

# High efficiency, single-digit numeric displays

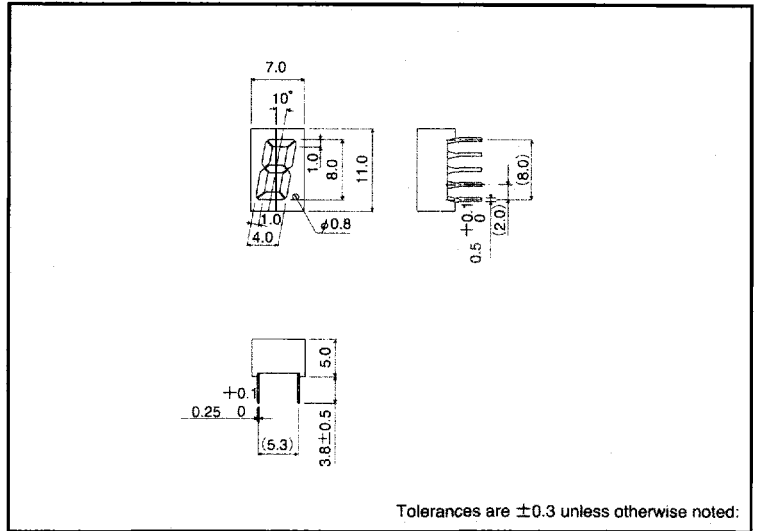
## LA-301 BL Series

The LA-301 BL series were designed to meet the need for 8 mm single-digit numeric displays. These LED numeric displays use GaAsP on GaP for the emitting material (with the exception of green) and are housed in an epoxy resin package. They are single-digit displays with a character height of 8 mm.

### ●Features

- 1) Large display with small exterior dimensions.
- 2) Compact package with little worrisome light leakage from segment.
- 3) Red, orange, yellow, and green are available in common anode and common cathode configurations.
- 4) The package surface is coated black and the segments are colored the display color.

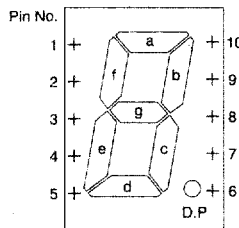
### ●External dimensions (Unit: mm)



### ●Selection guide

Emitting color	Common			
	Red	Orange	Yellow	Green
Anode	LA-301VB	LA-301DB	LA-301YB	LA-301MB
Cathode	LA-301VL	LA-301DL	LA-301YL	LA-301ML

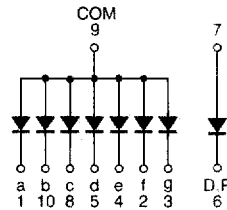
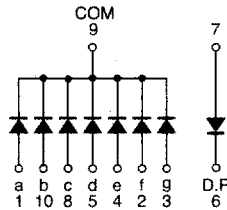
### ●Pin layout, BL series



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

● Internal circuit schematic (example of common cathode)

(example of common cathode)



● Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Red	Orange	Yellow	Green	Unit
		LA-301VB/VL	LA-301DB/DL	LA-301YB/YL	LA-301MB/ML	
Power dissipation	P <sub>D</sub>	320	320	320	480	mW
Power dissipation	P <sub>D</sub> /seg	40	40	40	60	mW
Forward current	I <sub>F</sub>	15	15	15	20	mA
Peak forward current	I <sub>FP</sub>	60*	60*	60*	60*	mA
Reverse voltage	V <sub>R</sub>	3	3	3	3	V
Operating temperature	T <sub>opr</sub>	-25~75				°C
Storage temperature	T <sub>stg</sub>	-30~85				°C

\* Pulse width 1ms Duty 1/5

● Electrical and optical characteristics (Ta = 25°C)

Parameter	Symbol	Conditions	Red			Orange			Yellow			Green			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =10mA	—	2.0	2.8	—	2.0	2.8	—	2.1	2.8	—	2.1	2.8	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =3V	—	—	100	—	—	100	—	—	100	—	—	100	μA
Peak wavelength	λ <sub>P</sub>	I <sub>F</sub> =10mA	—	650	—	—	610	—	—	585	—	—	563	—	nm
Spectral line half width	Δλ	I <sub>F</sub> =10mA	—	40	—	—	40	—	—	40	—	—	40	—	nm

\* Not designed for radiation resistance.

● Luminous intensity

Color	λ <sub>p</sub>	Type	Min.	Typ.	Max.	Unit
Red	650	LA-301VB	3.6	10	—	mcd
		LA-301VL				
Orange	610	LA-301DB	2.2	6.3	—	mcd
		LA-301DL				
Yellow	585	LA-301YB	2.2	6.3	—	mcd
		LA-301YL				
Green	563	LA-301MB	3.6	10	—	mcd
		LA-301ML				

Note: Measured at I<sub>F</sub> = 10 mA