



LF Series

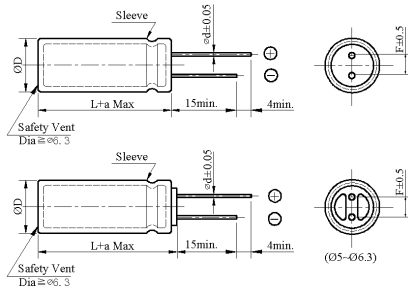
- Standard size downsized
- 2,000 hours assured at 105°C



◆ SPECIFICATIONS

Item	Performance Characteristics										
Category Temperature Range	-25 ~ +105°C										
Working Voltage Range	200 ~ 450Vdc										
Capacitance Range	1 ~ 68 µF										
Capacitance Tolerance	±20% (at 25°C and 120Hz)										
Dissipation Factor (tanδ) (at 25°C, 120Hz)	<table border="1"> <tr> <td>Rated Voltage (V)</td> <td>200 ~ 250</td> <td>350</td> <td>400 ~ 450</td> </tr> <tr> <td>tanδ(Max)</td> <td>0.15</td> <td>0.20</td> <td>0.20</td> </tr> </table>	Rated Voltage (V)	200 ~ 250	350	400 ~ 450	tanδ(Max)	0.15	0.20	0.20		
	Rated Voltage (V)	200 ~ 250	350	400 ~ 450							
tanδ(Max)	0.15	0.20	0.20								
The above values should be increased by 0.02 for every additional 1000µF											
Leakage Current	$I \leq 0.03CV + 10 \mu A$ I : Leakage current (µA) C : Rated capacitance (µF) V : Rated voltage (V) Impress the rated voltage for 2 minutes										
Low Temperature Characteristics Impedance Ratio(MAX)	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>200 ~ 250</td> <td>350</td> <td>400</td> <td>420 ~ 450</td> </tr> <tr> <td>Z(-25°C)/Z(+20°C)</td> <td>3</td> <td>5</td> <td>5</td> <td>6</td> </tr> </table> <p style="text-align: right;">(at 120Hz)</p>	Rated voltage (V)	200 ~ 250	350	400	420 ~ 450	Z(-25°C)/Z(+20°C)	3	5	5	6
Rated voltage (V)	200 ~ 250	350	400	420 ~ 450							
Z(-25°C)/Z(+20°C)	3	5	5	6							
Endurance	The following specifications shall be satisfied when the capacitors are restored to 25°C after subjected to DC voltage with the rated ripple current is applied for 2,000 hours at 105°C <table border="1"> <tr> <td>Capacitance change</td> <td>≒ ±20% of the original value</td> </tr> <tr> <td>Dissipation factor(tanδ)</td> <td>≒ 200% of the specified value</td> </tr> <tr> <td>Leakage current</td> <td>≒ specified value</td> </tr> </table>	Capacitance change	≒ ±20% of the original value	Dissipation factor(tanδ)	≒ 200% of the specified value	Leakage current	≒ specified value				
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Dissipation factor(tanδ)	≒ 200% of the specified value										
Leakage current	≒ specified value										
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 25°C after the rated voltage applied for 500 hours at 105°C without voltage applied. <table border="1"> <tr> <td>Capacitance change</td> <td>≒ ±20% of the original value</td> </tr> <tr> <td>Dissipation factor(tanδ)</td> <td>≒ 200% of the specified value</td> </tr> <tr> <td>Leakage current</td> <td>≒ 200% of the specified value</td> </tr> </table>	Capacitance change	≒ ±20% of the original value	Dissipation factor(tanδ)	≒ 200% of the specified value	Leakage current	≒ 200% of the specified value				
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Leakage current	≒ 200% of the specified value										
Others	Conforms to JIS-C-5101-4 (1998), characteristic W										

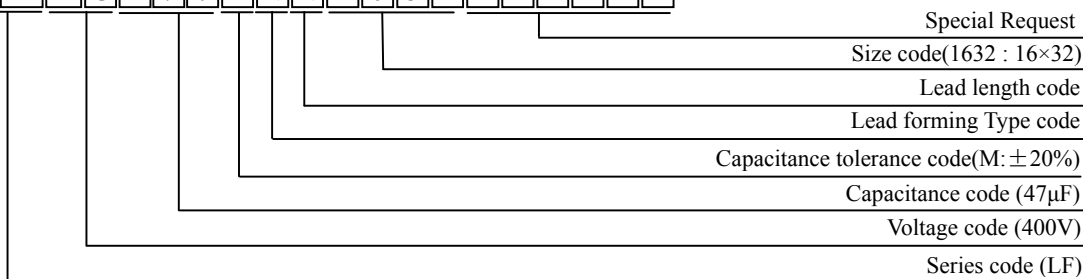
◆ DIMENSIONS (mm)



ΦD	5	6.3	8	10	12.5 L < 35	12.5 L ≥ 35	16	18
ΦD	ΦD + 0.5 Max							
Φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0		7.5	7.5
a	L + 1.5 Max				$\leq 35 L + 1.5 \text{Max}$ $\geq 40 L + 2.0 \text{Max}$		L + 1.5 Max	

◆ PART NUMBER SYSTEM (Example : 400V 47µF)

L F 2 G 4 7 0 M N N 1 6 3 2



LF Series

◆ Case size & Permissible rated ripple current: (mA rms) at 105°C / 120Hz

uF \ Vdc	200		250		350		400		450	
	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC
1	5×11	18	5×11	16	6.3×11	16	6.3×11	18	6.3×11	15
2.2	6.3×11	27	6.3×11	26	6.3×11	28	8×11.5	33	10×12.5	28
2.7	6.3×11	30	6.3×11	30	8×11.5	35	8×11.5	38	10×12.5	35
3.3	6.3×11	33	8×11.5	35	10×12.5	41	10×12.5	41	10×16	38
4.7	8×11.5	43	8×11.5	41	10×16	49	10×16	55	10×20	41
5.6	8×11.5	46	8×11.5	49	10×16	55	10×16	60	10×20	48
6.8	8×11.5	61	8×11.5	66	10×16	60	10×20	62	12.5×20	51
8.2	8×11.5	66	10×12.5	71	10×16	71	12.5×20	82	12.5×20	62
10	10×12.5	82	10×16	81	10×20	88	12.5×20	100	12.5×25	78
15	10×16	88	10×20	104	12.5×20	110	12.5×20	145	12.5×25	104
22	10×20	132	12.5×20	143	12.5×20	126	12.5×25	180	16×25	130
33	12.5×20	175	12.5×20	171	16×20	215	16×25	235	16×31.5	185
47	12.5×25	215	12.5×25	230	16×25	290	16×31.5	290	16×35.5	215
68	16×25	230	16×25	275	16×31.5	300	18×35.5	340	18×35.5	245

◆ RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Vdc	Cap(uF)	Frequency (Hz)				
		50/60	120	1K	10K	100K
200 ~ 450	1 ~ 68	0.80	1.00	1.40	1.60	1.60