# High efficiency, two-digit numeric displays

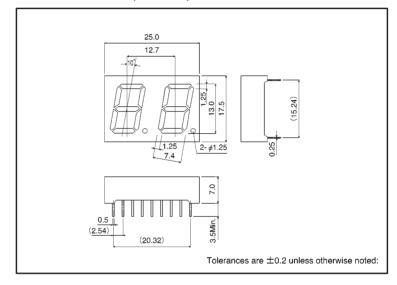
# **LB-502 DN Series**

The LB-502 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 13.0 mm.

#### Features

- 1) Height of character: 13.0 mm.
- Common anode and common cathode configurations are available for each color.
- 3) High efficiency reflectors are used to achieve a bright, clear display.
- The package surface is painted black and the segments are colored the display color.

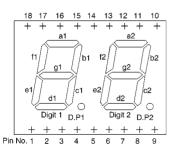
#### External dimensions (Units: mm)



#### Selection guide

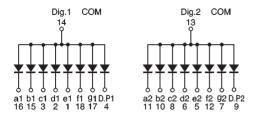
Emitting color Common	Red	Orange	Green		
Anode	LB-502VD	LB-502DD	LB-502MD		
Cathode	LB-502VN	LB-502DN	LB-502MN		

#### Pin assignments



Pin No.	Function	Pin No.	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	Symbol	Red	Orange	Green	Unit	
	Symbol	LB-502VD / VN	LB-502DD / DN LB-502MD / MN		Offic	
Power dissipation	Pp	960	960	960	mW	
Power dissipation	P⊳/ seg	60	60	60	mW	
Forward current	lF	20	20	20	mA	
Peak forward current	IFP	60*	60*	60*	mA	
Reverse voltage	VR	5	5	5	V	
Operating temperature	Topr		°C			
Storage temperature	Tstg		င			

<sup>\*</sup> Pulse width 1ms duty 1 / 5

# ●Electrical and optical characteristics( Ta = 25°C)

Parameter Symbo	Symbol Conditions	Red		Orange		Green			Unit			
	Symbol	Conditions	Min.	Тур.	Max.	Min.	Тур.	Max.	Min.	Тур.	Max.	Offic
Forward voltage	VF	I=10mA	_	2.0	2.8	_	2.0	2.8	_	2.1	2.8	V
Reverse current	lR	V <sub>R</sub> =5V	_	_	100	_	-	100	_	-	100	μΑ
Peak wavelength	λР	I=10mA	_	650	_	_	610	_	_	563	_	nm
Spectral line half width	Δλ	I=10mA	_	40	_	_	40	_	_	40	_	nm

ONot designed for radiation resistance.

#### Luminous intensity

Color	λР	Туре	Min.	Тур.	Max.	Unit
Red	650	LB-502VD	5.6	16	_	mcd
		LB-502VN	5.6			
Orange	610	LB-502DD	5.6	16	_	mcd
		LB-502DN				
Green	563	LB-502MD	0.0	25	_	mcd
		LB-502MN	9.0			

Note: Measured at IF = 10mA