

# Single Digit LED Numeric Display

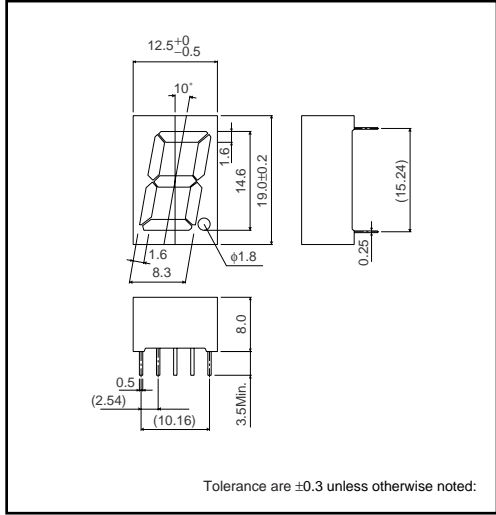
## LA-601 B / L Series

LA-601 B / L series is designed to use in the light. Materials of emission are GaAsP on GaP, AlGaInP GaP and GaN. This is the height of a letter 14.6mm, single digit LED Numeric Display that is packed by epoxy resin.

**●Features**

- 1) The height of a letter is 14.6mm.
- 2) Dimension is 12.5×19.0×8.0mm.
- 3) The package of surface color is black. Color of segment is colored in emitting color. (Blue color is only milky white)
- 4) Each color has anode common and cathode common respectively.

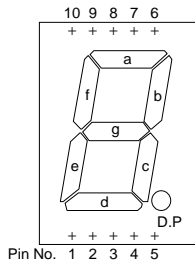
**●Dimensions (Unit : mm)**



**●Selection guide**

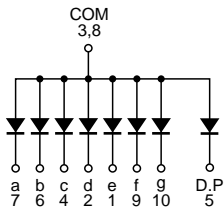
Common	Emitting color					
	Red	Red (High brightness)	Orange (High brightness)	Yellow (High brightness)	Green	Blue
Anode	LA-601VB	LA-601AB	LA-601EB	LA-601XB	LA-601MB	LA-601BB
Cathode	LA-601VL	LA-601AL	LA-601EL	LA-601XL	LA-601ML	LA-601BL

**●Pin assignments**

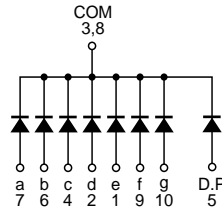


Pin No.	Function
1	Segment "e"
2	Segment "d"
3	Common
4	Segment "c"
5	D.P
6	Segment "b"
7	Segment "a"
8	Common
9	Segment "f"
10	Segment "g"

**●Equivalent circuit (anode common)**



**(cathode common)**



## LED displays

## ●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Red	Red (High brightness)	Orange (High brightness)	Yellow (High brightness)	Green	Blue	Unit
		LA-601VB / VL	LA-601AB / AL	LA-601EB / EL	LA-601XB / XL	LA-601MB / ML	LA-601BB / BL	
Power dissipation	P <sub>D</sub>	480	520	520	520	480	336	mW
Power dissipation	P <sub>D</sub> / seg	60	65	65	65	60	42	mW
Forward current	I <sub>F</sub>	20	25	25	25	20	10	mA
Peak forward current	I <sub>FP</sub>	60 *1	50 *2	50 *2	50 *2	60 *1	50 *2	mA
Reverse voltage	V <sub>R</sub>	5	5	5	5	5	5	V
Operating temperature	T <sub>opr</sub>	-25 to +75						°C
Storage temperature	T <sub>stg</sub>	-30 to +85						°C

\*1 Pulse width 1ms Duty 1 / 5

\*2 Pulse width 0.1ms Duty 1 / 10

## ●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Conditions	Red		Red (High brightness)		Orange (High brightness)		Yellow (High brightness)		Green		Blue		Unit
			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =10mA	2.0	2.8	2.05*	2.6*	2.05*	2.6*	2.05*	2.6*	2.1	2.8	3.6	4.2	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =3V	-	100	-	100	-	100	-	100	-	100	-	100	μA
Peak wavelength	λ <sub>P</sub>	I <sub>F</sub> =10mA	650	-	626*	-	610*	-	589*	-	563	-	470	-	nm
Spectral line half width	Δλ	I <sub>F</sub> =10mA	40	-	18*	-	17*	-	15*	-	40	-	26	-	nm

©The products are not radiations resistant.

\* Shows the number on the condition of I<sub>F</sub>=20mA.

## ●Luminous intensity

Color	λ <sub>P</sub> (nm)	Type	Min.	Typ.	Unit
Red	650	LA-601VB	5.6	14	mcd
		LA-601VL			
Red (High brightness)	626	LA-601AB	36	90	mcd
		LA-601AL			
Orange (High brightness)	610	LA-601EB	36	90	mcd
		LA-601EL			
Yellow (High brightness)	589	LA-601XB	36	90	mcd
		LA-601XL			
Green	563	LA-601MB	9	22	mcd
		LA-601ML			
Blue	470	LA-601BB	14	56	mcd
		LA-601BL			

©A condition of measurement is I<sub>F</sub>=10mA.

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●Electrical and optical characteristic curves

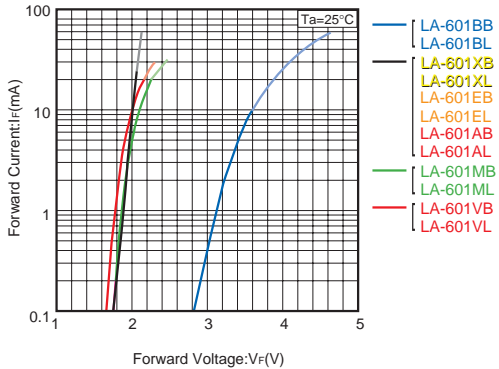


Fig.1 Forward Current - Forward Voltage

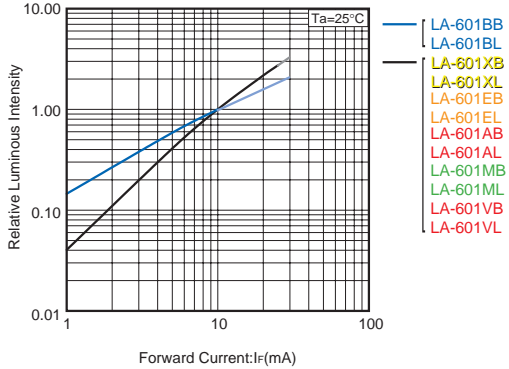


Fig.2 Relative Luminous Intensity - Forward Current

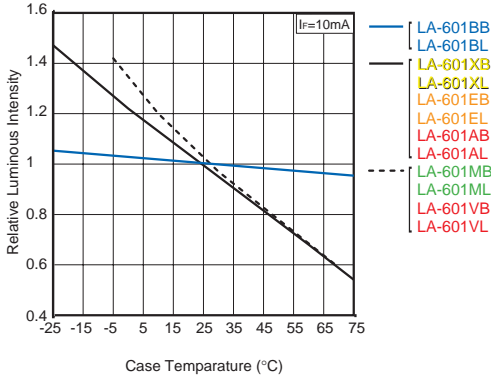


Fig.3 Relative Luminous Intensity - Case Temperature

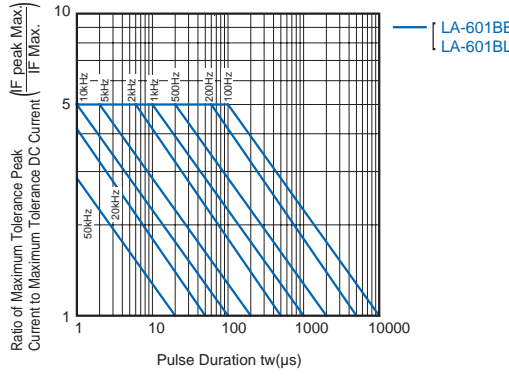


Fig.4 Ratio of Maximum Tolerable Peak Current - Pulse Duration ( I )

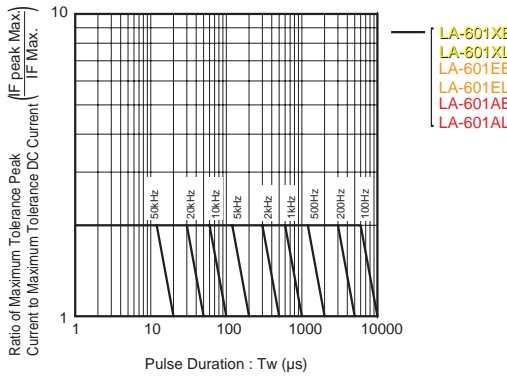


Fig.5 Ratio of Maximum Tolerable Peak Current - Pulse Duration ( II )

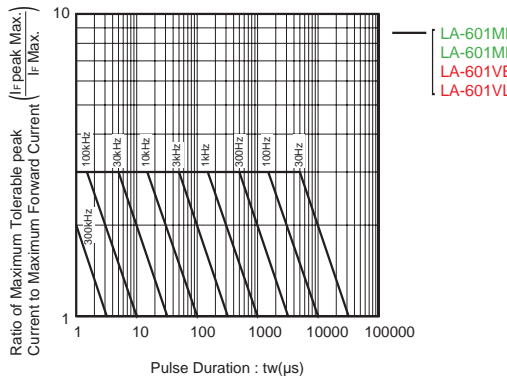


Fig.6 Ratio of Maximum Tolerable Peak Current - Pulse Duration ( III )

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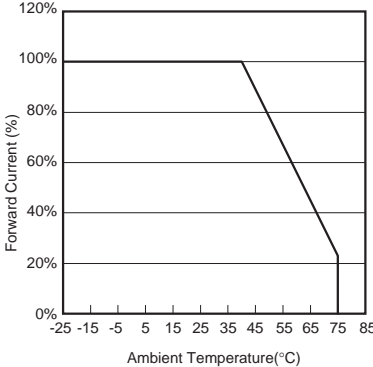


Fig.7 Derating

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