

# LP series

- 85°C 3000hours, Screw terminal type.
- High ripple current resistance.
- Suitable for industrial machinery, power converter, communication sets and test equipment.
- RoHS Compliance
- 85°C 3000小時螺絲型端子。
- 耐高紋波電流。
- 適用於工業機械、電源轉換器、通訊或檢測設備。



## SPECIFICATIONS

Items 項目	Characteristics 特性										
Capacitance Tolerance 靜電容量誤差	± 20%(120Hz,20°C)										
Operating Temperature Range 適用溫度範圍	-40 ~ +85°C						-25 ~ +85°C				
Rated Voltage Range 額定電壓範圍	16 ~ 250VDC						350 ~ 500VDC				
Leakage Current 洩漏電流	$I \leq 3\sqrt{CV}$ (µA) or 5mA, which is greater. ( After 5 minutes application of DC rated voltage, at 20 °C)										
Dissipation Factor 散逸因素( tan δ)	Measurement Frequency: 120Hz. Temperature: 20°C										
	Rated Voltage(V)	16	25	35	50	63	80	100	160~250	350~500	
	tan δ(Max)	35Ø	0.70	0.45	0.40	0.30	0.25	0.25	0.20	0.20	0.25
		51Ø	0.90	0.60	0.60	0.45	0.35	0.30	0.20	0.20	0.25
		64Ø	1.30	0.90	0.80	0.50	0.40	0.35	0.25	0.20	0.25
		76Ø	2.00	1.20	0.90	0.70	0.50	0.40	0.35	0.25	0.25
90Ø		-	-	-	-	-	-	-	0.25	0.25	
Low Temperature Stability 低溫特性	Measurement Frequency: 120Hz.										
Impedance Ratio(Max) 阻抗比率(最大值)	Rated Voltage(V)	16~250					350~500				
	Z(-25°C)/Z(20°C)	-					8				
	Z(-40°C)/Z(20°C)	12					-				
Load Life 負荷壽命	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied for 3,000 hours at 85°C.										
	Capacitance Change	Within ± 15% of Initial Value									
	tan δ	175% or less of Initial Specified Value									
	Leakage Current	Initial Specified Value or less									
Shelf Life 放置壽命	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours 85°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.										
	Capacitance Change	Within ± 15% of Initial Value									
	tan δ	175% or less of Initial Specified Value									
	Leakage Current	Initial Specified Value or less									
Standards 參照標準	JIS C 5101-4 (IEC 60384)										

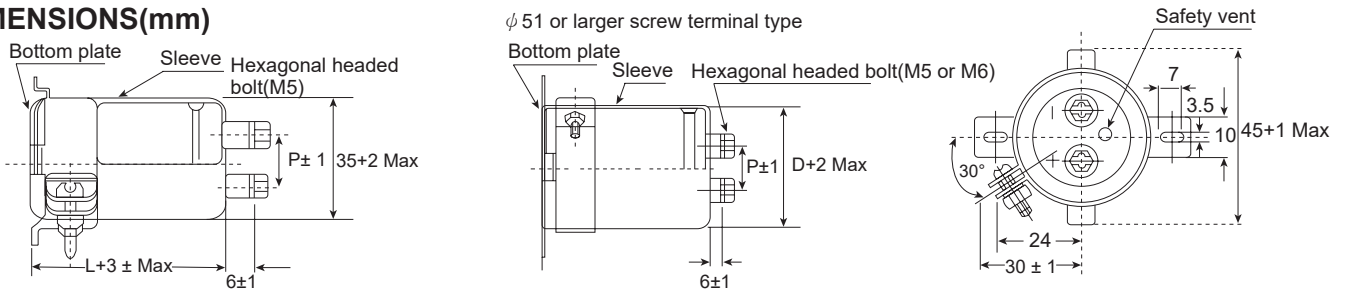
## Frequency Coefficient of Permissible Ripple Current

Rated Voltage (V)	Frequency (Hz)			
	50	120	1K	≥ 10K
16 ~ 100	0.90	1.00	1.15	1.15
160 ~ 250	0.88	1.00	1.15	1.20
350 ~ 500	0.82	1.00	1.30	1.40

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 10°C rise. When long life performance is required in actual use , the rms ripple current has to be reduced.

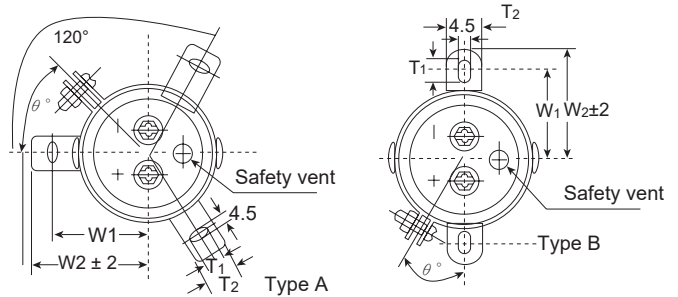
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## DIMENSIONS(mm)



## DIMENSIONS OF TERMINAL PITCH(P)

Case dia. (mm)	P (mm)
35	12.7
51	22.0
64	28.6
76	31.8
90	31.8



## DIMENSIONS OF MOUNTING BRACKET

Cap (μF)	Leg shape	3-Legs				2-Legs				
		φ D	φ 51	φ 64	φ 76	φ 90	φ 51	φ 64	φ 76	φ 90
	W1		32.5	38	44	50.8	33.2	40.5	46.5	53
	W2		38	43	49.2	57	39.5	46.5	53	59
	T1		7	8	7	7	6	6	6	6
	T2		12	14	16	16	14	14	14	14
	θ°		60	60	60	60	30	30	30	30

## STANDARD RATINGS

D×L(mm) ; R.C.(A rms) at 85°C 120Hz

Cap (μF)	V	16		25		35		50		63	
		Item	D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L
10000										35x80	4.0
15000								35x80	5.4	35x100	5.5
22000								35x100	6.0	35x120	7.0
33000				35x80	6.0	35x80	6.2	51x80	7.0	51x80	8.8
47000		35x80	6.4	35x100	8.2	35x120	8.2	51x100	8.6	51x120	11.7
68000		35x100	7.9	35x120	9.4	51x80	9.3	51x100	11.0	64x100	15.0
100000		35x120	10.6	51x100	12.0	51x120	13.6	64x100	14.2	64x140	20.8
150000		51x120	11.5	51x120	15.3	64x120	16.5	76x120	18.6	76x140	26.0
220000		51x120	15.6	64x120	18.9	76x100	20.1				
330000		64x120	25.0	76x120	23.2	76x150	24.8				
470000		76x120	30.5								
500000		76x160	32.0								

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## STANDARD RATINGS

D×L(mm) ; R.C.(A rms) at 85°C 120Hz

Cap (μF)	V	80		100		160		200		250	
		D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.
1000										35x80	2.4
1500								35x80	2.9	35x100	3.0
2200						35x80	3.2	35x100	3.5	51x80	4.0
3300						35x120	4.7	51x80	4.8	51x100	5.4
4700				35x80	3.7	51x80	5.0	51x100	6.3	64x100	7.3
6800				35x100	4.5	51x100	6.4	51x140	7.3	64x120	8.9
10000		35x80	4.2	35x120	5.3	64x100	9.0	64x120	9.8	76x120	11.8
15000		35x120	6.0	51x80	6.0	76x100	12.0	76x120	13.0	90x150	16.4
22000		51x80	6.5	51x100	6.8	76x140	16.9	90x150	15.9		
33000		51x120	9.2	51x140	10.0	90x150	19.2				
47000		64x120	12.7	64x140	14.1						
68000		64x140	15.5	76x150	18.2						
100000		76x150	21.3								

Cap (μF)	V	350		400		450		500	
		D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.
470				35x80	2.0	35x80	2.0	51x75	2.2
680		35x80	2.5	35x100	2.6	35x120	2.9	51x100	3.1
1000		51x60	3.3	51x80	3.3	51x80	3.6	51x130	3.8
1200		51x80	3.6	51x80	4.2	51x100	4.2	64x100	4.6
1500		51x80	4.5	51x100	4.8	51x120	5.0	64x120	5.4
1800		51x100	5.1	51x120	5.4	64x100	5.4	64x130	5.8
2200		51x120	6.0	51x140	6.3	64x120	6.6	76x120	6.9
2700		51x140	6.9	64x120	7.2	64x140	7.5	76x150	7.9
3300		64x100	8.0	64x140	8.4	76x120	8.4	90x140	8.6
3900		64x120	9.0	76x100	8.7	76x150	9.6	90x150	10.0
4700		76x100	9.6	76x150	10.5	76x150	11.4	90x190	12.0
5600		76x120	11.4	76x150	12.3	76x150	13.2		
6800		76x150	13.5	76x150	13.5	90x150	14.4		
8200		76x150	15.0	90x150	15.9	90x150	15.9		
10000		90x150	16.8	90x150	17.7	90x190	17.5		
12000		90x150	18.4	90x190	20.7				
15000		90x190	22.8						