

High efficiency, two-digit numeric displays

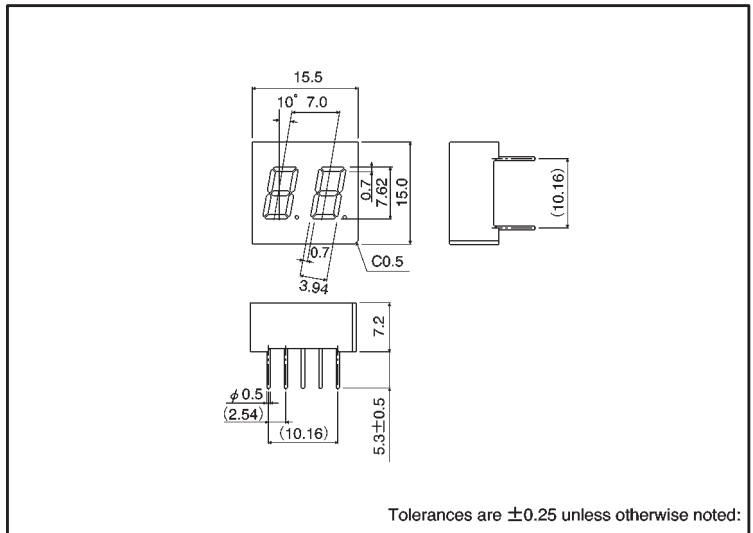
LB-302 FP / FP1 Series

The LB-302 FP and LB-302 FP1 series were designed to meet the need for multi-digit numeric displays. These two-digit LED numeric displays have a character height of 7.62 mm.

●Features

- 1) Height of character : 7.62 mm.
- 2) High efficiency in a compact package.
- 3) Common anode and common cathode configurations are available for red, orange, yellow and green.
- 4) Illuminating or non-illuminating dots can be selected.
- 5) The package surface is painted black and the segments are milky white.

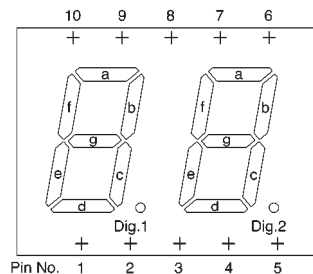
●External dimensions (Units: mm)



●Selection guide

Emitting color	Red	Orange	Yellow	Green
	Common			
Anode	LB-302VF LB-302VF1	LB-302DF LB-302DF1	LB-302YF LB-302YF1	LB-202MF LB-202MF1
Cathode	LB-302VP LB-302VP1	LB-302DP LB-302DP1	LB-302YP LB-302YP1	LB-202MP LB-202MP1

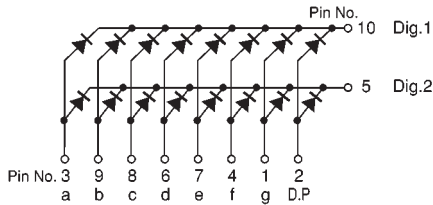
●Pin assignments



Pin No.	Function
1	Segment "g"
2	D.P
3	Segment "a"
4	Segment "f"
5	Digit 2 Common
6	Segment "d"
7	Segment "e"
8	Segment "c"
9	Segment "b"
10	Digit 1 Common

Dots do not illuminate in LB-302FP1 series (no pin)

● Internal circuit schematic (example of common cathode)



● Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Red	Orange	Yellow	Green	Unit
		LB-302VF / VP / VF1 / VP1	LB-302DF / DP / DF1 / DP1	LB-302YF / YP / YF1 / YP1	LB-302MF / MP / MF1 / MP1	
Power dissipation	P_D	800(700)	800(700)	800(700)	960(840)	mW
Power dissipation	P_D / seg	50	50	50	60	mW
Forward current	I_F	15	15	15	20	mA
Peak forward current	I_{FP}	60*	60*	60*	60*	mA
Reverse voltage	V_R	5	5	5	5	V
Operating temperature	T_{opr}	-25~+75				$^\circ\text{C}$
Storage temperature	T_{stg}	-30~+85				$^\circ\text{C}$

* Pulse width 1ms duty 1 / 5

() is F1 / P1 value

● Electrical and optical characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Conditions	Red			Orange			Yellow			Green			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Forward voltage	V_F	$I_F=10\text{mA}$	—	2.0	3.0	—	2.0	3.0	—	2.1	3.0	—	2.1	3.0	V
Reverse current	I_R	$V_R=5\text{V}$	—	—	100	—	—	100	—	—	100	—	—	100	μA
Peak wavelength	λ_P	$I_F=10\text{mA}$	—	650	—	—	610	—	—	585	—	—	563	—	nm
Spectral line half width	$\Delta\lambda$	$I_F=10\text{mA}$	—	40	—	—	40	—	—	40	—	—	40	—	nm

Ⓞ Not designed for radiation resistance.

● Luminous intensity

Color	λ_P	Type	Min.	Typ.	Max.	Unit
Red	650	LB-302VF / VP	2.2	6.3	—	mcd
		LB-302VF1 / VP1				
Orange	610	LB-302DF / DP	2.2	6.3	—	mcd
		LB-302DF1 / DP1				
Yellow	585	LB-302YF / YP	2.2	6.3	—	mcd
		LB-302YF1 / YP1				
Green	563	LB-302MF / MP	2.2	6.3	—	mcd
		LB-302MF1 / MP1				

Note: Measured at $I_F = 10\text{mA}$