

LED displays

High efficiency, three-digit numeric displays

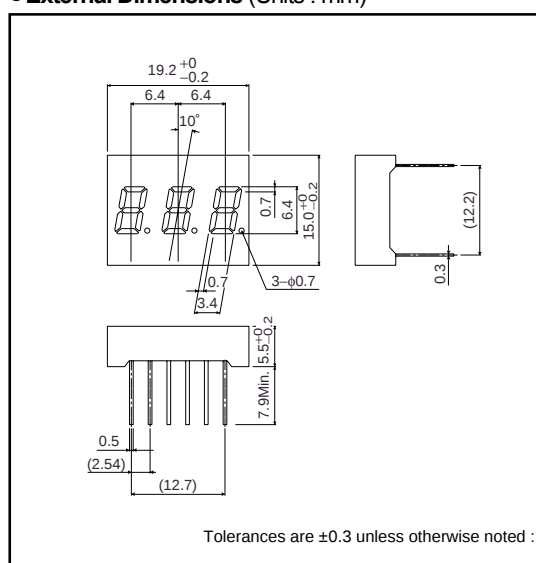
LB-203BL Series

The LB-203BL series are small, three-digit numeric displays with a character height of 6.4mm. These displays can be combined with appropriate displays in the two-digit LB-202BL 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 painted black and the segments are colored the display color.

●External Dimensions (Units : mm)

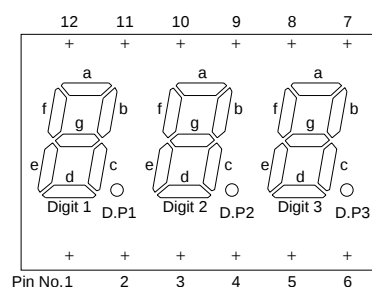


●Selection guide

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

* Order-based production.

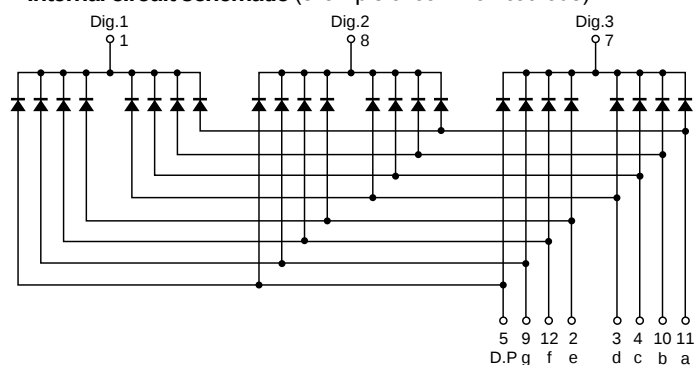
●Pin assignments



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"

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●Internal circuit schematic (example of common cathode)



●Absolute maximum ratings (Ta=25°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	60	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~+75				°C
Storage temperature	T _{stg}	-30~+85				°C

* Pulse width 1ms duty 1 / 5

●Electrical and optical characteristics (Ta=25°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 =10mA	—	2.0	2.8	—	2.0	2.8	—	2.1	2.8	—	2.1	2.8	V
Reverse current	I _R	V _R =3V	—	—	100	—	—	100	—	—	100	—	—	100	μA
Peak wavelength	λ _P	I _F =10mA	—	650	—	—	610	—	—	585	—	—	563	—	nm
Spectral line half width	Δλ	I _F =10mA	—	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=10mA