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Single Digit LED Numeric Display

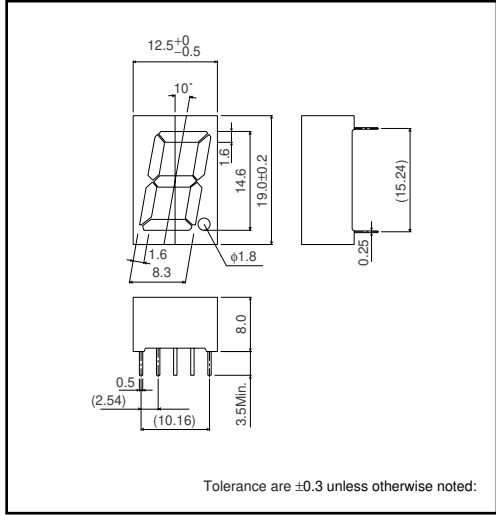
LA-601 B / L Series

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.

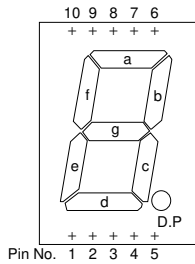
●Dimensions (Unit : mm)



●Selection guide

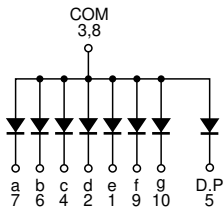
Common	Emitting color					
	Red	Red (High brightness)	Orange (High brightness)	Yellow (High brightness)	Green	Blue
Anode	LA-601VB	LA-601AB	LA-601EB	LA-601XB	LA-601MB	LA-601BB
Cathode	LA-601VL	LA-601AL	LA-601EL	LA-601XL	LA-601ML	LA-601BL

●Pin assignments

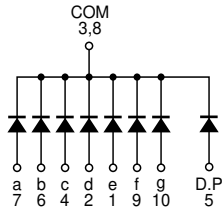


Pin No.	Function
1	Segment "e"
2	Segment "d"
3	Common
4	Segment "c"
5	D.P
6	Segment "b"
7	Segment "a"
8	Common
9	Segment "f"
10	Segment "g"

●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 _D	480	520	520	520	480	336	mW
Power dissipation	P _D / seg	60	65	65	65	60	42	mW
Forward current	I _F	20	25	25	25	20	10	mA
Peak forward current	I _{FP}	60 *1	50 *2	50 *2	50 *2	60 *1	50 *2	mA
Reverse voltage	V _R	5	5	5	5	5	5	V
Operating temperature	T _{opr}	-25 to +75						°C
Storage temperature	T _{stg}	-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 _F	I _F =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 _R	V _R =3V	—	100	—	100	—	100	—	100	—	100	—	100	μA
Peak wavelength	λ _P	I _F =10mA	650	—	626*	—	610*	—	589*	—	563	—	470	—	nm
Spectral line half width	Δλ	I _F =10mA	40	—	18*	—	17*	—	15*	—	40	—	26	—	nm

©The products are not radiations resistant.

* Shows the number on the condition of I_F=20mA.

●Luminous intensity

Color	λ _P (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_F=10mA.

LED displays

●Electrical and optical characteristic curves

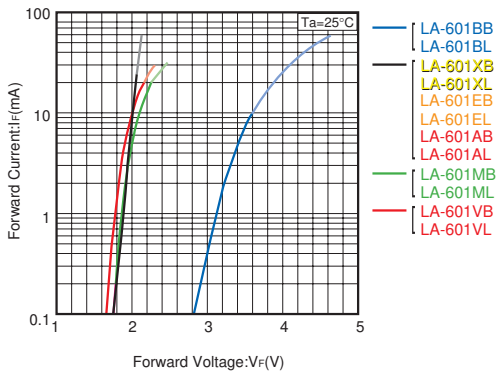


Fig.1 Forward Current - Forward Voltage

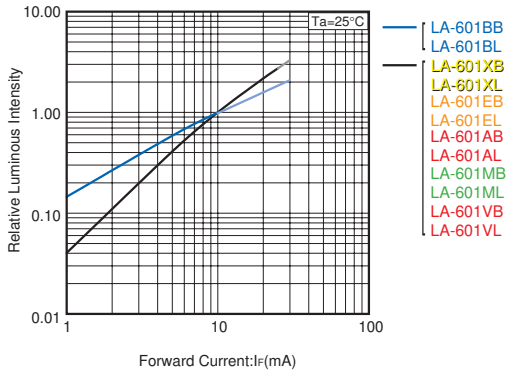


Fig.2 Relative Luminous Intensity - Forward Current

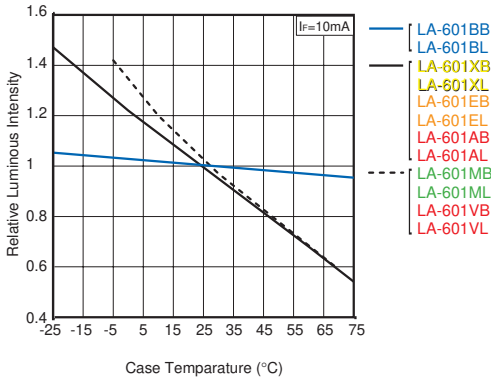


Fig.3 Relative Luminous Intensity - Case Temperature

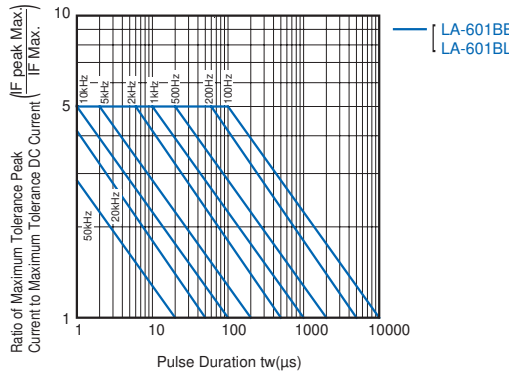


Fig.4 Ratio of Maximum Tolerable Peak Current - Pulse Duration (I)

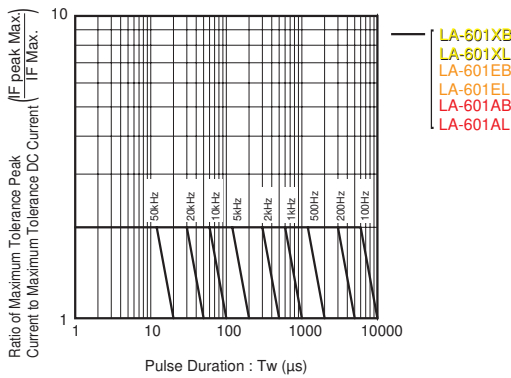


Fig.5 Ratio of Maximum Tolerable Peak Current - Pulse Duration (II)

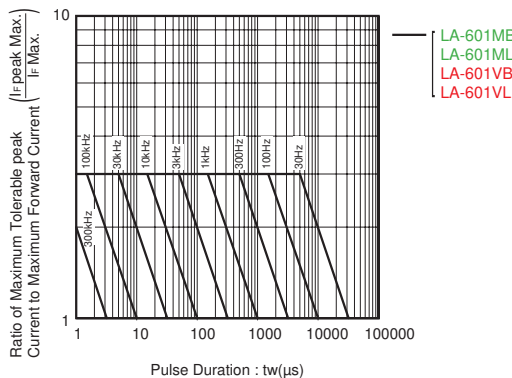


Fig.6 Ratio of Maximum Tolerable Peak Current - Pulse Duration (III)

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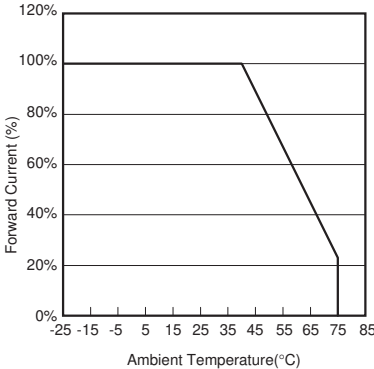


Fig.7 Derating

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