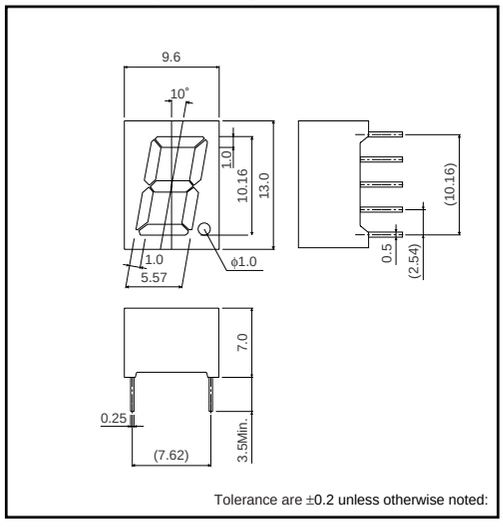
chanhvinh.com

Single Digit LED Numeric Display

LA-401 D / N Series

LA-401 D / N series is developed because of the demand for small single digit LED Numeric Display. Materials of emission are GaAsP on GaP, AlGaInP GaP and GaN. This is the height of a letter 10.16mm, single digit LED Numeric Display that is packed by EPOXY resin.

●Dimensions (Unit : mm)



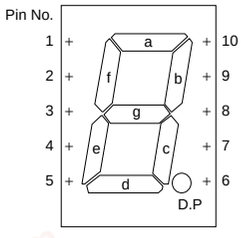
●Features

1) The height of a letter is 10.16mm.
2) Dimension is 9.6×13.0×7.0mm.
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.

●Selection guide

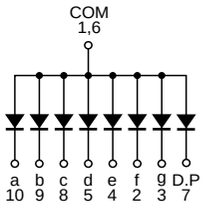
Emitting color / Common	Red	Red High brightness	Orange High brightness	Yellow High brightness	Green	Blue
Anode	LA-401VD	LA-401AD	LA-401ED	LA-401XD	LA-401MD	LA-401BD
Cathode	LA-401VN	LA-401AN	LA-401EN	LA-401XN	LA-401MN	LA-401BN

●Pin assignments

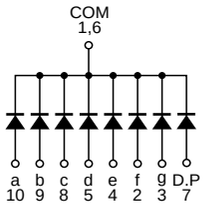


Pin No.	Function
1	Common
2	Segment "f"
3	Segment "g"
4	Segment "e"
5	Segment "d"
6	Common
7	D.P
8	Segment "c"
9	Segment "b"
10	Segment "a"

●Equivalent circuit (anode common)



(cathode common)



chanhvinh.com

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Red	Red High brightness	Orange High brightness	Yellow High brightness	Green	Blue	Unit
		LA-401VD / VN	LA-401AD / AN	LA-401ED / EN	LA-401XD / XN	LA-401MD / MN	LA-401BD / BN	
Power dissipation	P_D	320	520	520	520	480	336	mW
Power dissipation	P_D / seg	40	65	65	65	60	42	mW
Forward current	I_F	15	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	Topr	−25 to +75						˚C
Storage temperature	Tstg	−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	$\Delta\lambda$	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–401VD	5.6	16	mcd
		LA–401VN			
High brightness red	626	LA–401AD	36	90	mcd
		LA–401AN			
High brightness orange	610	LA–401ED	36	90	mcd
		LA–401EN			
High brightness yellow	589	LA–401XD	36	90	mcd
		LA–401XN			
Green	563	LA–401MD	5.6	16	mcd
		LA–401MN			
Blue	470	LA–401BD	14	56	mcd
		LA–401BN			

◎A condition of measurement is I_F=10mA.

chanhvinh.com

●Electrical and optical characteristic curves

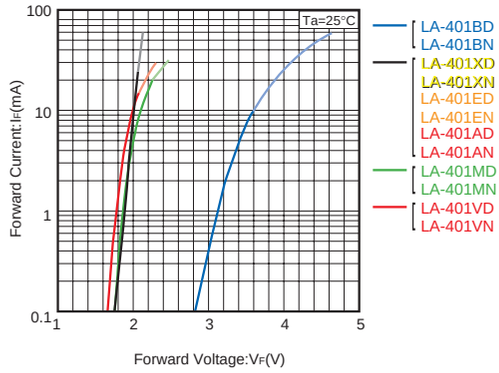


Fig.1 Forward Current - Forward Voltage

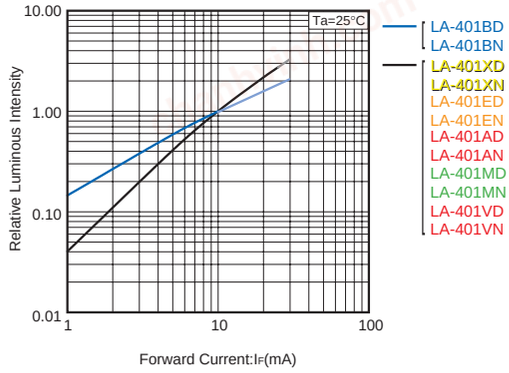


Fig.2 Relative Luminous Intensity - Forward Current

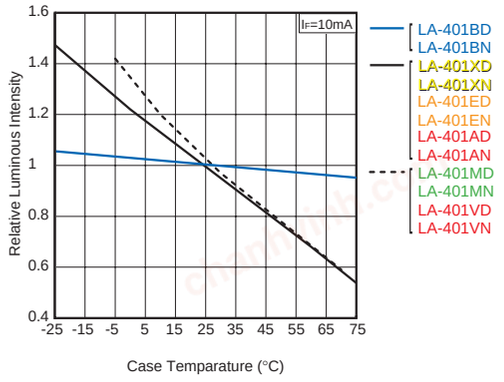


Fig.3 Relative Luminous Intensity - Case Temperature

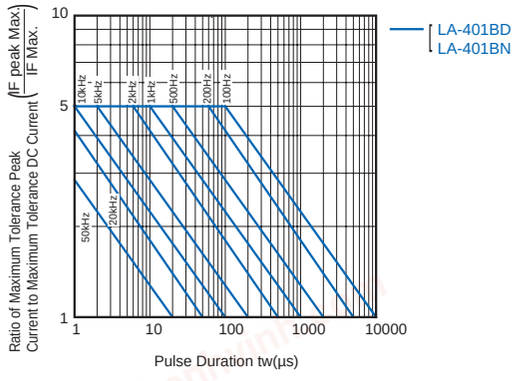


Fig.4 Ratio of Maximum Tolerable Peak Current - Pulse Duration (I)

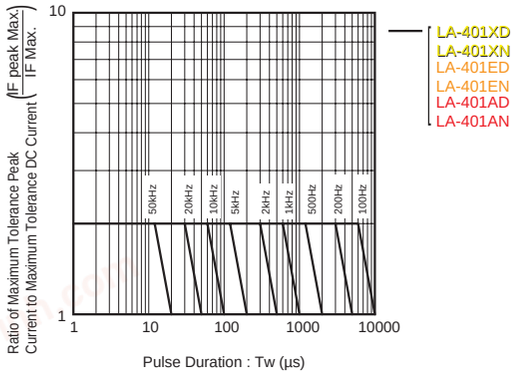


Fig.5 Ratio of Maximum Tolerable Peak Current - Pulse Duration (II)

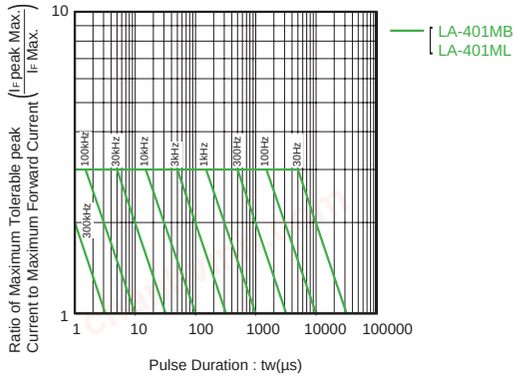


Fig.6 Ratio of Maximum Tolerable Peak Current - Pulse Duration (III)

chanhvinh.com

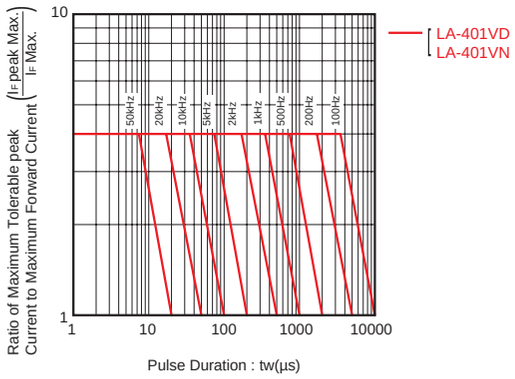


Fig.7 Ratio of Maximum Tolerable Peak Current - Pulse Duration (IV)

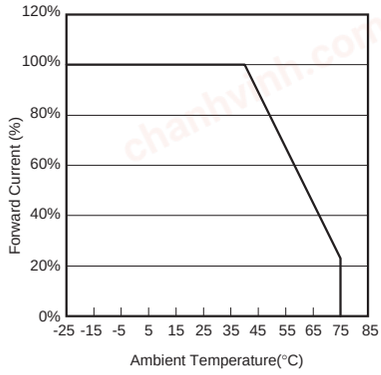


Fig.8 Derating

chanhvinh.com

Notes

No copying or reproduction of this document, in part or in whole, is permitted without the consent of ROHM CO.,LTD.

The content specified herein is subject to change for improvement without notice.

The content specified herein is for the purpose of introducing ROHM's products (hereinafter "Products"). If you wish to use any such Product, please be sure to refer to the specifications, which can be obtained from ROHM upon request.
Examples of application circuits, circuit constants and any other information contained herein illustrate the standard usage and operations of the Products. The peripheral conditions must be taken into account when designing circuits for mass production.

Great care was taken in ensuring the accuracy of the information specified in this document. However, should you incur any damage arising from any inaccuracy or misprint of such information, ROHM shall bear no responsibility for such damage.

The technical information specified herein is intended only to show the typical functions of and examples of application circuits for the Products. ROHM does not grant you, explicitly or implicitly, any license to use or exercise intellectual property or other rights held by ROHM and other parties. ROHM shall bear no responsibility whatsoever for any dispute arising from the use of such technical information.

The Products specified in this document are intended to be used with general-use electronic equipment or devices (such as audio visual equipment, office-automation equipment, communication devices, electronic appliances and amusement devices).

The Products are not designed to be radiation tolerant.

While ROHM always makes efforts to enhance the quality and reliability of its Products, a Product may fail or malfunction for a variety of reasons.

Please be sure to implement in your equipment using the Products safety measures to guard against the possibility of physical injury, fire or any other damage caused in the event of the failure of any Product, such as derating, redundancy, fire control and fail-safe designs. ROHM shall bear no responsibility whatsoever for your use of any Product outside of the prescribed scope or not in accordance with the instruction manual.

The Products are not designed or manufactured to be used with any equipment, device or system which requires an extremely high level of reliability the failure or malfunction of which may result in a direct threat to human life or create a risk of human injury (such as a medical instrument, transportation equipment, aerospace machinery, nuclear-reactor controller, fuel-controller or other safety device). ROHM shall bear no responsibility in any way for use of any of the Products for the above special purposes. If a Product is intended to be used for any such special purpose, please contact a ROHM sales representative before purchasing.

If you intend to export or ship overseas any Product or technology specified herein that may be controlled under the Foreign Exchange and the Foreign Trade Law, you will be required to obtain a license or permit under the Law.

Thank you for your accessing to ROHM product informations.
More detail product informations and catalogs are available, please contact your nearest sales office.

ROHM Customer Support System — **THE AMERICAS** / **EUROPE** / **ASIA** / **JAPAN**

www.rohm.com

Contact us : webmaster@rohm.co.jp

Copyright © 2008 ROHM CO.,LTD.

ROHM CO., LTD. 21 Saiin Mizosaki-cho, Ukyo-ku, Kyoto 615-8585, Japan
TEL : +81-75-311-2121
FAX : +81-75-315-0172