PL series

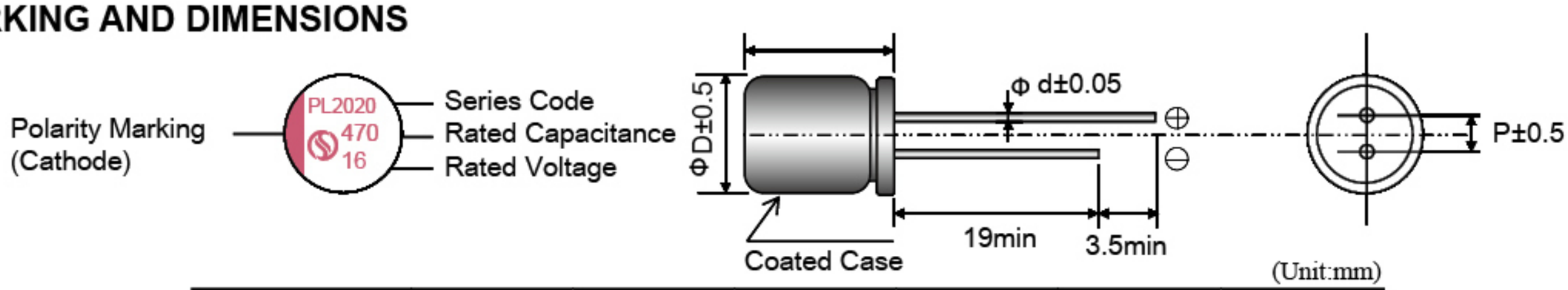
- Super low ESR,High ripplie current capability
- Rated voltage :2.5~50V
- Endurance:20,000hours at 105℃
- Applications: Servers,LCD-TV power,Inverter etc.
- ROHS compliant
- Halogen Free compliant

SPECIFICATIONS

Items	Conditions	Characteristics	
Category Temperature Range	—	-55 to +105℃	
Rated Voltage Range	—	2.5~50V	
Capacitance Tolerance	at 20℃,120HZ	±20%(M)	
Surge Voltage	at 105℃	Rated voltage ×1.15V	
Leakage Current	at 20℃after 2 minutes	I≦0.2CV or 300(μA) Whichever is greater measured,after 2minutes application of rated working voltage at +20℃.	
Dissipation Factor (tan δ)	at 20℃,120Hz	Please see the attached characteristics list	
Characteristics of Impedance at low, high temperature	at -55℃,100kHz	Z(-55℃)/Z(+20℃)	≦ 1.25
	at -25℃,100kHz	Z(-25℃)/Z(+20℃)	≦ 1.15
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃after the rated voltage is applied for 20,000 hours at 105℃.	Appearance	NO significant damage.
		Capacitance change	≦±20% of the initial value.
		DF(tanδ)	≦150% of the initial specified value.
		ESR	≦150% of the initial specified value.
		Leakage current	≦The initial specified value.
Damp Heag (Steady State)	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjecting them to subjecting them to store at 60℃, 90 to 95% RH for 1,000 hours ,without DC applied.	Appearance	NO significant damage.
		Capacitance change	≦±20% of the initial value.
		DF(tanδ)	≦150% of the initial specified value.
		ESR	≦150% of the initial specified value.
		Leakage current	≦The initial specified value.
Surge Voltage	The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltages specified at 105℃ for 30 seconds through aprotective resistor (R=1kΩ) and discharge for 5 minutes 30seconds	Appearance	NO significant damage.
		Capacitance change	≦±20% of the initial value.
		DF(tanδ)	≦150% of the initial specified value.
		ESR	≦150% of the initial specified value.
		Leakage current	≦The initial specified value.

※ Note:If any doubt arises,measure the leakage current after following voltage treatment.
Voltage treatment :DC rated voltage are applied to the capacitors for 120 minutes at 105℃.

MARKING AND DIMENSIONS



(Unit:mm)

Size Code	6.3×6	6.3×9	8×8	8×12	10×10	10×12
φD	6.3	6.3	8	8	10	10
L	L+1.0 max	L+1.0 max	L+1.5 max	L+1.0 max	L+1.0 max	L+1.0 max
φd	0.5	0.5	0.6	0.6	0.6	0.6
P	2.5	2.5	3.5	3.5	5.0	5.0

PL SERIES STANDARD CHARACTERISITICS LIST

Rated Voltage (S.V.)	Cap (μF)	Size DxL	Leakage current (μA) max. ※2	ESR (mΩ) max. 100k to 300kHz / 20°C	Rated Ripple Current (mA rms) 100kHz / 105°C	D.F. (tanδ) max. 120Hz / 20°C
2.5 (2.9)	220	6.3×6	300	24	2,400	0.12
	560	6.3×9	300	15	3,200	0.12
	1000	8×8	500	15	3,640	0.12
	1200	8×12	600	10	5,200	0.12
	1800	10×12	900	10	5,200	0.12
	2,200	10×12	1,100	10	5,500	0.12
6.3 (7.2)	100	6.3×6	300	24	2,400	0.12
	180	6.3×6	300	24	2,400	0.12
	470	6.3×9	592	20	3,500	0.12
	560	6.3×9	706	20	3,500	0.12
	560	8×8	706	15	4,100	0.12
	680	8×8	856	15	4,300	0.12
	1000	8×12	1,260	12	5,000	0.12
	1,200	10×10	1,512	15	5,200	0.12
	1800	10×12	2,268	12	5,500	0.12
10 (11.5)	120	6.3×6	300	24	2,400	0.12
	330	6.3×9	660	15	3,500	0.12
	560	8×8	1,120	15	4,000	0.12
	680	8×12	1,360	15	4,800	0.12
	1000	10×10	2,000	15	4,800	0.12
	1200	10×12	2,400	12	5,500	0.12
16 (18.4)	82	6.3×6	300	24	2.400	0.12
	100	6.3×9	320	15	3500	0.12
	220	6.3×9	704	15	3500	0.12
	330	8×8	1056	15	4200	0.12
	470	8×12	1504	12	4500	0.12
	470	10×12	1504	10	5100	0.12
	680	10×10	2176	15	5100	0.12
	820	10×12	2624	15	5400	0.12
	1000	10×12	3200	15	5400	0.12
25 (28.8)	47	6.3×6	300	40	1500	0.12
	100	6.3×9	500	30	2500	0.12
	180	8×8	900	30	3260	0.12
	220	8×12	1100	30	3520	0.12
	330	10×10	1650	20	3850	0.12
	470	10×12	2350	25	4020	0.12
35 (40.3)	22	6.3×6	300	70	1450	0.12
	68	6.3×9	476	60	1520	0.12
	120	8×8	840	30	2100	0.12
	150	8×12	1050	26	2800	0.12
	220	10×10	1540	30	3050	0.12
	270	10×12	1890	26	3650	0.12
50 (57.5)	10	6.3×6	300	90	900	0.12
	33	6.3×9	330	60	1500	0.12
	47	8×8	470	32	2000	0.12
	68	8×12	680	28	2200	0.12
	100	10×10	1000	32	2350	0.12
	100	10×12	1000	28	2550	0.12

※ 1. Capacitance tolerance : ±20%(M)
※ 2. After 2 minutes

FREDUENCY COEFFICIENT FOR RIPPLE CURRENT

Frequency	120Hz ≦ f < 1kHz	1kHz ≦ f < 10kHz	10kHz ≦ f < 100kHz	100kHz ≦ f < 500kHz
Coefficient	0.05	0.3	0.7	1