

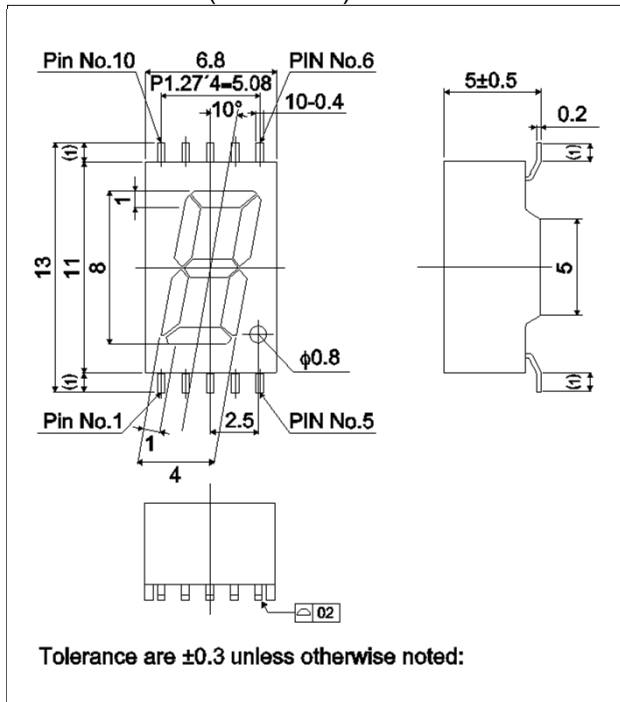
LF-3011A / K series of Single Digit Surface Mount LED Numeric Display which the height of a letter 8mm have ROHM original structure that realizes re-flow soldering.

### ●Features

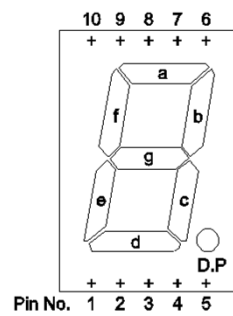
- 1) Re-flow soldering \*
- 2) Pb-free available
- 3) Automatic mounting with taping pack

\* Number of re-flow process shall be recommend 1 time by our re-flow condition

### ●Dimensions (Unit : mm)



### ●Pin assignments

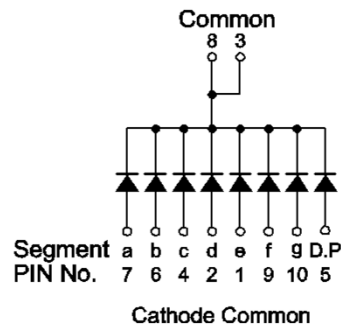
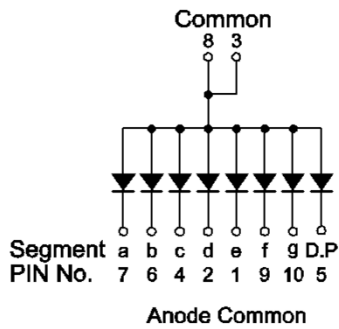


Pin No.	Function
1	Segment "e"
2	Segment "d"
3	Common
4	Segment "c"
5	D.P
6	Segment "b"
7	Segment "a"
8	Common
9	Segment "f"
10	Segment "g"

### ●Selection guide

Emitting color	Red	Green
	Common	
Anode	LF-3011VA	LF-3011MA
Cathode	LF-3011VK	LF-3011MK

●Internal circuit schematic



●Absolute maximum ratings (T<sub>a</sub> = 25°C)

Parameter	Symbol	Red	Green	Unit
		LF-3011VA / VK	LF-3011MA / MK	
Power dissipation	P <sub>D</sub>	320	480	mW
Power dissipation	P <sub>D</sub> / seg	40	60	mW
Forward current	I <sub>F</sub>	15	20	mA
Peak forward current	I <sub>FP</sub>	60 *	60 *	mA
Reverse voltage	V <sub>R</sub>	5	5	V
Operating temperature	T <sub>opr</sub>	-25 to +75		°C
Storage temperature	T <sub>stg</sub>	-30 to +85		°C

\* Pulse width 1ms, duty 1 / 5

●Electrical and optical characteristics (T<sub>a</sub> = 25°C)

Parameter	Symbol	Conditions	Red		Green		Unit
			Typ.	Max.	Typ.	Max.	
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =10mA	2.0	2.8	2.1	2.8	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =3V	-	100	-	100	μA
Peak wavelength	λ <sub>p</sub>	I <sub>F</sub> =10mA	650	-	563	-	nm
Spectral line halfwidth	Δλ	I <sub>F</sub> =10mA	40	-	40	-	nm

© The products are not radiations resistant.

## ●Luminous intensity

Parameter	$\lambda_p$	Type	Min.	Typ.	Max.	Unit
Red	650	LF-3011VA	3.6	10	-	mcd
		LF-3011VK				
Green	563	LF-3011MA	3.6	10	-	mcd
		LF-3011MK				

© Condition  $I_F=10\text{mA}$ 

## ●Iv classification

Parameter	Type	Item	Iv classification	Unit
Red	LF-3011VA LF-3011VK	“ K ”	3.6 to 7.1	mcd
		“ L ”	5.6 to 11	mcd
		“ M ”	9.0 to 18	mcd
		“ N ”	14 to 28	mcd
		“ P ”	22 to (45)	mcd
Green	LF-3011MA LF-3011MK	“ K ”	3.6 to 7.1	mcd
		“ L ”	5.6 to 11	mcd
		“ M ”	9.0 to 18	mcd
		“ N ”	14 to 28	mcd
		“ P ”	22 to (45)	mcd

© Condition  $I_F=10\text{mA}$

●Electrical and optical characteristics curves

Fig.1 Forward Current vs. Forward Voltage

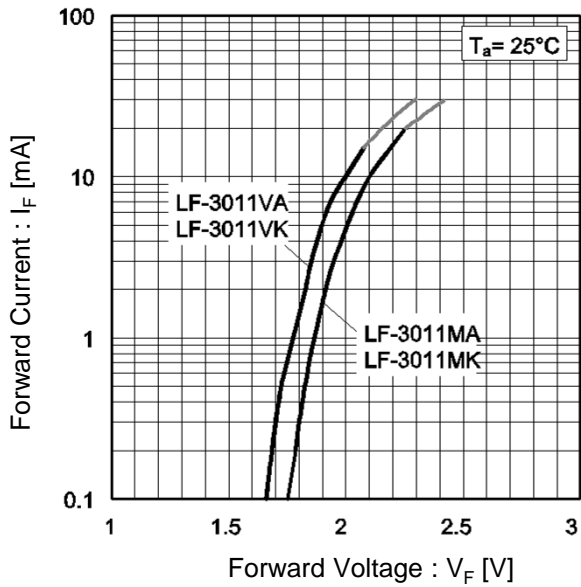


Fig.2 Relative Luminous Intensity vs. Forward Current

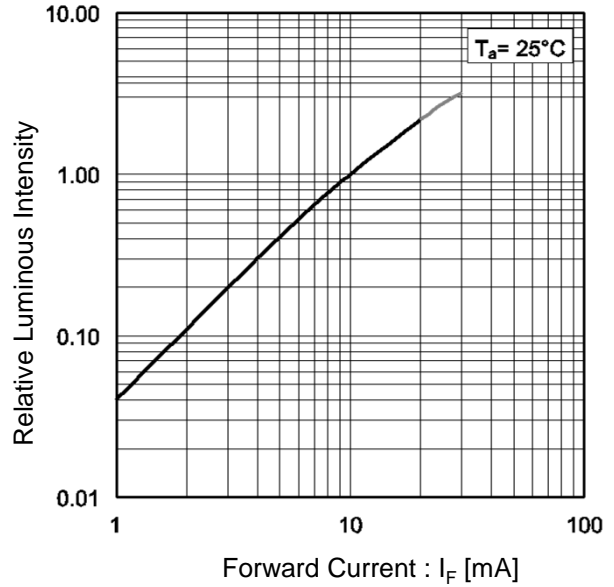


Fig.3 Relative Luminous Intensity vs. Case Temperature

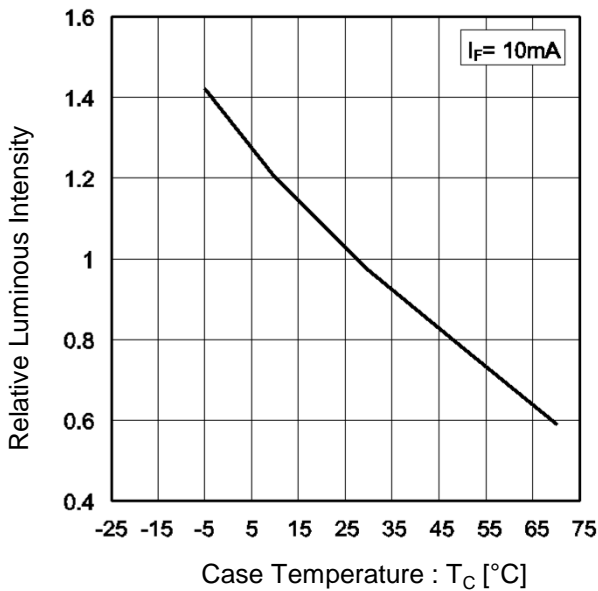
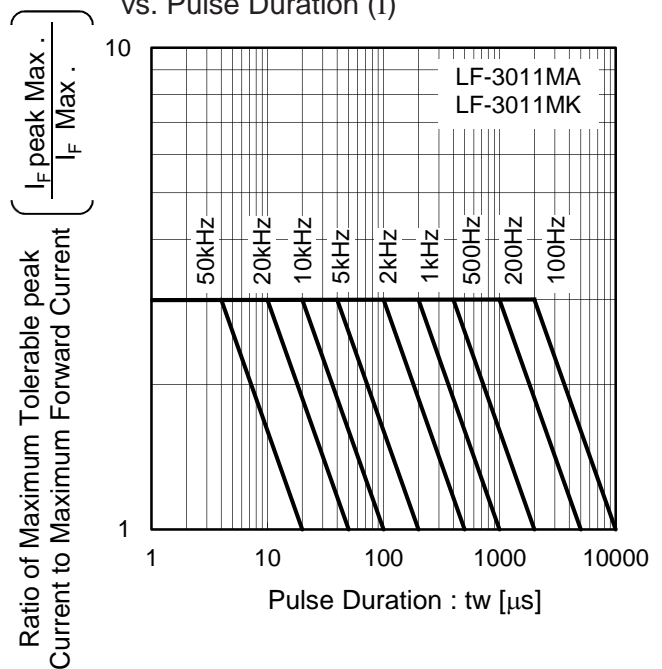


Fig.4 Ratio of Maximum Tolerable Peak Current vs. Pulse Duration (I)



●Electrical and optical characteristics curves

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

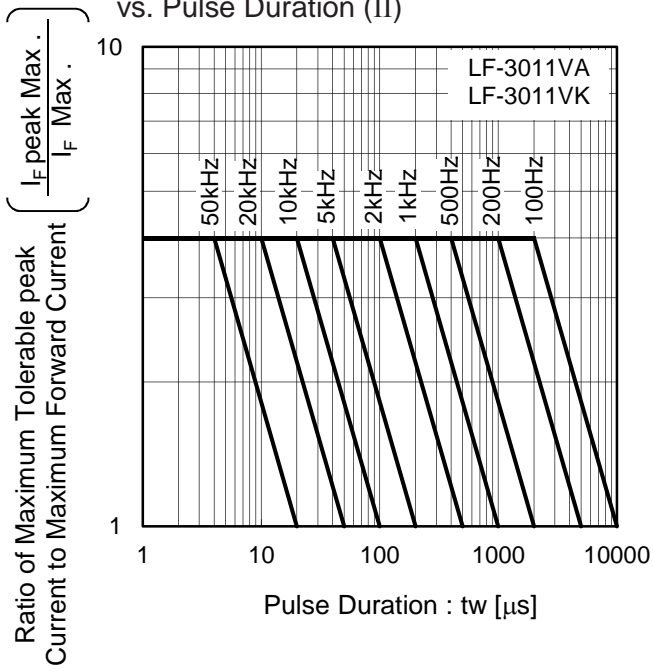
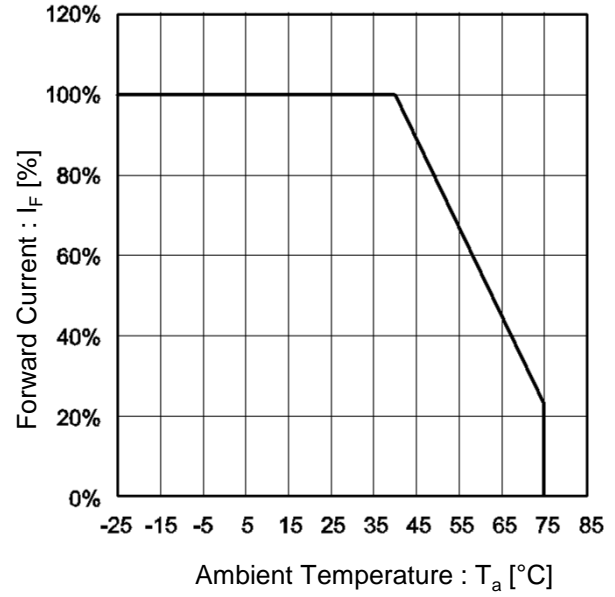


Fig.6 Derating



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