

# High efficiency, two-digit numeric displays

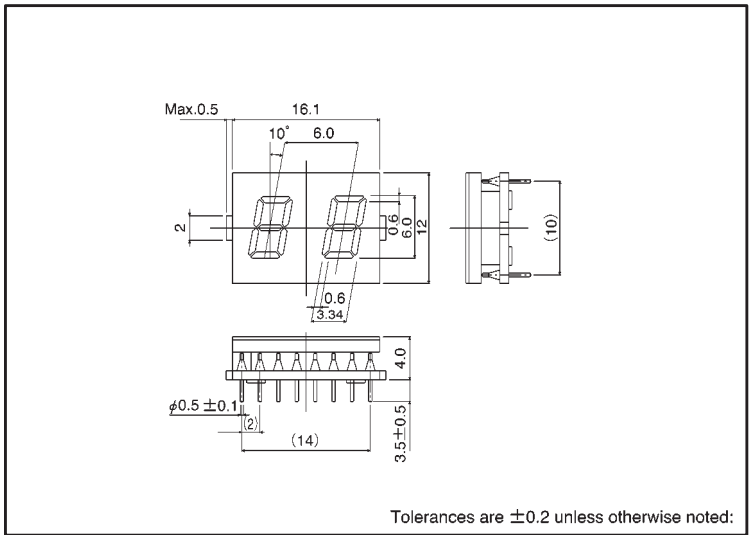
## LB-202 DN Series

The LB-202 DN series were designed to meet the need for multi-digit numeric displays. These two-digit LED numeric displays use GaAsP on GaP for the emitting material (with the exception of green) and have a character height of 6.0 mm.

●Features

- 1) Height of character : 6.0 mm.
- 2) Common anode and common cathode configurations are available for each color.
- 3) High-efficiency reflectors are used to achieve a bright, clear display.

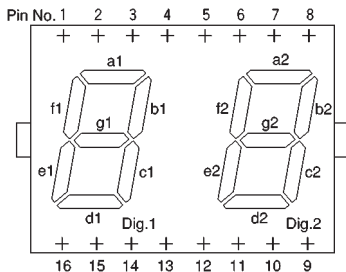
●External dimensions (Units: mm)



●Selection guide

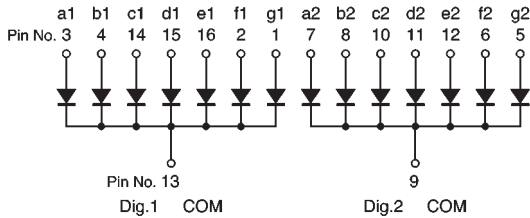
Emitting color	Red	Orange	Yellow	Green
	Common			
Anode	LB-202VD	LB-202DD	LB-202YD	LB-202MD
Cathode	LB-202VN	LB-202DN	LB-202YN	LB-202MN

●Pin assignments



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

● Internal circuit schematic (example of common cathode)



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

Parameter	Symbol	Red	Orange	Yellow	Green	Unit
		LB-202VD / VN	LB-202DD / DN	LB-202YD / YN	LB-202MD / MN	
Power dissipation	$P_D$	784	784	784	784	mW
Power dissipation	$P_D / \text{seg}$	56	56	56	56	mW
Forward current	$I_F$	20	20	20	20	mA
Peak forward current	$I_{FP}$	60*	60*	60*	60*	mA
Reverse voltage	$V_R$	3	3	3	3	V
Operating temperature	$T_{opr}$	-25~+75				$^\circ\text{C}$
Storage temperature	$T_{stg}$	-30~+85				$^\circ\text{C}$

\* Pulse width 1ms duty 1 / 5

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

Parameter	Symbol	Conditions	Red			Orange			Yellow			Green			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Forward voltage	$V_F$	$I_F=10\text{mA}$	—	2.1	2.8	—	2.1	2.8	—	2.1	2.8	—	2.1	2.8	V
Reverse current	$I_R$	$V_R=3\text{V}$	—	—	100	—	—	100	—	—	100	—	—	100	$\mu\text{A}$
Peak wavelength	$\lambda_P$	$I_F=10\text{mA}$	—	650	—	—	610	—	—	585	—	—	563	—	nm
Spectral line half width	$\Delta\lambda$	$I_F=10\text{mA}$	—	40	—	—	40	—	—	40	—	—	40	—	nm

©Not designed for radiation resistance.

● Luminous intensity

Color	$\lambda_P$	Type	Min.	Typ.	Max.	Unit
Red	650	LB-202VD	1.4	4.0	—	mcd
		LB-202VN				
Orange	610	LB-202DD	2.2	6.3	—	mcd
		LB-202DN				
Yellow	585	LB-202YD	1.4	4.0	—	mcd
		LB-202YN				
Green	563	LB-202MD	3.6	10	—	mcd
		LB-202MN				

Note: Measured at  $I_F = 10\text{mA}$