

High efficiency, three-digit numeric displays

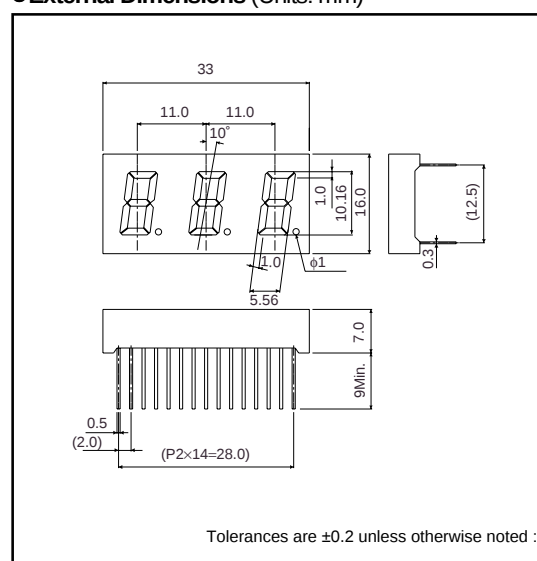
LB-403DN Series

The LB-403DN series were designed to meet the need for multi-digit numeric displays. These LED numeric displays use GaAsP on GaP for the emitting material (with the exception of green) and are housed in an epoxy resin package. They are three-digit displays with a character height of 10.16 mm.

●Features

- 1) Height of character: 10.16 mm
- 2) Long 9 mm leads (minimum) on bottom of case.
- 3) High efficiency reflectors are used to achieve a bright, clear display.
- 4) The package surface is painted black and the segments are colored the display color.

●External Dimensions (Units: mm)

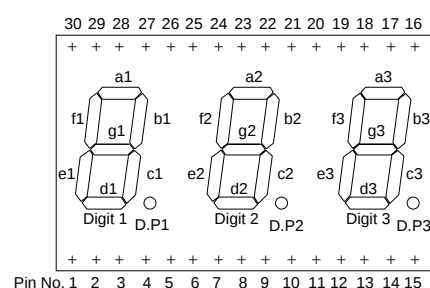


●Selection guide

Emitting color	Red	Orange	Green
Common			
Anode	LB-403VD	LB-403DD *	LB-403MD
Cathode	LB-403VN	—	LB-403MN

* Order-based production.

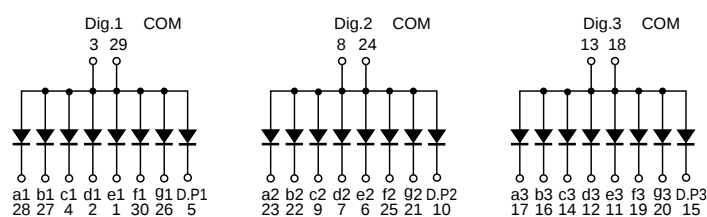
●Pin assignments



Pin No.	Function	Pin No.	Function
1	Segment "e1"	16	Segment "b3"
2	Segment "d1"	17	Segment "a3"
3	Digit 1 Common	18	Digit 3 Common
4	Segment "c1"	19	Segment "f3"
5	D.P1	20	Segment "g3"
6	Segment "e2"	21	Segment "g2"
7	Segment "d2"	22	Segment "b2"
8	Digit 2 Common	23	Segment "a2"
9	Segment "c2"	24	Digit 2 Common
10	D.P2	25	Segment "f2"
11	Segment "e3"	26	Segment "g1"
12	Segment "d3"	27	Segment "b1"
13	Digit 3 Common	28	Segment "a1"
14	Segment "c3"	29	Digit 1 Common
15	D.P3	30	Segment "f1"

LED displays

●Internal circuit schematic (example of common anode)



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Red	Orange	Green	Unit
		LB-403VD / VN	LB-403DD	LB-403MD / MN	
Power dissipation	P _D	1344	1344	1344	mW
Power dissipation	P _D / seg	56	56	56	mW
Forward current	I _F	20	20	20	mA
Peak forward current	I _{FP}	60*	60*	60*	mA
Reverse voltage	V _R	5	5	5	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			Green			Unit
			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	V
Reverse current	I _R	V _R =3V	—	—	100	—	—	100	—	—	100	μA
Peak wavelength	λ _P	I _F =10mA	—	650	—	—	610	—	—	563	—	nm
Spectral line half width	Δλ	I _F =10mA	—	40	—	—	40	—	—	40	—	nm

© Not designed for radiation resistance.

●Luminous intensity

Color	λ _P	Type	Min.	Typ.	Max.	Unit
Red	650	LB-403VD	3.6	10	—	mcd
		LB-403VN				
Orange	610	LB-403DD	2.2	6.3	—	mcd
Green	563	LB-403MD	5.6	16	—	mcd
		LB-403MN				

Note : Measured at I_F=10mA