# Single Digit LED Numeric Display

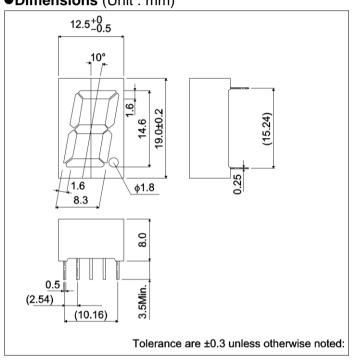
LA-601 B / L Series

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

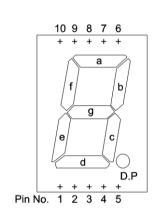
### ● Features

- 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.
- 4) Each color has anode common and cathode common respectively.

#### ● **Dimensions** (Unit: mm)



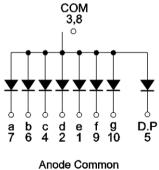
#### Pin assignments



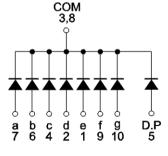
Pin No.	Function
1	Segment "e"
2	Segment "d"
3	Common
4	Segment "c"
5	D.P
6	Segment "b"
7	Segment "a"
8	Common
9	Segment "f"
10	Segment "g"

Datasheet

### ●Internal circuit schematic







Cathode Common

#### Selection guide

- concourant ganare						
Emitting color	Red	Red	Red Orange		Green	
Common	Keu	(High brightness)	(High brightness)	(High brightness)	Gieeli	
Anode	LA-601VB	LA-601AB	LA-601EB	LA-601XB	LA-601MB	
Cathode	LA-601VL	LA-601AL	LA-601EL	LA-601XL	LA-601ML	

## ● Absolute maximum ratings (T<sub>a</sub> = 25°C)

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

<sup>\*1</sup> Pulse width 1ms, duty 1 / 5

# ●Electrical and optical characteristics (T<sub>a</sub> = 25°C)

Parameter	Symbol Conditions	Conditions	Red		Red (High brightness)		Orange (High brightness)		Yellow (High brightness)		Green		Unit
			Тур.	Max.	Тур.	Max.	Тур.	Max.	Тур.	Max.	Тур.	Max.	
Forward voltage	$V_{F}$	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	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =3V	-	100	-	100	-	100	-	100	-	100	μΑ
Peak wavelength	$\lambda_{p}$	I <sub>F</sub> =10mA	650	-	626*	-	610*	-	589*	-	563	-	nm
Spectral line halfwidth	Δλ	I <sub>F</sub> =10mA	40	-	18*	-	17*	-	15*	-	40	-	nm

O Not designed for radiation resistance.

#### Luminous intensity

Parameter	$\lambda_{p}$	Type	Min.	Тур.	Max.	Unit
Red	650	LA-601VB	5.6	14	1	mcd
Reu	630	LA-601VL	5.0			
Red	626	LA-601AB	36	90		mcd
(High brightness)	020	LA-601AL	30	90	-	
Orange	610	LA-601EB	36	90		mcd
(High brightness)	610	LA-601EL	30	90	-	
Yellow	589	LA-601XB	36	90		mcd
(High brightness)	509	LA-601XL	30	90	-	
Green	563	LA-601MB	9	22	-	mcd
		LA-601ML	] 9			mea

© Condition I<sub>F</sub>=10mA

<sup>\*2</sup> Pulse width 0.1ms, duty 1 / 10

 $<sup>^{\</sup>star}$  Shows the number on the condition of  $I_F$ =20mA.

## •Electrical and optical characteristics curves

Fig.1 Forward Current vs. Forward Voltage

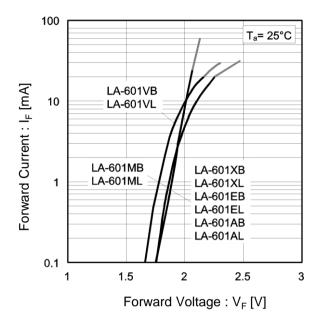


Fig.2 Relative Luminous Intensity vs. Forward Current

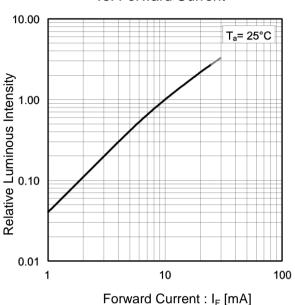


Fig.3 Relative Luminous Intensity vs. Case Temperature

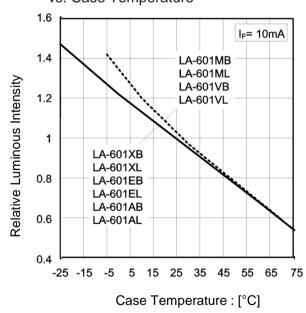
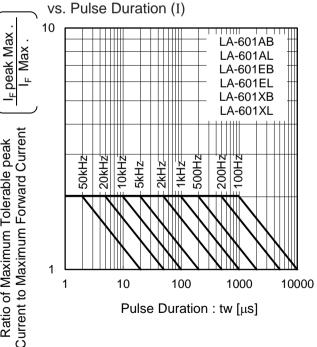


Fig.4 Ratio of Maximum Tolerable Peak Current



Ratio of Maximum Tolerable peak

## •Electrical and optical characteristics curves

Fig.4 Ratio of Maximum Tolerable Peak Current vs. Pulse Duration (II)

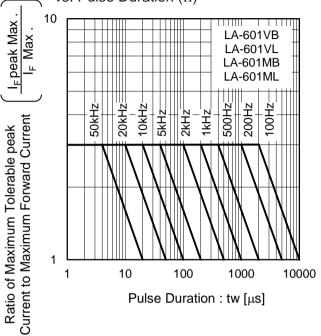
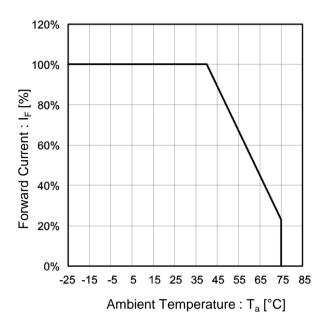


Fig.6 Derating



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