

## FL series Super Long Life 12000HRS

- Load Life :105°C 12000 hours or 130°C 3000 hours
- With high Ripple Current and high temperature130°C
- For Electronic Ballast,Power Supply
- ROHS compliant

### ■SPECIFICATIONS

Item	Performance Characteristics							
Operating Temperature Range	-40°C~130°C(160V~400VDC) -25°C~130°C(450VDC)							
Rated Voltage Range	160~450V							
Capacitance Range	1~150uF							
Capacitance Tolerance	±20%,120Hz,20°C							
Leakage Current (MAX)	V=160~400	V=450					After 1 minute application of rated voltage I=Leakage Current(uA) C=Nominal Capacitance(uF) V=Rated Voltage(V)	
	I=0.02CV+10uA	I=0.03CV+10uA						
Dissipation Factor (tan δ)	For capacitance of more than 1000uF, added 0.02 for every increase of 1000uF,measurement							
	Rated voltage(V)	160	200	250	350	400	450	MAX (20°C120Hz)
Low Temperature Stability Impedance Ratio	Tan δ							MAX (120Hz)
	Rated voltage(V)	160	200	250	350	400~420	450	
	Z(-25°C) / Z (+20°C)	3	3	3	4	4	5	
	Z(-40°C) / Z (+20°C)	6	6	6	6	6	6	
Load Life	After application of the rated DC voltage with rated ripple current at 130°C 3000 hours or application of the rated DC voltage with rated ripple current at 105°C 12000 hours,the capacitors shall meet the requirement bellow							
	Leakage Current	The initial specified value						
	Capacitance Change	±20% of initial value						
Shelf Life	After leaving capacitors under no load at 105°C for 1000hours and applying voltage according to JIS C-5102 4-3,they meet the specified value for load life characteristics listed above.							
	Under the condition in of 145°C,applying the capacitor with the rated DC voltage under the rated ripple current for 700 hours,then cooling the capacitor,the performance of capacitors should meet the following requirements							
Accelerated Durability Test	Leakage Current	The initial specified value						
	Capacitance Change	±20% of initial value						
	Dissipation Factor	200% of the initial specified value						
Standard	According to JIS C-5141							

### ■MULTIPLIER FOR RIPPLE CURRENT

#### Frequency coefficient

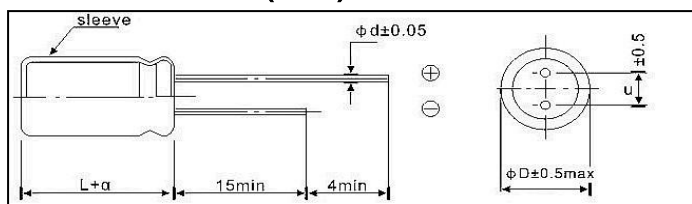
Frequency(Hz)	120	1k	10k	100k≤
Coefficient	0.50	0.80	0.90	1.00

#### Temperature coefficient

Temperature	65°C	75°C	85°C	105°C
Coefficient	1.78	1.70	1.40	1.00

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### ■DIMENSIONS(mm)



ΦD	8	10	12	13	16	18
Φd	0.5	0.6		0.8		
F	3.5	5.0		7.5		
α	L≤16 : α=1.5 L≥16 : α=2.0					

### ■STANDARD SIZE PERMISSIBLE RIPPLE CURRENT

Size ΦD×L(mm)Ripple Current(mA 105°C,100KHz)r.m.s

W. V Cap (uF)	160		200		250		350		400		450	
	SIZE	Ripple	SIZE	Ripple	SIZE	Ripple	SIZE	Ripple	SIZE	Ripple	SIZE	Ripple
1.0							8×12	66	8×12	74	8×12	72
1.2							8×12	70	8×12 10×13	82 86	8×14 10×13	75 80
1.5									8×14 8×16 10×16	59 79 86		
1.8					8×12	80	8×12	80	8×14 8×16 10×16	66 91 95	8×16 10×16	85 90
2.2					8×12	82	8×12	90	8×12 8×14 8×16 10×16	74 85 95 98	8×16 10×16	92 95
2.7									10×16	100		
2.8			8×12	85	10×13 10×16	92 96	8×16 10×16	98 102	8×14 10×16	95 105	10×16	100
3.3	8×12	90	8×12	96	10×16	106	8×16 10×16	108 112	10×13 8×16 10×16	100 98 112	10×16 10×20	105 110
3.9									10×20	128		
4.7	8×12	99	8×12	105	10×16 10×20	112 126	8×16 10×16	135 142	8×12 10×16 8×20 10×20	65 120 110 140	10×20 10×25	115 120
5.6	8×12	105	8×12	115	10×16 10×20	115 122	10×16	160	10×16 10×20 13×21	130 145 160	10×20 12×21	140 150
6.8	8×12	112	10×16	125	10×16 10×20	120 130	10×16 10×20	225 240	10×16 10×20 13×21	170 230 250	10×20 13×21	200 250
10	10×16	250	10×16 10×20	160 260	10×20	280	10×16 10×20	230 290	13×21	300	13×21	280
15	10×20	360	10×20	400	13×21	440	13×21	480	13×21 13×25	430 500	13×25	460
22	10×20	420	10×20	500	10×25 13×21	440 520	13×25	540	16×25	550	13×25 16×21 16×25 16×32 18×21	480 480 500 540 540
33	13×21	510	13×21	550	13×21 13×25	500 600	16×25	620	18×25	650	18×27 18×36	640 650
47	13×21	550	13×25	620	16×25	690	18×25	710	18×27	820	18×25 18×30	750 800
68					13×30	650	16×32	750				
82									18×25	640		
100									18×31	680		
150			16×25	860								