

High efficiency, three-digit numeric displays

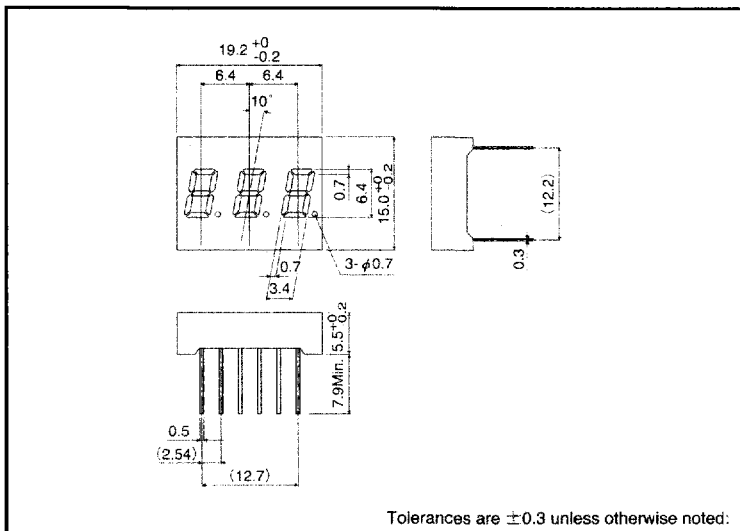
LB-203 BL Series

The LB-203 BL series are small, three-digit numeric displays with a character height of 6.4 mm. These displays can be combined with appropriate displays in the two-digit LB-202 BL series to form a multi-digit display with an equal pitch interval between characters.

●Features

- 1) Four colors are available : red, orange, yellow and green.
- 2) Common anode and common cathode configurations are available.
- 3) Dynamic lighting system to minimize the number of pins.
- 4) Equal pitch interval between characters even with multi-digit display.
- 5) The package surface is coated black and the segments are colored the display color.

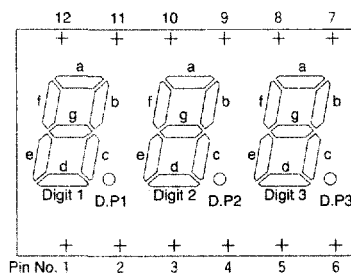
●External dimensions (Unit: mm)



●Selection guide

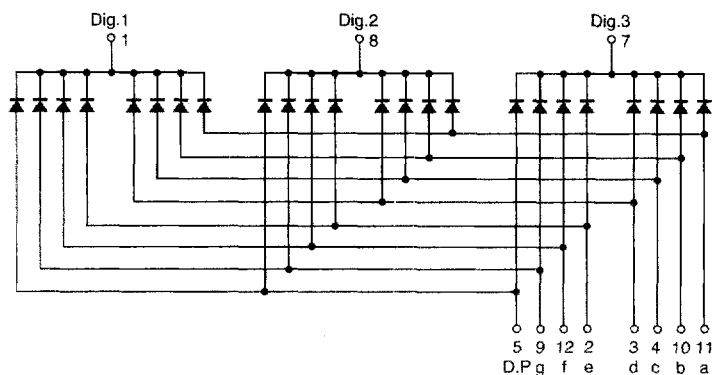
Emitting color	Red	Orange	Yellow	Green
Common				
Anode	LB-203VB	LB-203DB	LB-203YB	LB-203MB
Cathode	LB-203VL	LB-203DL	LB-203YL	LB-203ML

●Pin layout



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

● Internal circuit schematic (example of common cathode)



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

Parameter	Symbol	Red	Orange	Yellow	Green	Unit
		LB-203VB/VL	LB-203DB/DL	LB-203YB/YL	LB-203MB/ML	
Power dissipation	P_D	960	960	960	960	mW
Power dissipation	P_D/seg	40	40	40	40	mW
Forward current	I_F	15	15	15	15	mA
Peak forward current	I_{FP}	60*	60*	60*	60*	mA
Reverse voltage	V_R	3	3	3	3	V
Operating temperature	T_{opr}	$-25 \sim 75$				$^\circ\text{C}$
Storage temperature	T_{stg}	$-30 \sim 85$				$^\circ\text{C}$

* 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	$I_F = 10\text{mA}$	—	2.0	2.8	—	2.0	2.8	—	2.1	2.8	—	2.1	2.8	V
Reverse current	I_R	$V_R = 3\text{V}$	—	—	100	—	—	100	—	—	100	—	—	100	μA
Peak wavelength	λ_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	λ_P	Type	Min.	Typ.	Max.	Unit
Red	650	LB-203VB	2.2	6.3	—	mcd
		LB-203VL				
Orange	610	LB-203DB	2.2	6.3	—	mcd
		LB-203DL				
Yellow	585	LB-203YB	2.2	6.3	—	mcd
		LB-203YL				
Green	563	LB-203MB	2.2	6.3	—	mcd
		LB-203ML				

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