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High efficiency, two-digit numeric displays

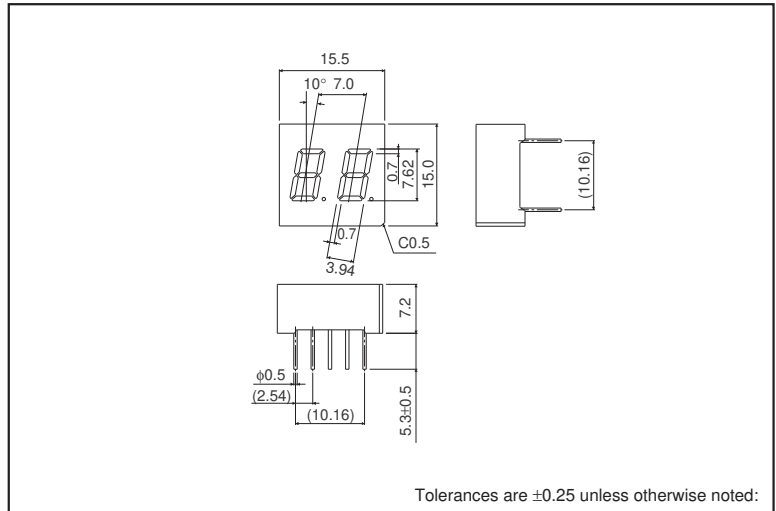
LB-302FP Series

The LB-302FP 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 and green.
- 4) The package surface is painted black and the segments are milky white.

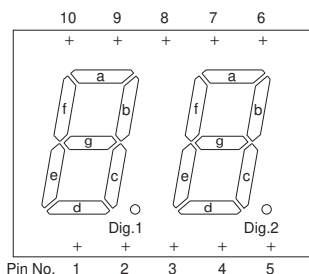
●Dimensions (Unit : mm)



●Selection guide

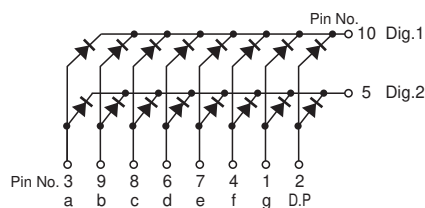
Emitting color	Common	
	Red	Green
Anode	LB-302VF	LB-302MF
Cathode	LB-302VP	LB-302MP

●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

●Internal circuit schematic (example of common cathode)



●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Red	Green	Unit
		LB-302VF / VP	LB-302MF / MP	
Power dissipation	P_D	800	960	mW
Power dissipation	P_D / seg	50	60	mW
Forward current	I_F	15	20	mA
Peak forward current	I_{FP}	60*	60*	mA
Reverse voltage	V_R	5	5	V
Operating temperature	T_{opr}	-25 to +75		°C
Storage temperature	T_{stg}	-30 to +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	$I_F = 10\text{mA}$	-	2.0	2.8	-	2.1	2.8	V
Reverse current	I_R	$V_R = 5\text{V}$	-	-	100	-	-	100	μA
Peak wavelength	λ_P	$I_F = 10\text{mA}$	-	650	-	-	563	-	nm
Spectral line half width	$\Delta\lambda$	$I_F = 10\text{mA}$	-	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
Green	563	LB-302MF / MP	3.6	9.0	-	mcd

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

●Electrical and optical characteristic curves

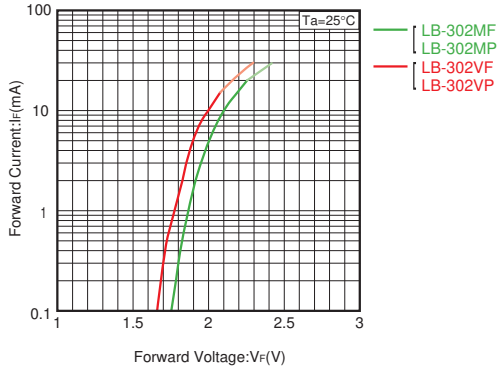


Fig.1 Forward Current - Forward Voltage

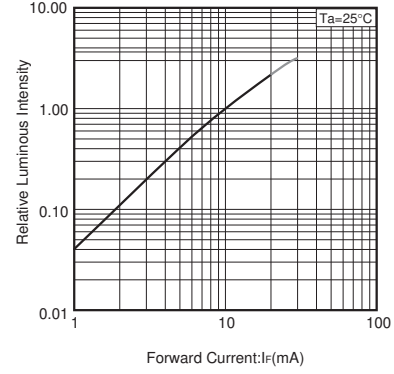


Fig.2 Relative Luminous Intensity - Forward Current

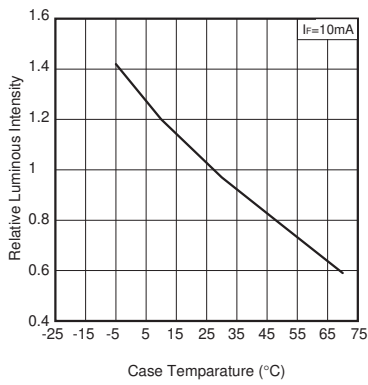


Fig.3 Relative Luminous Intensity - Case Temperature

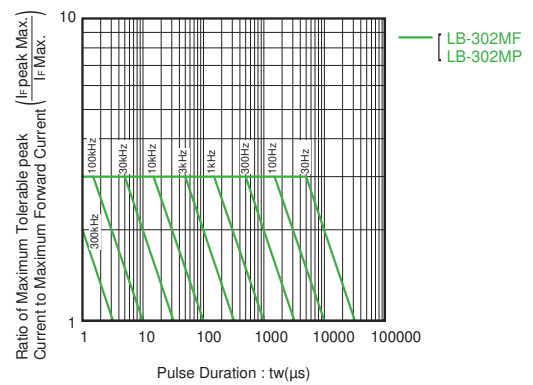


Fig.4 Ratio of Maximum Tolerable Peak Current - Pulse Duration (I)

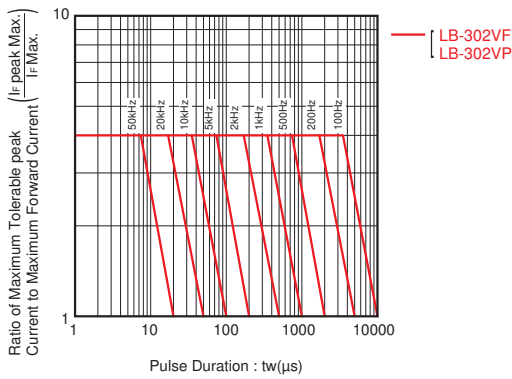


Fig.5 Ratio of Maximum Tolerable Peak Current - Pulse Duration (II)

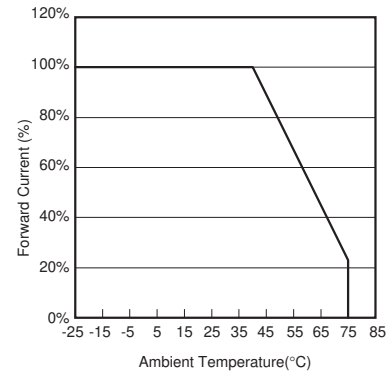


Fig.6 Derating

Notes

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