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.
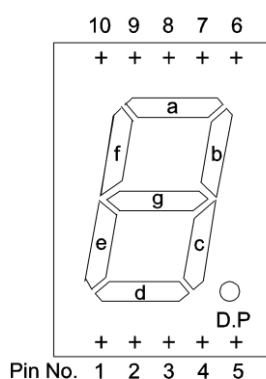
●Features

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.
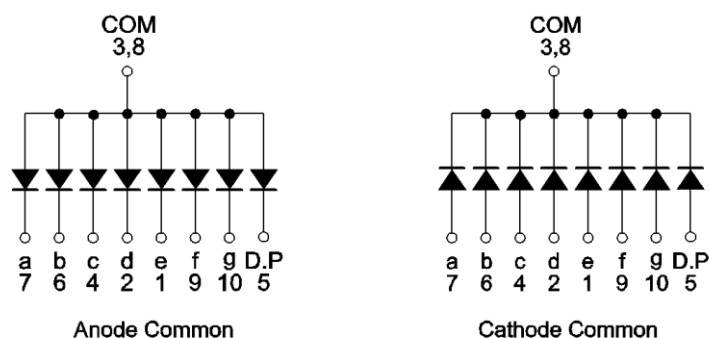
●Dimensions (Unit : mm)

Tolerance are ±0.2 unless otherwise noted:
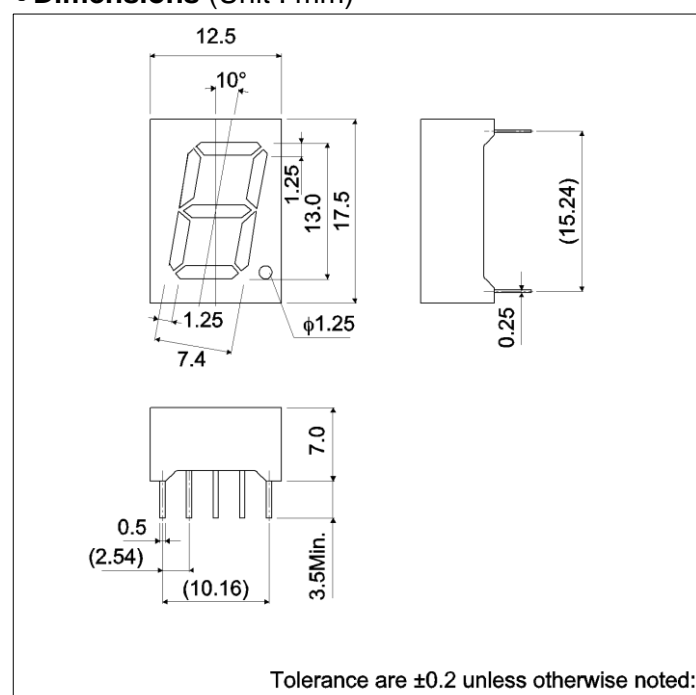
●Pin assignments

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

Anode Common

Cathode Common

●Selection guide

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

● **Absolute maximum ratings** (T_a = 25°C)

Parameter	Symbol	Red	Green	Unit
		LA-501VD / VN	LA-501MD / MN	
Power dissipation	P_D	480	480	mW
Power dissipation	P_D / 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}	$-25 \sim +75$		°C
Storage temperature	T_{stg}	$-30 \sim +85$		°C

* Pulse width 1ms, duty 1 / 5

● **Electrical and optical characteristics** (T_a = 25°C)

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

◎ Not designed for radiation resistance.

● **Luminous intensity**

Parameter	λ_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=10mA

● **Electrical and optical characteristics curves**
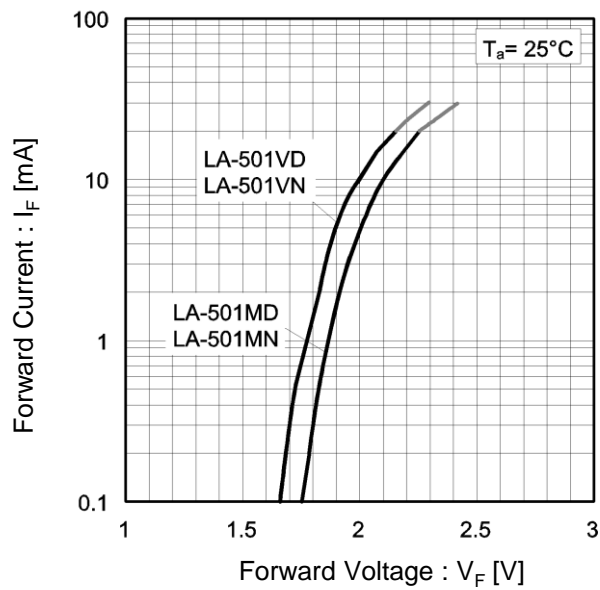
Fig.1 Forward Current vs. Forward Voltage

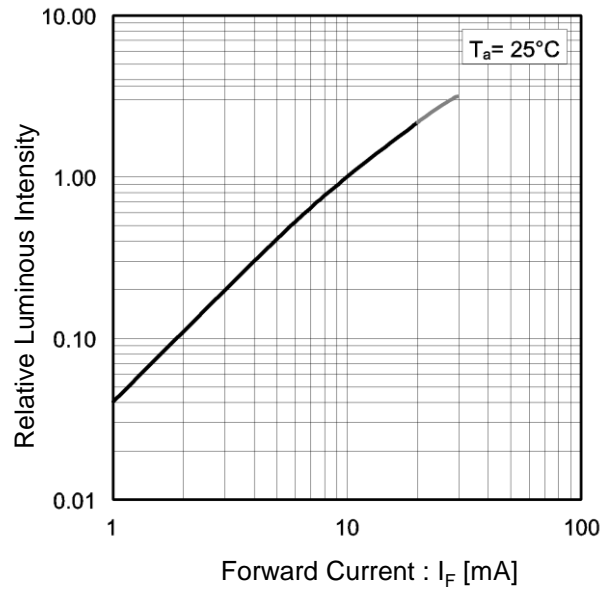Fig.2 Relative Luminous Intensity vs. Forward Current

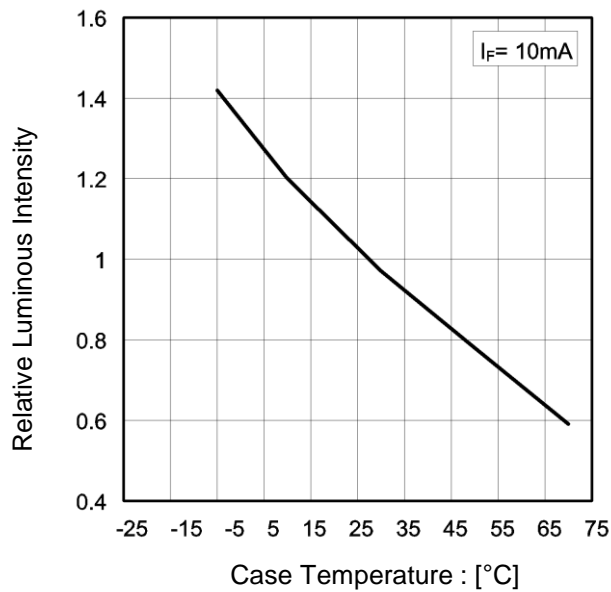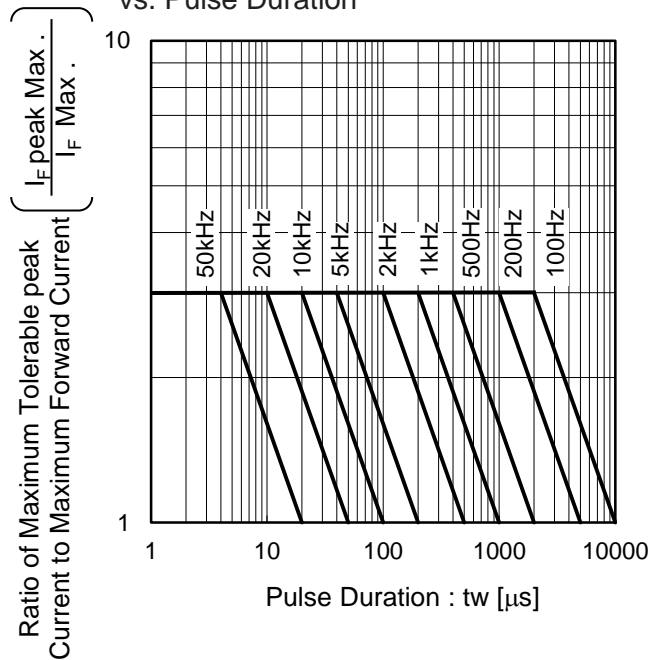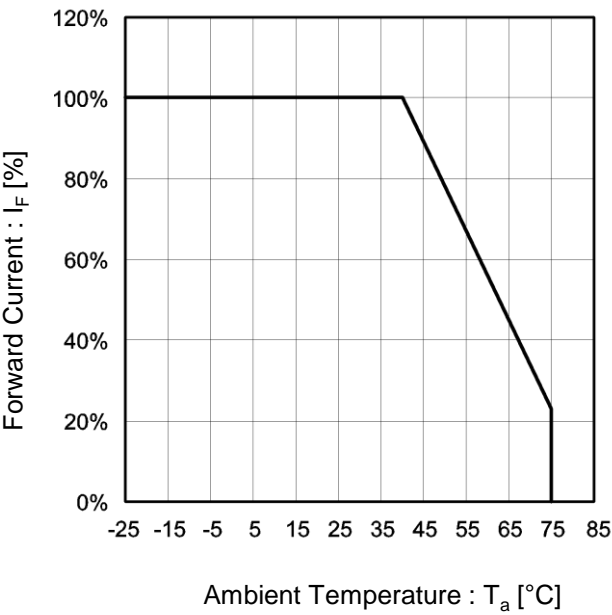Fig.3 Relative Luminous Intensity vs. Case Temperature

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

● **Electrical and optical characteristics curves**

Fig.5 Derating

Y-axis: Forward Current : I_F [%]
X-axis: Ambient Temperature : T_a [°C]

Notes

1) The information contained herein is subject to change without notice.

2) Before you use our Products, please contact our sales representative and verify the latest specifications :

3) Although ROHM is continuously working to improve product reliability and quality, semiconductors can break down and malfunction due to various factors.
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