

# High efficiency, single-digit numeric displays

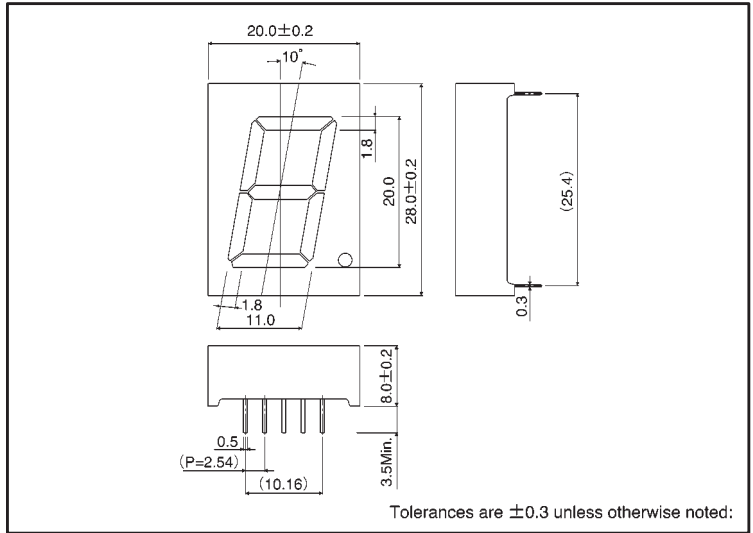
## LA-801 FP Series

The LA-801 FP series are LED numeric displays designed to be used in bright locations. The height of the character is 20 mm, and four colors are available : red, orange, yellow and green. These displays have been designed for use as large numeric displays in game machines and other applications.

### ●Features

- 1) Height of character : 20 mm.
- 2) External dimensions : 20 × 28 × 8 mm.
- 3) Common anode and common cathode configurations are available for each color.
- 4) The package surface is painted black and the segments are colored the display color.
- 5) High luminosity, clear display.
- 6) Convenient pin layout for designing the printed circuit board pattern.

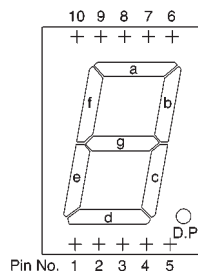
### ●External dimensions (Units: mm)



### ●Selection guide

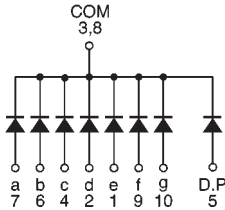
Emitting color	Emitting color			
	Red	Orange	Yellow	Green
Common				
Anode	LA-801VF	LA-801DF	LA-801YF	LA-801MF
Cathode	LA-801VP	LA-801DP	LA-801YP	LA-801MP

### ●Pin assignments



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

● Internal circuit schematic (example of common cathode)



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

Parameter	Symbol	Red	Orange	Yellow	Green	Unit
		LA-801VF / VP	LA-801DF / DP	LA-801YF / YP	LA-801MF / MP	
Power dissipation	$P_D$	480	480	480	480	mW
Power dissipation	$P_D / \text{seg}$	60	60	60	60	mW
Forward current	$I_F$	20	20	20	20	mA
Peak forward current	$I_{FP}$	60*	60*	60*	60*	mA
Reverse voltage	$V_R$	3	3	3	3	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

● 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	2.8	—	2.0	2.8	—	2.1	2.8	—	2.1	2.8	V
Reverse current	$I_R$	$V_R=3\text{V}$	—	—	100	—	—	100	—	—	100	—	—	100	$\mu\text{A}$
Peak wavelength	$\lambda_P$	$I_F=10\text{mA}$	—	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	$\lambda_P$	Type	Min.	Typ.	Max.	Unit
Red	650	LA-801VF	3.6	10	—	mcd
		LA-801VP				
Orange	610	LA-801DF	3.6	10	—	mcd
		LA-801DP				
Yellow	585	LA-801YF	2.2	6.3	—	mcd
		LA-801YP				
Green	563	LA-801MF	3.6	10	—	mcd
		LA-801MP				

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