

**0.52 inch ( 13.2 mm )**

**SINGLE DIGIT NUMERIC LED DISPLAYS UVS-54XA SERIES**

**DESCRIPTION**

The UVS-546A/547A is 0.52 inch (13.2mm) height single digit display.  
Choices of five colors-high efficiency red/bright red/green/yellow/red orange.  
High efficiency red displays has red face and red segments. Green displays has gray face and green segments.  
Bright red , yellow , and red orange displays have gray face and whit 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
UVS-546A	Common Anode	Fig. 1	Fig. 2
UVS-547A	Common Cathode		

**ABSOLUTE MAXIMUM RATINGS**

@ T<sub>A</sub>=25 °C

PARAMETER	HLEFF. 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 25°C Per Segment	0.33	0.2	0.33	0.27	0.33	mA/°C
Reverse Voltage Per Segment	5	5	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						

**0.52 inch ( 13.2 mm )**

**SINGLE DIGIT NUMERIC LED DISPLAYS UVS-54XA SERIES**

**PACKAGE DIMENSIONS**

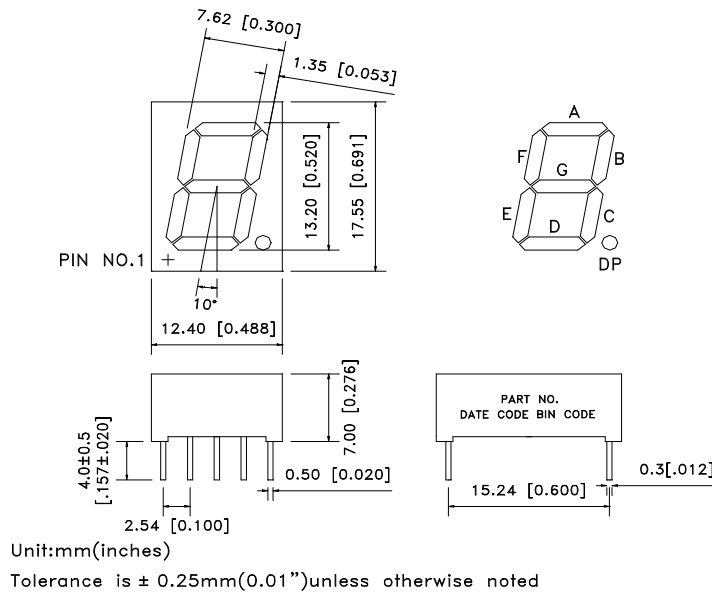


Fig. 1

**INTERNAL CIRCUIT DIAGRAM**

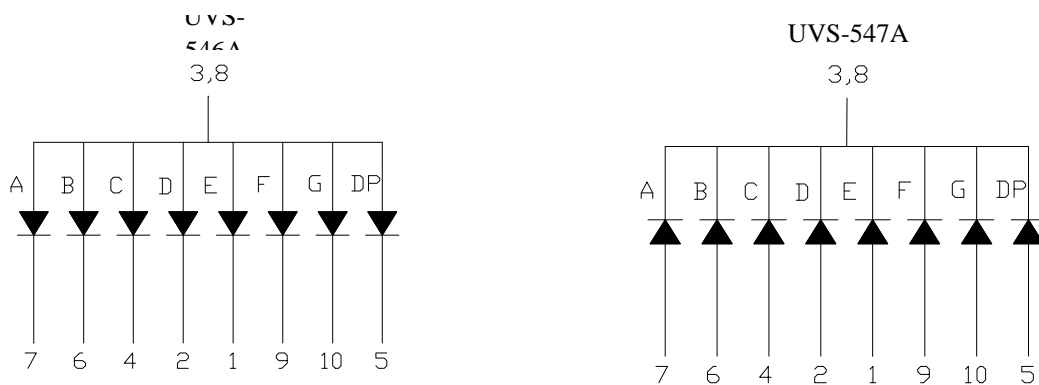


Fig. 2

0.52 inch ( 13.2 mm )

**SINGLE DIGIT NUMERIC LED DISPLAYS UVS-54XA SERIES**

**PIN CONNECTION**

PIN	CONNECTION	
	UVS-546A	UVS-547A
1	CATHODE E	ANODE E
2	CATHODE D	ANODE D
3	COMMON ANODE *	COMMON CATHODE *
4	CATHODE C	ANODE C
5	CATHODE D . P .	ANODE D . P .
6	CATHODE B	ANODE B
7	CATHODE A	ANODE A
8	COMMON ANODE *	COMMON CATHODE *
9	CATHODE F	ANODE F
10	CATHODE G	ANODE G

**ELECTRICAL/OPTICAL CHARACTERISTICS**

**HI.EFF. RED (UVS-546AHR / 547AHR)**

@ T<sub>A</sub>=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I <sub>V</sub>	800	2200		μcd	I <sub>F</sub> = 10 mA
Peak Emission Wavelength	λ <sub>p</sub> /Hue		635/623		nm	I <sub>F</sub> = 20 mA
Spectral Line Half-Width	Δλ		40		nm	I <sub>F</sub> = 20 mA
Forward Voltage, Per Segment	V <sub>F</sub>		2.0	2.6	V	I <sub>F</sub> = 20 mA
Reverse Current, Per Segment	I <sub>R</sub>			100	μA	V <sub>R</sub> = 5 V
Luminous Intensity Matching Ratio	I <sub>v</sub> - m			2:1		I <sub>F</sub> = 10 mA

**BRIGHT RED (UVS-546AP / 547AP)**

@ T<sub>A</sub>=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I <sub>V</sub>	320	800		μcd	I <sub>F</sub> = 10 mA
Peak Emission Wavelength	λ <sub>p</sub> /Hue		697/657		nm	I <sub>F</sub> = 20 mA
Spectral Line Half-Width	Δλ		90		nm	I <sub>F</sub> = 20 mA
Forward Voltage, Per Segment	V <sub>F</sub>		2.1	2.6	V	I <sub>F</sub> = 20 mA
Reverse Current, Per Segment	I <sub>R</sub>			100	μA	V <sub>R</sub> = 5 V
Luminous Intensity Matching Ratio	I <sub>v</sub> - m			2:1		I <sub>F</sub> = 10 mA

0.52 inch ( 13.2 mm )

SINGLE DIGIT NUMERIC LED DISPLAYS

UVS-54XA SERIES

**ELECTRICAL/OPTICAL CHARACTERISTICS**

**GREEN (UVS-546AG / 547AG)**

@ T<sub>A</sub>=25 °C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I <sub>V</sub>	800	2200		mcd	I <sub>F</sub> = 10 mA
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, Per Segment	V <sub>F</sub>		2.1	2.6	V	I <sub>F</sub> = 20 mA
Reverse Current, Per Segment	I <sub>R</sub>			100	mA	V <sub>R</sub> = 5 V
Luminous Intensity Matching Ratio	I <sub>v</sub> - m			2:1		I <sub>F</sub> = 10 mA

**YELLOW (546AY / 547AY)**

@ T<sub>A</sub>=25 °C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I <sub>V</sub>	800	2200		μcd	I <sub>F</sub> = 10 mA
Peak Emission Wavelength	λ <sub>p</sub> /Hue		585/588		nm	I <sub>F</sub> = 20 mA
Spectral Line Half-Width	Δλ		35		nm	I <sub>F</sub> = 20 mA
Forward Voltage, Per Segment	V <sub>F</sub>		2.1	2.6	V	I <sub>F</sub> = 20 mA
Reverse Current, Per Segment	I <sub>R</sub>			100	μA	V <sub>R</sub> = 5 V
Luminous Intensity Matching Ratio	I <sub>v</sub> - m			2:1		I <sub>F</sub> = 10 mA

**RED ORANGE (546AE / 547AE)**

@ T<sub>A</sub>=25 °C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I <sub>V</sub>	800	2200		μcd	I <sub>F</sub> = 10 mA
Peak Emission Wavelength	λ <sub>p</sub> /Hue		630/621		nm	I <sub>F</sub> = 20 mA
Spectral Line Half-Width	Δλ		40		nm	I <sub>F</sub> = 20 mA
Forward Voltage, Per Segment	V <sub>F</sub>		2.0	2.6	V	I <sub>F</sub> = 20 mA
Reverse Current, Per Segment	I <sub>R</sub>			100	μA	V <sub>R</sub> = 5 V
Luminous Intensity Matching Ratio	I <sub>v</sub> - m			2:1		I <sub>F</sub> = 10 mA



0.52 inch ( 13.2 mm )

**SINGLE DIGIT NUMERIC LED DISPLAYS**

**UVS-54XA SERIES**

**TYPICAL ELECTRICAL/OPTICAL CHARACTERISTIC CURVES**

( Ambient Temperature =25°C Unless Otherwise Noted )

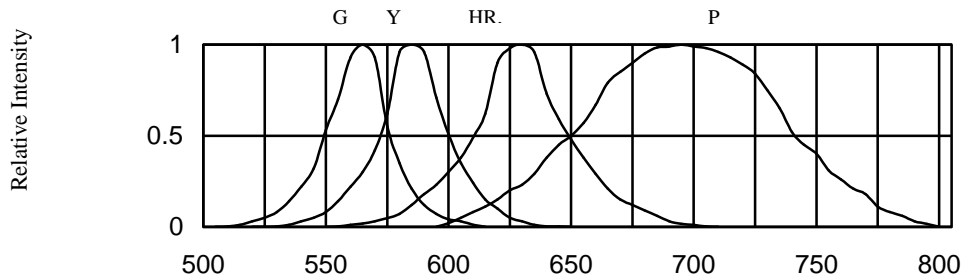


FIG.1 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH

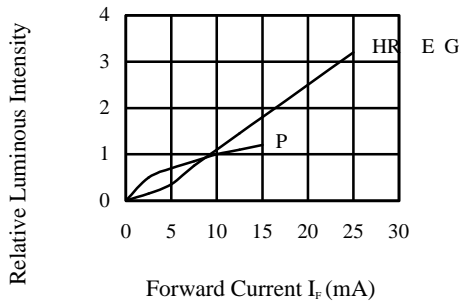


FIG.2 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

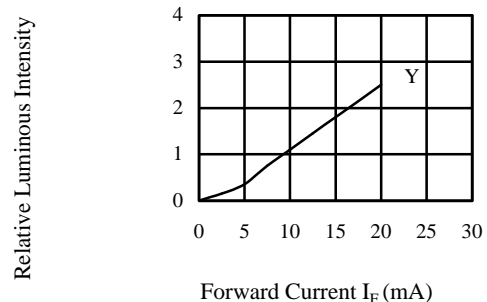


FIG.2-1 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

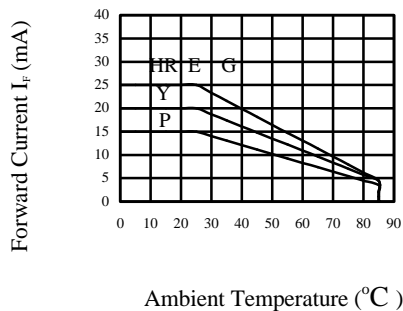


FIG.3 ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE

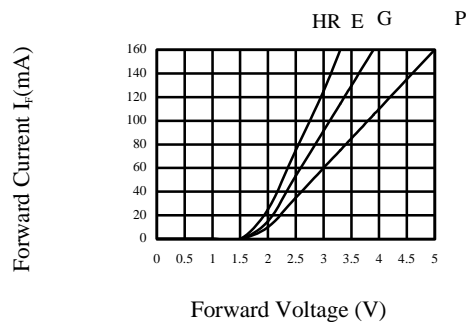


FIG.4 FORWARD CURRENT VS. FORWARD VOLTAGE