High efficiency, two-digit numeric displays

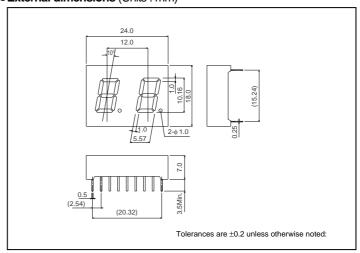
LB-402DN Series

The LB-402 DN 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 two-digit displays with a character height of 10.16 mm.

Features

- 1) Height of character: 10.16 mm
- Common anode and common cathode configurations are available for each color.
- 3) The package surface is painted black and the segments are colored the display color.
- 4) High efficiency reflectors are used to achieve a bright, clear display.

●External dimensions (Units : mm)

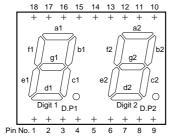


Selection guide

Emitting color Common	Red	Orange	Yellow	Green	
Anode	LB-402VD	LB-402DD*	LB-402YD*	LB-402MD	
Cathode	LB-402VN	LB-402DN*	LB-402YN*	LB-402MN	

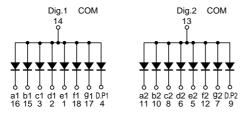
^{*}Order-based production.

Pin assignments



Pin No.	Pin No. Function		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"		

●Internal circuit schematic (example of common anode)



● Absolute maximum ratings (Ta = 25°C)

Parameter	Cumhal	Red	Orange	Yellow	Green	Unit	
	Symbol	LB-402VD / VN	B-402VD / VN		LB-402MD / MN	Oill	
Power dissipation	Po	640	640	640	960	mW	
Power dissipation	P _D / seg	40	40	40	60	mW	
Forward current	lF	15	15	15	20	mA	
Peak forward current	I FP	60*	60*	60*	60*	mA	
Reverse voltage	VR	5	5	5	5	V	
Operating temperature	Topr		°C				
Storage temperature	Tstg		°C				

^{*} Pulse width 1ms duty 1 / 5

• Electrical and optical characteristics (Ta = 25°C)

Parameter Symbol	Cumbal	I Conditions	Red		Orange		Yellow			Green			Unit		
	Conditions	Min.	Тур.	Max.	Min.	Тур.	Max.	Min.	Тур.	Max.	Min.	Тур.	Max.	Offic	
Forward voltage	VF	I _F = 10mA	_	2.0	2.8	_	2.0	2.8	_	2.1	2.8	_	2.1	2.8	V
Reverse current	lR	$V_R = 3V$	_	-	100	_	-	100	_	_	100	_	_	100	μА
Peak wavelength	λР	I _F = 10mA	_	650	_	_	610	_	_	585	_	_	563	_	nm
Spectral line half width	Δλ	I _F = 10mA	-	40	_	_	40	_	-	40	_	_	40	_	nm

ONot designed for radiation resistance.

Luminous intensity

Color	λР	Туре	Min.	Тур.	Max.	Unit
Red	650	LB-402VD	5.6	16	-	mcd
Reu	650	LB-402VN	5.6			
Orange	610	LB-402DD	3.6	10	-	mcd
	610	LB-402DN	3.0			
Yellow	585	LB-402YD	3.6	10		
		LB-402YN	3.0	10	_	mcd
Green	563	LB-402MD	9.0	25		a d
		LB-402MN	9.0	25	_	mcd

Note: Measured at IF = 10mA

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