIGHT RED	GREEN	YELLOW	RED ORANGE	UNIT
Power Dissipation Per Segment	75	40	75	60	75	mW
Peak Forward Current Per Segment (1/10 Duty Cycle. ,0.1ms pulse width)	100	60	100	80	100	mA
Continuous Forward Current Per Segment	25	15	25	20	25	mA
Derating Linear From 25ºC Per Segment	0.33	0.2	0.33	0.27	0.33	mA/ºC
Reverse Voltage Per Segment	5	5	5	5	5	V
Operating Temperature Range	-35ºCto+85ºC					
Storage Temperature Range	-35ºCto+85ºC					
Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 260ºC						

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PACKAGE DIMENSIONS

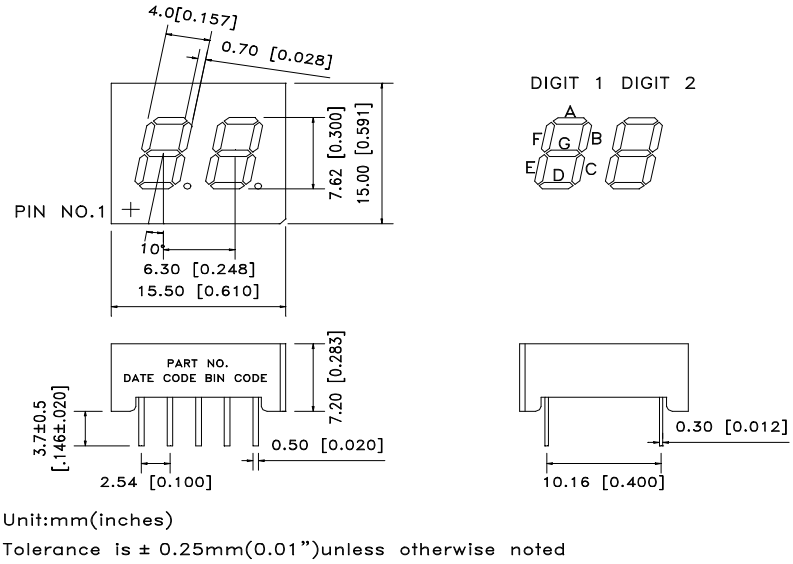


Fig. 1

INTERNAL CIRCUIT DIAGRAM

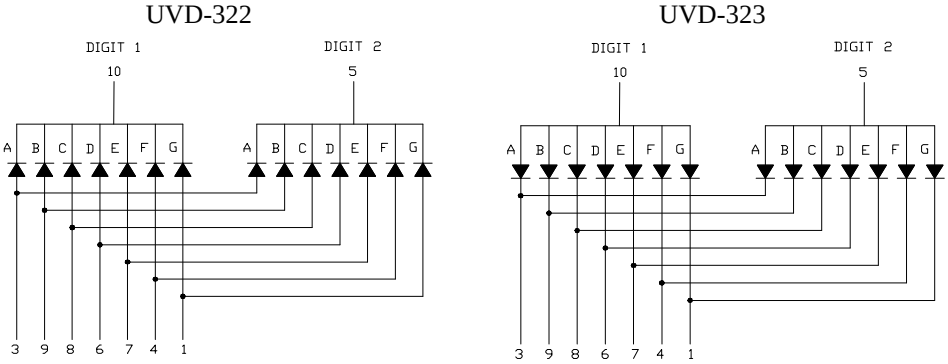


Fig. 2

0.3 inch (7.62 mm)
DUAL DIGIT NUMERIC LED DISPLAYS UVD-32X SERIES

PIN CONNECTION

PIN	CONNECTION	
	UVD-322	UVD-323
1	ANODE G	CATHODE G
2	NO PIN	NO PIN
3	ANODE A	CATHODE A
4	ANODE F	CATHODE F
5	COMMON CATHODE (DIG 2)	COMMON ANODE (DIG 2)
6	ANODE D	CATHODE D
7	ANODE E	CATHODE E
8	ANODE C	CATHODE C
9	ANODE B	CATHODE B
10	COMMON CATHODE (DIG 1)	COMMON ANODE (DIG 1)

ELECTRICAL/OPTICAL CHARACTERISTICS

HI.EFF. RED (UVD-322HR / 323HR)

@ T_A=25 ºC

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	500	2000		μcd	I_F = 10 mA
Peak Emission Wavelength	λp/Hue		635/623		nm	I_F = 20 mA
Spectral Line Half-Width	Δλ		40		nm	I_F = 20 mA
Forward Voltage, Per Segment	V_F		2.0	2.6	V	I_F = 20 mA
Reverse Current, Per Segment	I_R			100	μA	V_R = 5 V
Luminous Intensity Matching Ratio	I_v- m			2:1		I_F = 10 mA

BRIGHT RED (UVD-322P / 323P)

@ T_A=25 ºC

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	210	650		μcd	I_F = 10 mA
Peak Emission Wavelength	λp/Hue		697/657		nm	I_F = 20 mA
Spectral Line Half-Width	Δλ		90		nm	I_F = 20 mA
Forward Voltage, Per Segment	V_F		2.1	2.6	V	I_F = 20 mA
Reverse Current, Per Segment	I_R			100	μA	V_R = 5 V
Luminous Intensity Matching Ratio	I_v- m			2:1		I_F = 10 mA

0.3 inch (7.62 mm)
DUAL DIGIT NUMERIC LED DISPLAYS UVD-32X SERIES

ELECTRICAL/OPTICAL CHARACTERISTICS

GREEN (UVD-322G / 323G)

@ T_A=25 °C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	540	1600		μcd	I_F = 10 mA
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, Per Segment	V_F		2.1	2.6	V	I_F = 20 mA
Reverse Current, Per Segment	I_R			100	μA	V_R = 5 V
Luminous Intensity Matching Ratio	I_v- m			2:1		I_F = 10 mA

YELLOW (UVD-322Y / 323Y)

@ T_A=25 °C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	500	2000		μcd	I_F = 10 mA
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, Per Segment	V_F		2.1	2.6	V	I_F = 20 mA
Reverse Current, Per Segment	I_R			100	μA	V_R = 5 V
Luminous Intensity Matching Ratio	I_v- m			2:1		I_F = 10 mA

RED ORANGE (UVD-322E / 323E)

@ T_A=25 °C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	500	2000		μcd	I_F = 10 mA
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, Per Segment	V_F		2.0	2.6	V	I_F = 20 mA
Reverse Current, Per Segment	I_R			100	μA	V_R = 5 V
Luminous Intensity Matching Ratio	I_v- m			2:1		I_F = 10 mA

0.3 inch (7.62 mm)
DUAL DIGIT NUMERIC LED DISPLAYS UVD-32X SERIES

TYPICAL ELECTRICAL/OPTICAL CHARACTERISTIC CURVES

(Ambient Temperature =25°C Unless Otherwise Noted)

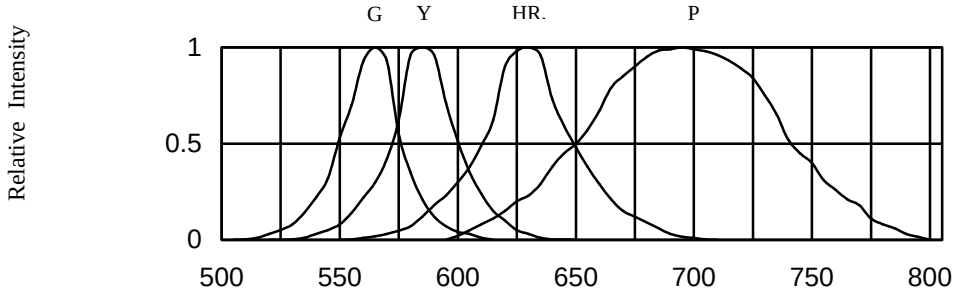
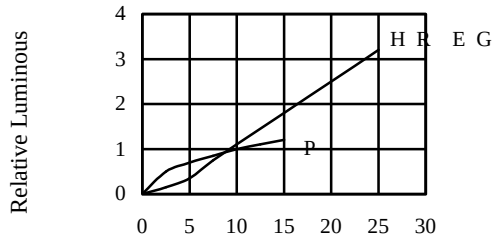
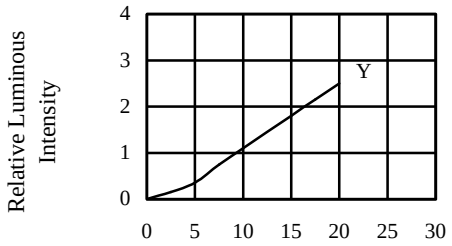


FIG.1 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH



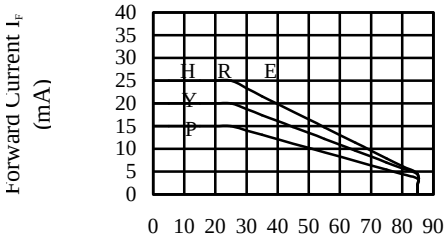
Forward Current I_F (mA)

FIG.2 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



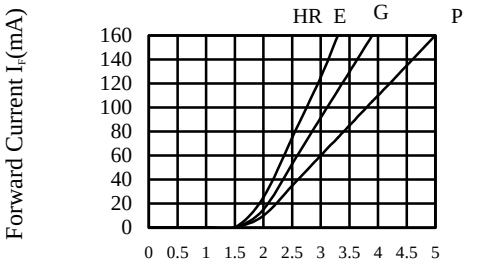
Forward Current I_F (mA)

FIG.2-1 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