

Double Digits LED Numeric Display

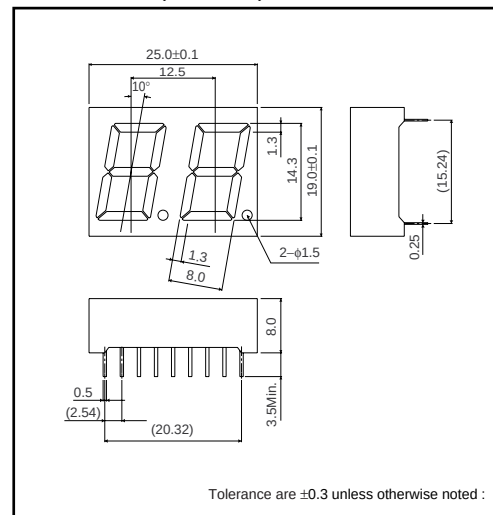
LB-602 A / K2 Series

LB-602 A / K2 series is designed to use in the light. Materials of emission are GaAsP on GaP, AlGaInP GaP and GaN. This is the height of a letter 14.3mm, double digits LED Numeric Display that is packed by epoxy resin.

●Features

- 1) The height of a letter is 14.3mm.
- 2) Dimension is 25.0×19.0×8.0mm.
- 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.

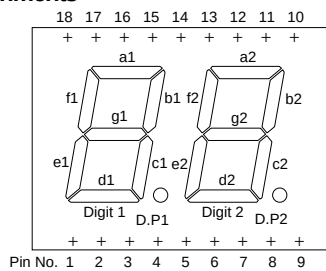
●Dimensions (Unit : mm)



●Selection guide

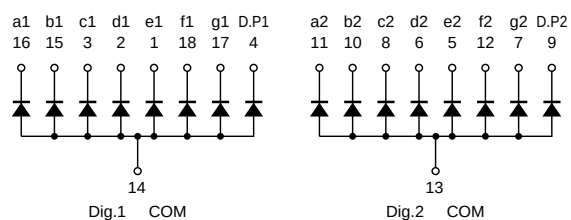
Emitting color Common	Red	Red (High brightness)	Orange (High brightness)	Yellow (High brightness)	Green	Blue
Anode	LB-602VA2	LB-602AA2	LB-602EA2	LB-602XA2	LB-602MA2	LB-602BA2
Cathode	LB-602VK2	LB-602AK2	LB-602EK2	LB-602XK2	LB-602MK2	LB-602BK2

●Pin assignments

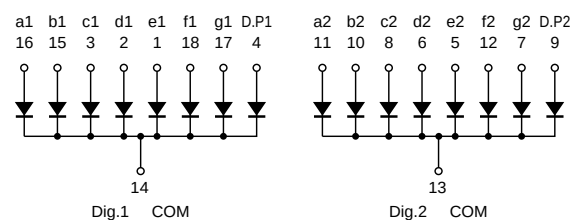


Pin No.	Function	Pin No.	Function
1	Segment "e1"	10	Segment "b2"
2	Segment "d1"	11	Segment "a2"
3	Segment "c1"	12	Segment "f2"
4	D.P1	13	Digit 2 Common
5	Segment "e2"	14	Digit 1 Common
6	Segment "d2"	15	Segment "b1"
7	Segment "g2"	16	Segment "a1"
8	Segment "c2"	17	Segment "g1"
9	D.P2	18	Segment "f1"

●Equivalent circuit (anode common)



(cathode common)



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●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Red	Red (High brightness)	Orange (High brightness)	Yellow (High brightness)	Green	Blue	Unit
		LB-602VA2 / VK2	LB-602AA2 / AK2	LB-602EA2 / EK2	LB-602XA2 / XK2	LB-602MA2 / MK2	LB-602BA2 / BK2	
Power dissipation	P _D	960	1040	1040	1040	960	960	mW
Power dissipation	P _D / seg	60	65	65	65	65	42	mW
Forward current	I _F	20	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	T _{opr}	-25 to +75						°C
Storage temperature	T _{stg}	-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	Δλ	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	LB-602VA2	5.6	16	mcd
		LB-602VK2			
Red (High brightness)	626	LB-602AA2	36	90	mcd
		LB-602AK2			
Orange (High brightness)	610	LB-602EA2	36	90	mcd
		LB-602EK2			
Yellow (High brightness)	589	LB-602XA2	36	90	mcd
		LB-602XK2			
Green	563	LB-602MA2	9	25	mcd
		LB-602MK2			
Blue	470	LB-602BA2	14	56	mcd
		LB-602BK2			

©A condition of measurement is I_F=10mA.

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●Electrical and optical characteristic curves

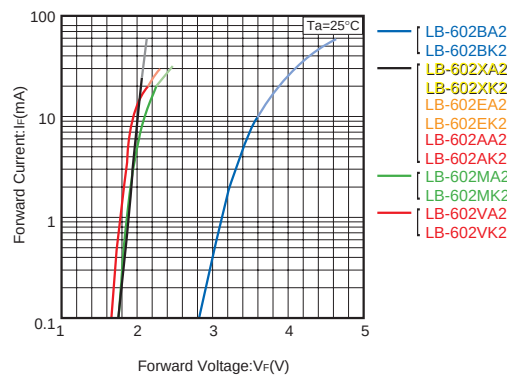


Fig.1 Forward Current - Forward Voltage

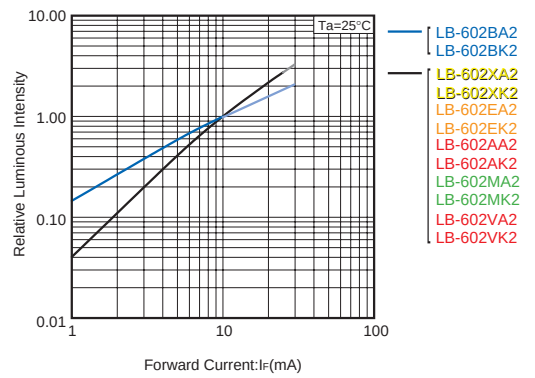


Fig.2 Relative Luminous Intensity - Forward Current

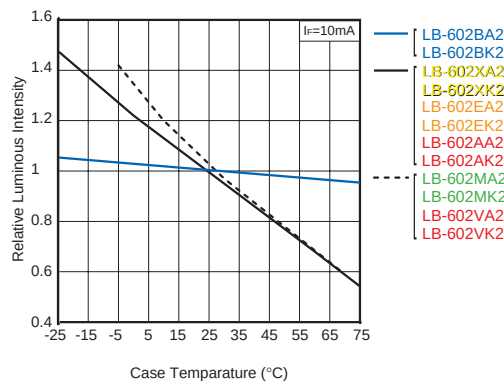


Fig.3 Relative Luminous Intensity - Case Temperature

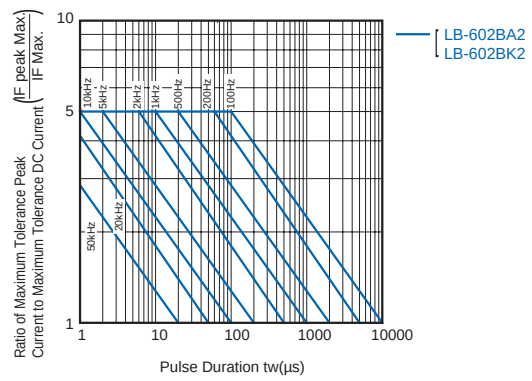


Fig.4 Ratio of Maximum Tolerable Peak Current - Pulse Duration (I)

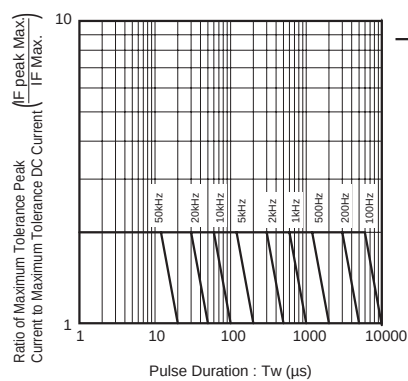


Fig.5 Ratio of Maximum Tolerable Peak Current - Pulse Duration (II)

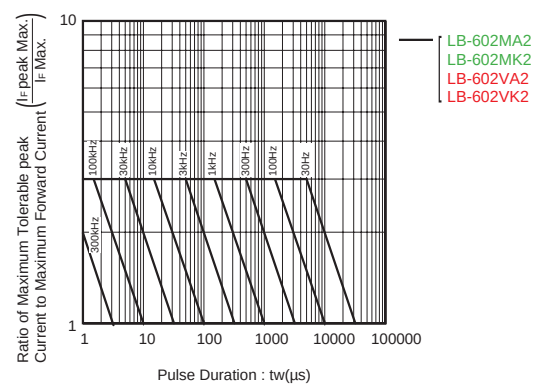


Fig.6 Ratio of Maximum Tolerable Peak Current - Pulse Duration (III)

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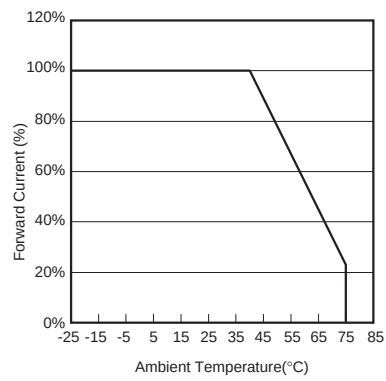


Fig.7 Derating

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