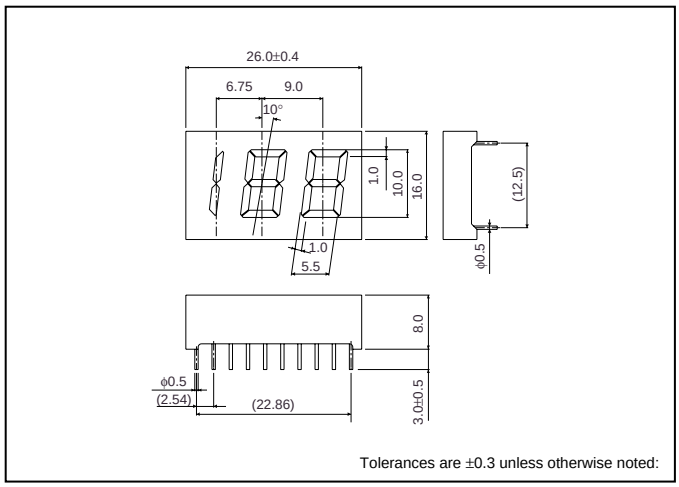
High efficiency, three-digit numeric displays

LB-403F1 Series

The LB-403 F1 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 mm.

●**External dimensions** (Units : mm)



Tolerances are ±0.3 unless otherwise noted:

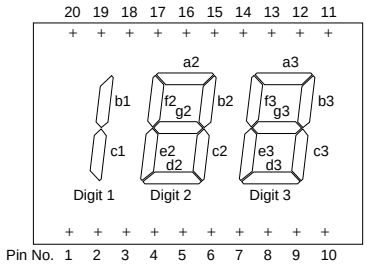
●**Features**

1) Height of character : 10mm.
2) Common anode configuration available for each color.
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.

●**Selection guide**

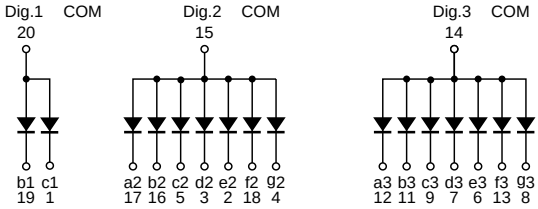
Emitting color / Common	Red	Green
Anode	LB-403VF1	LB-403MF1

●**Pin assignments**



Pin No.	Function	Pin No.	Function
1	Segment "c1"	11	Segment "b3"
2	Segment "e2"	12	Segment "a3"
3	Segment "d2"	13	Segment "f3"
4	Segment "g2"	14	Digit 3 Common
5	Segment "c2"	15	Digit 2 Common
6	Segment "e3"	16	Segment "b2"
7	Segment "d3"	17	Segment "a2"
8	Segment "g3"	18	Segment "f2"
9	Segment "c3"	19	Segment "b1"
10	NC	20	Digit 1 Common

● **Internal circuit schematic** (example of common anode)



● **Absolute maximum ratings** (Ta = 25°C)

Parameter	Symbol	Red	Green	Unit
		LB-403VF1	LB-403MF1	
Power dissipation	P_D	640	640	mW
Power dissipation	P_D / seg	40	40	mW
Forward current	I_F	15	15	mA
Peak forward current	I_{FP}	60*	60*	mA
Reverse voltage	V_R	3	3	V
Operating temperature	Topr	−25~+75		°C
Storage temperature	Tstg	−30~+85		°C

* Pulse width 1ms duty 1 / 5

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

Parameter	Symbol	Conditions	Red			Green			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Forward voltage	V_F	I_F = 10mA	–	2.0	2.8	–	2.1	2.8	V
Reverse current	I_R	V_R = 3V	–	–	100	–	–	100	μA
Peak wavelength	λ_P	I_F = 10mA	–	650	–	–	563	–	nm
Spectral line half width	$\Delta\lambda$	I_F = 10mA	–	40	–	–	40	–	nm

◎ Not designed for radiation resistance.

● **Luminous intensity**

Color	λ_P	Type	Min.	Typ.	Max.	Unit
Red	650	LB-403VF1	2.2	6.3	–	mcd
Green	563	LB-403MF1	5.6	16	–	mcd

Note : Measured at I_F = 10mA