



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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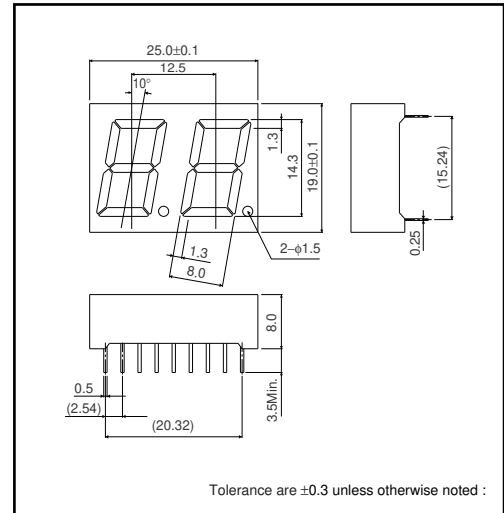


LB-602 A / K2 series is designed to use in the light. Materials of emission are GaAsP on GaP, AlGaInP GaP and GaN. This is the height of a letter 14.3mm, double digits LED Numeric Display that is packed by epoxy resin.

#### ●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.

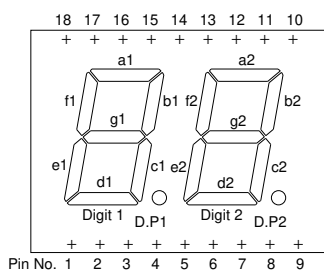
#### ●Dimensions



#### ●Selection guide

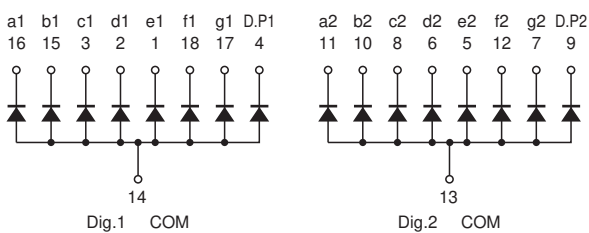
Common	Emitting color					
	Red	Red (High brightness)	Orange (High brightness)	Yellow (High brightness)	Green	Blue
Anode	LB-602VA2	LB-602AA2	LB-602EA2	LB-602XA2	LB-602MA2	LB-602BA2
Cathode	LB-602VK2	LB-602AK2	LB-602EK2	LB-602XK2	LB-602MK2	LB-602BK2

#### ●Pin assignments

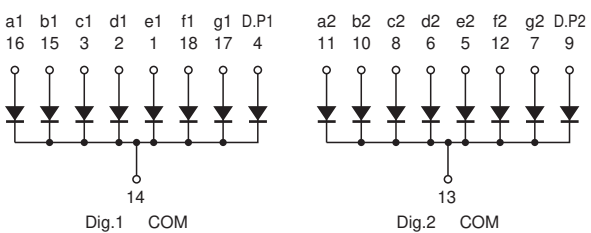


Pin No.	Function	Pin No.	Function
1	Segment "e1"	10	Segment "b2"
2	Segment "d1"	11	Segment "a2"
3	Segment "c1"	12	Segment "f2"
4	D.P1	13	Digit 2 Common
5	Segment "e2"	14	Digit 1 Common
6	Segment "d2"	15	Segment "b1"
7	Segment "g2"	16	Segment "a1"
8	Segment "c2"	17	Segment "g1"
9	D.P2	18	Segment "f1"

#### ●Equivalent circuit (anode common)



#### (cathode common)



●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 <sub>D</sub>	960	1040	1040	1040	960	672	mW
Power dissipation	P <sub>D</sub> / seg	60	65	65	65	65	42	mW
Forward current	I <sub>F</sub>	20	25	25	25	20	10	mA
Peak forward current	I <sub>FP</sub>	60 *1	50 *2	50 *2	50 *2	60 *1	50 *2	mA
Reverse voltage	V <sub>R</sub>	5	5	5	5	5	5	V
Operating temperature	T <sub>opr</sub>	-25 to +75						°C
Storage temperature	T <sub>stg</sub>	-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 <sub>F</sub>	I <sub>F</sub> =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 <sub>R</sub>	V <sub>R</sub> =3V	-	100	-	100	-	100	-	100	-	100	-	100	μA
Peak wavelength	λ <sub>P</sub>	I <sub>F</sub> =10mA	650	-	626*	-	610*	-	589*	-	563	-	470	-	nm
Spectral line half width	Δλ	I <sub>F</sub> =10mA	40	-	18*	-	17*	-	15*	-	40	-	26	-	nm

©The products are not radiations resistant.

\* Shows the number on the condition of I<sub>F</sub>=20mA.

●Luminous intensity

Color	λ <sub>P</sub> (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<sub>F</sub>=10mA.

●Electrical and optical characteristic curves

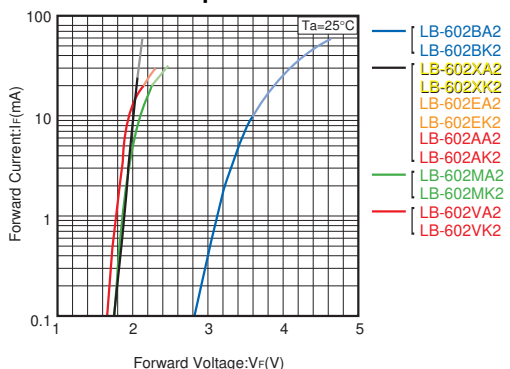


Fig.1 Forward Current - Forward Voltage

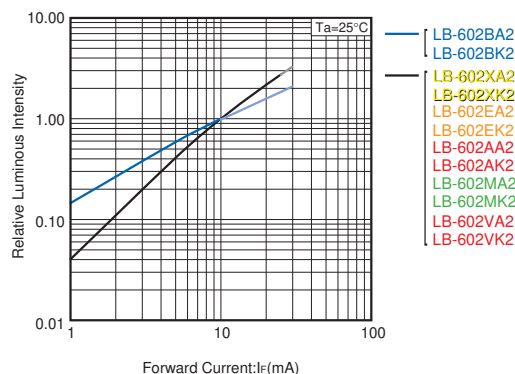


Fig.2 Relative Luminous Intensity - Forward Current

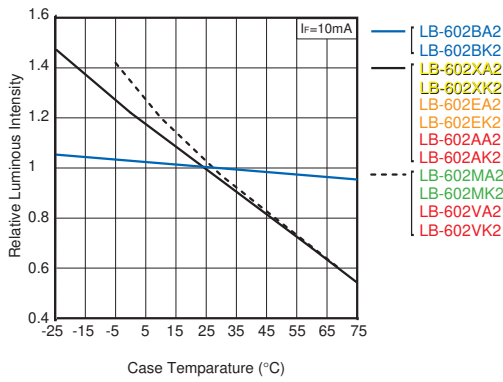


Fig.3 Relative Luminous Intensity - Case Temperature

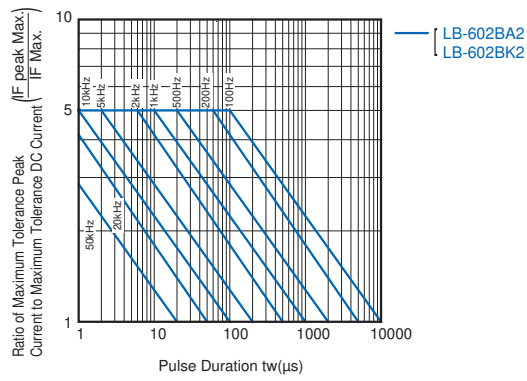


Fig.4 Ratio of Maximum Tolerable Peak Current - Pulse Duration ( I )

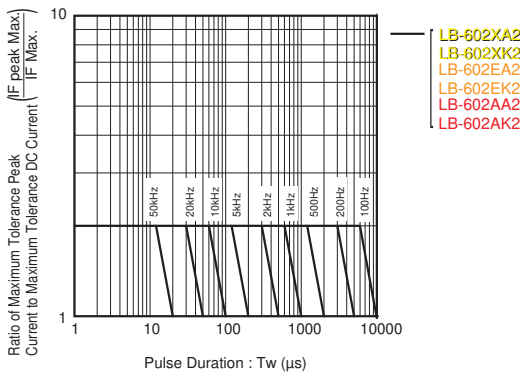


Fig.5 Ratio of Maximum Tolerable Peak Current - Pulse Duration ( II )

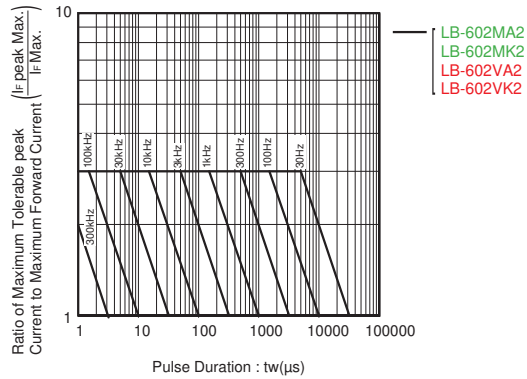


Fig.6 Ratio of Maximum Tolerable Peak Current - Pulse Duration ( III )

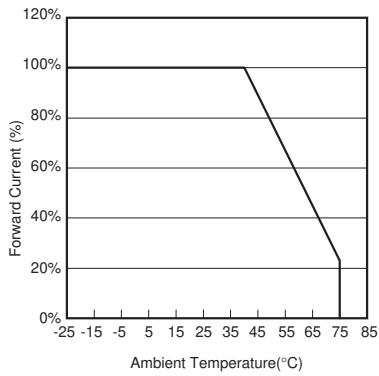


Fig.7 Derating

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