



PL Series

- Load life 2,000 hours at 105°C .
- Large size for PCB board mounting hole type



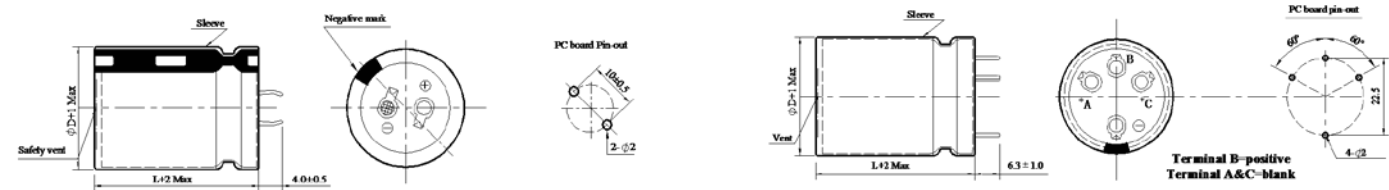
◆ SPECIFICATIONS

Item	Performance Characteristics																													
Category Temperature Range	-40 ~ +105℃							-25 ~ +105℃																						
Working Voltage Range	16 ~ 100Vdc							160 ~ 500Vdc																						
Capacitance Range	560 ~ 47,000μF							47 ~ 2,200μF																						
Capacitance Tolerance	± 20% (at 25℃ and 120Hz)																													
Dissipation Factor (tan δ) (at 25℃ , 120Hz)	<table><tr><td>Rated Voltage (V)</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>80</td><td>100 ~ 250</td><td>350 ~ 450</td><td>500</td></tr><tr><td>tanδ(Max)</td><td>0.35</td><td>0.35</td><td>0.25</td><td>0.25</td><td>0.25</td><td>0.20</td><td>0.15</td><td>0.15</td><td>0.20</td></tr></table>										Rated Voltage (V)	16	25	35	50	63	80	100 ~ 250	350 ~ 450	500	tanδ(Max)	0.35	0.35	0.25	0.25	0.25	0.20	0.15	0.15	0.20
	Rated Voltage (V)	16	25	35	50	63	80	100 ~ 250	350 ~ 450	500																				
	tanδ(Max)	0.35	0.35	0.25	0.25	0.25	0.20	0.15	0.15	0.20																				
The above values should be increased by 0.02 for every additional 1000μF																														
Leakage Current	I=0.02CV or 3000μA,whichever is smaller I : Leakage current (μA) C : Rated capacitance (μF) V : Rated voltage (V) Impress the rated voltage for 5 minutes.																													
Endurance	The following requirements shall be satisfied when the capacitor are restored to 25℃ after the rated voltage applied for 2,000 hours (1,000 hours for WV ≦ 100V) at 105℃.																													
	Capacitance change		≦ ±20% of the initial value																											
	Dissipation factor(tan δ)		≦ 200% of the specified value																											
	Leakage current		≦ specified value																											
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 25℃ after exposing them for 500 hours at 105℃ without voltage applied.																													
	Capacitance change		≦ ±20% of the initial value																											
	Dissipation factor(tanδ)		≦ 200% of the specified value																											
	Leakage current		≦ 200% of the specified value																											
Others	Conforms to JIS-C-5101-4 (1998), characteristic W.																													

◆ DIMENSIONS (mm)

Terminal Code : ND : Standard

Terminal Code :K6 (ø35)



◆ PART NUMBERING SYSTEM (Example : 500V 100μF)

P L 2 H 1 0 1 M N D 2 5 4 5

Special Request

Size code(2545 : 25×45)

Terminal length code

Lead forming Type code

Capacitance tolerance code(M:±20%)

Capacitance code (100μF)

Voltage code (500V)

Series code (PL)



PL Series

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

Vdc uF ΦD	16								Vdc uF ΦD	25							
	Φ 22		Φ 25		Φ 30		Φ 35			Φ 22		Φ 25		Φ 30		Φ 35	
	ΦD x L	RC	ΦD x L	RC	ΦD x L	RC	ΦD x L	RC		ΦD x L	RC	ΦD x L	RC	ΦD x L	RC	ΦD x L	RC
6800	22x25	1490							4700	22x25	1425						
10000	22x31	1870	25x25	1870					5600	22x25	1545						
12000	22x35	2100	25x31	2100	30x25	2100			6800	22x31	1765	25x25	1765				
15000	22x41	2450	25x35	2450	30x25	2450			8200	22x35	2000	25x31	2000	30x25	2000		
18000	22x45	2725	25x41	2725	30x31	2725	35x25	2725	10000	22x41	2270	25x35	2270	30x25	2270		
22000			25x45	3150	30x35	3150	35x25	3150	12000	22x45	2600	25x41	2600	30x31	2600	35x25	2600
27000			25x51	3580	30x41	3580	35x31	3580	15000			25x45	3100	30x35	3100	35x31	3100
33000					30x45	4080	35x35	4080	18000			25x51	3360	30x41	3360	35x31	3360
39000					30x51	4565	35x41	4565	22000					30x45	3800	35x35	3800
47000							35x45	5155	27000							35x45	4490

Vdc uF ΦD	35								Vdc uF ΦD	50							
	Φ 22		Φ 25		Φ 30		Φ 35			Φ 22		Φ 25		Φ 30		Φ 35	
	ΦD×L	RC	ΦD×L	RC	ΦD×L	RC	ΦD×L	RC		ΦD×L	RC	ΦD×L	RC	ΦD×L	RC	ΦD×L	RC
3300	22×25	1330							1800	22×25	1260						
3900	22×31	1490							2200	22×31	1600	25×25	1600				
4700	22×31	1630	25×25	1630					3300	22×35	1830	25×31	1830				
5600	22×35	1860	25×31	1860	30×25	1860			3900	22×41	2070	25×35	2070	30×25	2070		
6800	22×41	2090	25×35	2090	30×25	2090			4700	22×45	2355	25×35	2355	30×31	2355	35×25	2355
8200	22×45	2610	25×41	2610	30×31	2610	35×25	2610	5600	22×51	2565	25×41	2565	30×35	2565	35×25	2565
10000			25×45	2755	30×35	2755	35×31	2755	6800			25×51	3135	30×41	3135	35×31	3135
12000			25×51	3075	30×41	3075	35×31	3075	8200					30×45	3420	35×35	3420
15000					30×45	3530	35×35	3530	10000					30×51	3825	35×41	3825
18000							35×41	4150	12000							35×45	4320
22000							35×51	4670	15000								

uF	Vdc ΦD		63								uF	Vdc ΦD		80							
			Φ 22		Φ 25		Φ 30		Φ 35					Φ 22		Φ 25		Φ 30		Φ 35	
	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC		ΦD × L	RC	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC		
1200	22×25	1130								820	22×25	1050									
1500	22×25	1260								1000	22×25	1155									
1800	22×31	1440	25×25	1440						1200	22×31	1320	25×25	1320							
2200	22×35	1650	25×31	1650						1500	22×35	1525	25×31	1525							
2700	22×41	1890	25×35	1890	30×25	1890				1800	22×41	1710	25×31	1710	30×25	1710					
3300	22×51	2155	25×41	2155	30×31	2155	35×25	2155	2200	22×45	1965	25×35	1965	30×31	1965	35×25	1965				
3900			25×45	2420	30×35	2420	35×25	2420	2700			25×45	2240	30×35	2240	35×25	2240				
4700			25×51	2715	30×41	2715	35×31	2715	3300			25×51	2545	30×41	2545	35×31	2545				
5600					30×45	3055	35×35	3055	3900					30×45	2850	35×35	2850				
6800					30×51	3465	35×41	3465	4700					30×51	3220	35×41	3220				
8200							35×45	3700	5600							35×45	3610				
10000							35×51	4180	6800							35×51	3700				



PL Series

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

Vdc uF ΦD	100								Vdc uF ΦD	160							
	Φ 22		Φ 25		Φ 30		Φ 35			Φ 22		Φ 25		Φ 30		Φ 35	
	ΦD x L	RC	ΦD x L	RC	ΦD x L	RC	ΦD x L	RC		ΦD x L	RC	ΦD x L	RC	ΦD x L	RC	ΦD x L	RC
560	22x25	995							220	22x25	760						
820	22x31	1260	25x25	1260					330	22x25	1140	25x25	1140				
1000	22x35	1425	25x31	1425					390	22x31	1215	25x25	1215	30x25	1215		
1200	22x41	1620	25x35	1620	30x25	1620			470	22x35	1330	25x25	1330	30x25	1330		
1500	22x45	1880	25x41	1880	30x31	1880	35x25	1880	560	22x41	1460	25x31	1460	30x25	1460	35x25	1460
1800			25x45	2115	30x35	2115	35x25	2115	680	22x45	1615	25x35	1615	30x25	1615	35x25	1615
2200			25x51	2565	30x41	2565	35x31	2565	820	22x51	1900	25x41	1900	30x31	1900	35x25	1900
2700					30x45	2735	35x35	2735	1000			25x45	2110	30x35	2110	35x25	2110
3300					30x51	3115	35x41	3115	1200			25x51	2315	30x41	2315	35x31	2315
3900							35x45	3485	1500					30x45	2675	35x35	2675
4700							35x51	3610	1800					30x51	3140	35x45	3140
5600									2200							35x51	3580

Vdc uF ΦD	200								Vdc uF ΦD	220							
	Φ 22		Φ 25		Φ 30		Φ 35			Φ 22		Φ 25		Φ 30		Φ 35	
	ΦD x L	RC	ΦD x L	RC	ΦD x L	RC	ΦD x L	RC		ΦD x L	RC	ΦD x L	RC	ΦD x L	RC	ΦD x L	RC
150	22x25	625							150	22x25	650						
180	22x25	680							180	22x25	695						
220	22x25	750	25x25	750					220	22x25	800	25x25	800				
330	22x31	1140	25x25	1140	30x25	1140			330	22x31	1160	25x25	1160	30x25	1160		
390	22x35	1240	25x25	1240	30x25	1240			390	22x41	1300	25x31	1300	30x25	1300	35x25	1300
470	22x41	1335	25x31	1335	30x25	1335	35x25	1335	470	22x45	1355	25x35	1355	30x31	1355	35x25	1355
560	22x45	1480	25x35	1480	30x25	1480	35x25	1480	560	22x51	1550	25x41	1550	30x35	1550	35x25	1550
680	22x51	1650	25x41	1650	30x31	1650	35x25	1650	680			25x45	1700	30x41	1700	35x31	1700
820			25x51	1935	30x35	1935	35x31	1935	820			25x51	1820	30x45	1820	35x31	1820
1000					30x45	2185	35x35	2185	1000					30x51	2010	35x35	2010
1200					30x51	2515	35x41	2515	1200							35x41	2200
1500							35x45	2925	1500							35x45	2460

Vdc uF ΦD	250								Vdc uF ΦD	400							
	Φ 22		Φ 25		Φ 30		Φ 35			Φ 22		Φ 25		Φ 30		Φ 35	
	ΦD x L	RC	ΦD x L	RC	ΦD x L	RC	ΦD x L	RC		ΦD x L	RC	ΦD x L	RC	ΦD x L	RC	ΦD x L	RC
120	22x25	560							47	22x25	350						
150	22x25	675							68	22x25	480	25x25	480				
180	22x25	710	25x25	710					82	22x31	600	25x25	600				
220	22x31	870	25x25	870	30x25	870			100	22x31	635	25x25	635	30x25	635		
330	22x41	1195	25x31	1195	30x25	1195	35x25	1195	120	22x35	680	25x31	680	30x25	680		
390	22x45	1415	25x35	1415	30x25	1415	35x25	1415	150	22x41	795	25x35	795	30x25	795	35x25	795
470	22x51	1490	25x41	1490	30x31	1490	35x25	1490	180	22x51	890	25x41	890	30x31	890	35x25	890
560			25x45	1700	30x35	1700	35x31	1700	220			25x45	1015	30x35	1015	35x31	1015
680			25x51	1870	30x41	1870	35x31	1870	330					30x45	1280	35x35	1280
820					30x45	1880	35x35	1880	390					30x51	1460	35x41	1460
1000							35x41	2185	470							35x45	1650
1200							35x45	2300									



PL Series

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

uF \ ΦD \ Vdc	420								uF \ ΦD \ Vdc	450							
	Φ 22		Φ 25		Φ 30		Φ 35			Φ 22		Φ 25		Φ 30		Φ 35	
	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC		ΦD × L	RC	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC
47	22×25	370							47								
68	22×25	505	25×25	505					68	22×31	475	25×25	475				
82	22×31	550	25×25	550					82	22×35	520	25×25	520				
100	22×31	605	25×25	605	30×25	605			100	22×41	600	25×31	600	30×25	600		
120	22×35	665	25×31	665	30×25	665			120	22×45	680	25×35	680	30×25	680		
150	22×41	740	25×35	740	30×25	740	35×25	740	150	22×51	710	25×41	710	30×31	710	35×25	710
180	22×51	810	25×41	810	30×31	810	35×25	810	180			25×45	825	30×35	825	35×31	825
220			25×45	900	30×35	900	35×31	900	220			25×51	930	30×41	930	35×31	930
330					30×45	1295	35×35	1295	330					30×51	1310	35×41	1310
390					30×51	1465	35×41	1465	390							35×45	1470
470							35×45	1600	470							35×51	1630

uF \ ΦD \ Vdc	500							
	Φ 22		Φ 25		Φ 30		Φ 35	
	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC
39	22×31	350						
47	22×35	410						
56	22×41	470						
68	22×45	540						
82	22×41	620						
100			25×45	670				
120			25×51	770			35×31	720
150					30×41	850		
180					30×51	1010		
220							35×45	1120
270							35×51	1290

◆ RIPPLE CURRENT MULTIPLIERS
Frequency Multipliers

Vdc	Frequency (Hz)				
	50/60	120	1K	10K	100K
16 ~ 100	0.90	1.00	1.15	1.15	1.15
160 ~ 250	0.80	1.00	1.15	1.17	1.20
350 ~ 500	0.90	1.00	1.10	1.12	1.15