

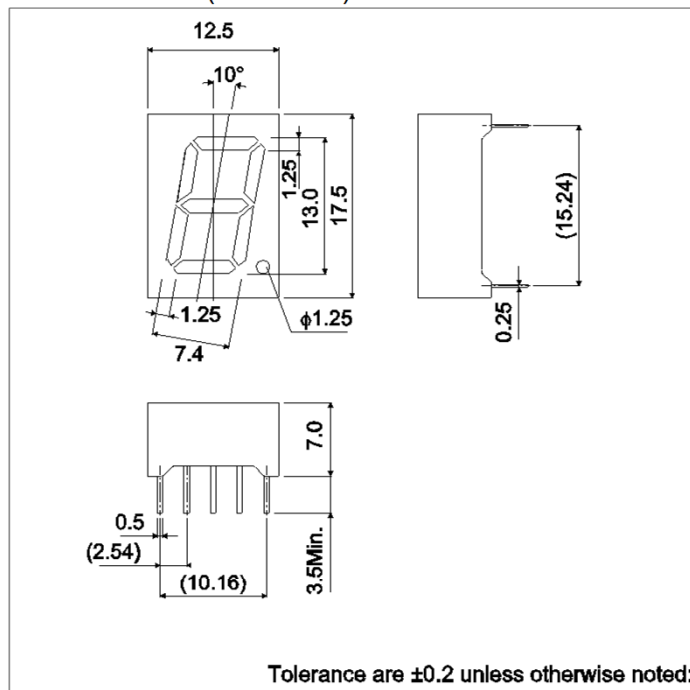
The LA-501DN series were designed to meet the need for 13mm single-digit numeric displays.

These LED numeric displays use GaAsP on GaP (Red) , GaP (Green) for the emitting material and are housed in an epoxy resin package. They are single-digit displays with a character height of 13.0mm.

### ●Features

- 1) Height of character: 13.0mm
- 2) Common anode and common cathode configurations are available for each color.
- 3) High-efficiency reflectors are used to achieve a bright, clear display.
- 4) The package surface is painted black and the segments are colored the display color.

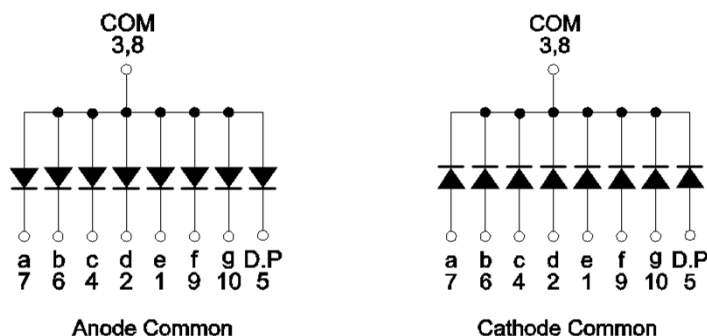
### ●Dimensions (Unit : mm)



### ●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"

### ●Internal circuit schematic



### ●Selection guide

Emitting color	Red	Green
Common		
Anode	LA-501VD	LA-501MD
Cathode	LA-501VN	LA-501MN

**●Absolute maximum ratings ( $T_a = 25^\circ\text{C}$ )**

Parameter	Symbol	Red	Green	Unit
		LA-501VD / VN	LA-501MD / MN	
Power dissipation	$P_D$	480	480	mW
Power dissipation	$P_D / \text{seg}$	60	60	mW
Forward current	$I_F$	20	20	mA
Peak forward current	$I_{FP}$	60 *	60 *	mA
Reverse voltage	$V_R$	5	5	V
Operating temperature	$T_{opr}$	$-25 \sim +75$		$^\circ\text{C}$
Storage temperature	$T_{stg}$	$-30 \sim +85$		$^\circ\text{C}$

\* Pulse width 1ms, duty 1 / 5

**●Electrical and optical characteristics ( $T_a = 25^\circ\text{C}$ )**

Parameter	Symbol	Conditions	Red			Green			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Forward voltage	$V_F$	$I_F = 10\text{mA}$	-	2	2.8	-	2.1	2.8	V
Reverse current	$I_R$	$V_R = 3\text{V}$	-	-	100	-	-	100	$\mu\text{A}$
Peak wavelength	$\lambda_p$	$I_F = 10\text{mA}$	-	563	-	-	563	-	nm
Spectral line halfwidth	$\Delta\lambda$	$I_F = 10\text{mA}$	-	40	-	-	40	-	nm

© Not designed for radiation resistance.

## ●Luminous intensity

Parameter	$\lambda_p$	Type	Min.	Typ.	Max.	Unit
Red	650	LA-501VD	5.6	16	-	mcd
		LA-501VN				
Green	563	LA-501MD	5.6	16	-	mcd
		LA-501MN				

© Condition  $I_F=10\text{mA}$ 

## ●Iv classification

Parameter	Type	Item	Iv classification	Unit
Red	LA-501VD LA-501VN	“ L ”	5.6 to 11	mcd
		“ M ”	9.0 to 18	mcd
		“ N ”	14 to 28	mcd
		“ P ”	22 to 45	mcd
		“ Q ”	36 to (71)	mcd
Green	LA-501MD LA-501MN	“ L ”	5.6 to 11	mcd
		“ M ”	9.0 to 18	mcd
		“ N ”	14 to 28	mcd
		“ P ”	22 to 45	mcd
		“ Q ”	36 to (71)	mcd

© Condition  $I_F=10\text{mA}$

●Electrical and optical characteristics curves

Fig.1 Forward Current vs. Forward Voltage

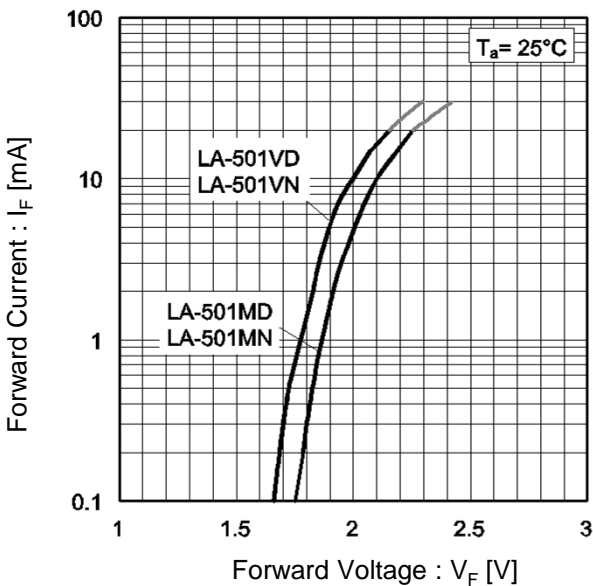


Fig.2 Relative Luminous Intensity vs. Forward Current

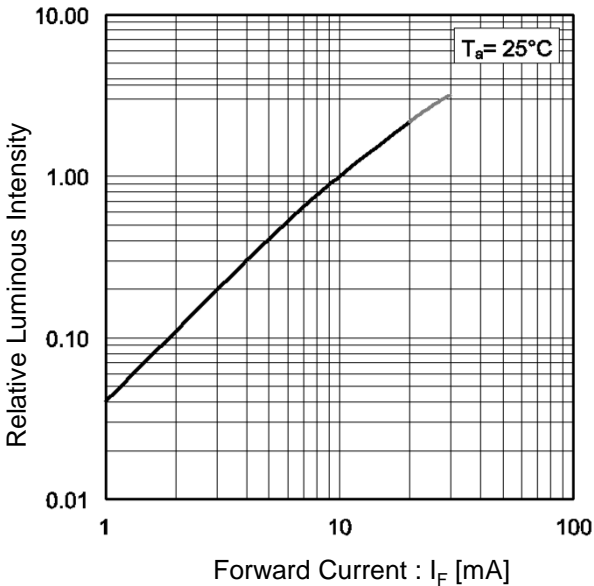


Fig.3 Relative Luminous Intensity vs. Case Temperature

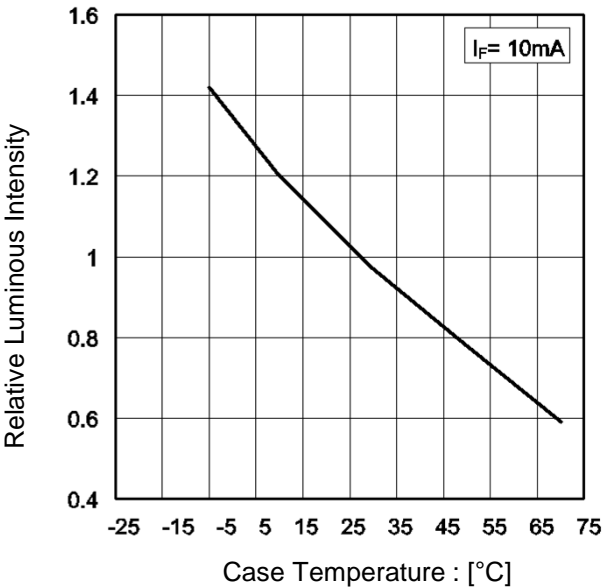
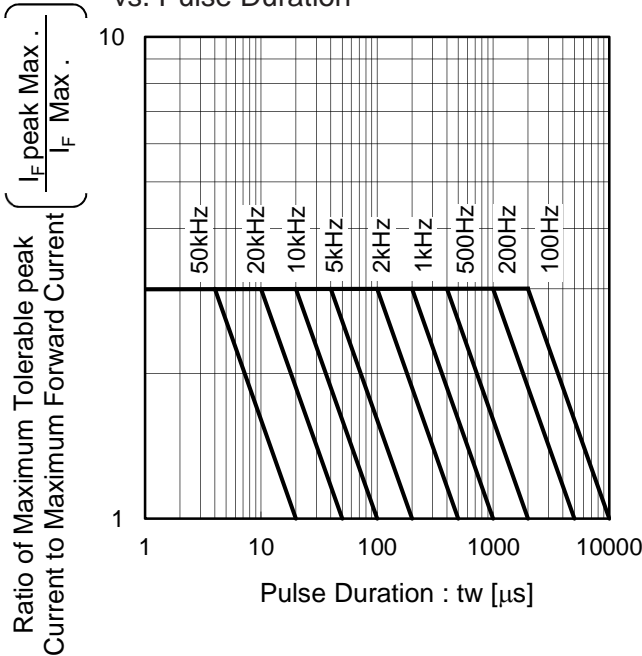
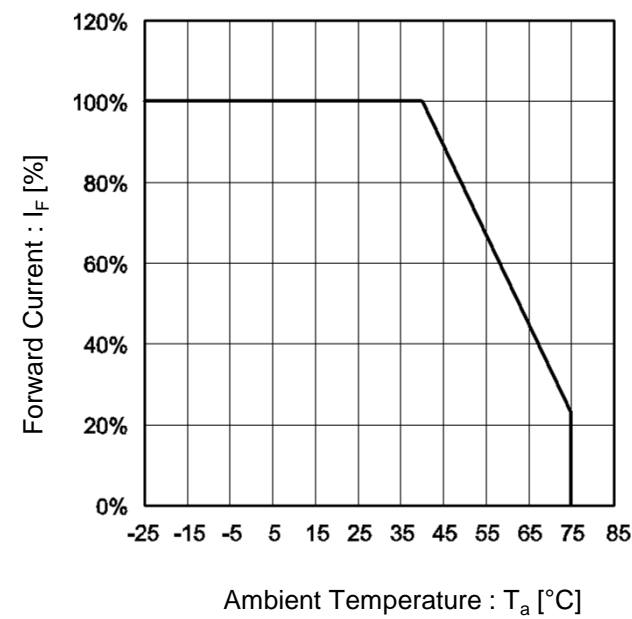


Fig.4 Ratio of Maximum Tolerable Peak Current vs. Pulse Duration



●Electrical and optical characteristics curves

Fig.5 Derating



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