

PL series

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

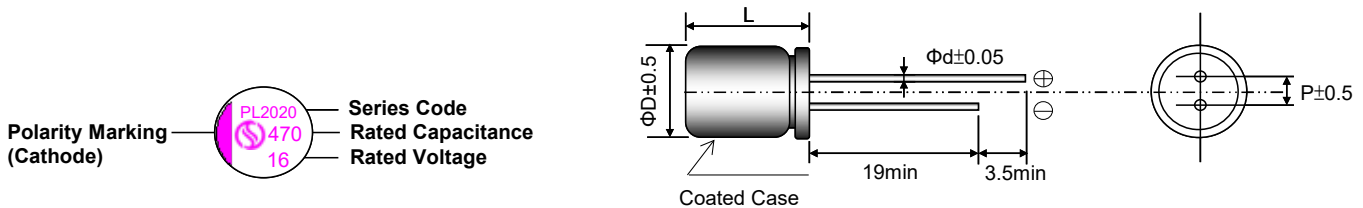


SPECIFICATIONS

Items	Conditions	Characteristics	
Category Temperature Range	—	-55 to +105°C	
Rated Voltage Range	—	2.5~50V	
Capacitance Tolerance	at 20°C,120HZ	±20%(M)	
Surge Voltage	at 105°C	Rated voltage × 1.15V	
Leakage Current	at 20°C after 2 minutes	I≤0.2CV or 300(μA) Whichever is greater measured,after 2minutes application of rated working voltage at +20°C.	
Dissipation Factor (tan δ)	at 20°C,120Hz	Please see the attached characteristics list	
Low Temperature Characteristics (Max. Impedance Ratio)	at -55°C,100kHz	Z(-55°C)/Z(+20°C)	≤ 1.25
	at -25°C,100kHz	Z(-25°C)/Z(+20°C)	≤ 1.15
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°Cafter the rated voltage is applied for 20,000 hours at 105°C.	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°C after subjecting them to store at 60°C, 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°C 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°C.

MARKING AND DIMENSIONS



(Unit:mm)

Size	6.3×6	6.3×9	8×8	8×11.5	10×10	10×11.5
ΦD	6.3	6.3	8	8	10	10
L	L+1.0 max	L+1.0 max	L+1.5 max	L+1.5 max	L+1.0 max	L+1.5 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

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STANDARD RATINGS

Rated Voltage (S.V.)	Cap (μF)	Size Code DxL	Leakage current (μA) max.	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	2400	0.12
	560	6.3×9	300	15	3200	0.12
	1000	8×8	500	15	3640	0.12
	1200	8×11.5	600	10	5200	0.12
	1800	10×11.5	900	10	5200	0.12
	2200	10×11.5	1100	10	5500	0.12
6.3 (7.2)	100	6.3×6	300	24	2400	0.12
	180	6.3×6	300	24	2400	0.12
	470	6.3×9	592	20	3500	0.12
	560	6.3×9	706	20	3500	0.12
	560	8×8	706	15	4100	0.12
	680	8×8	856	15	4300	0.12
	1000	8×11.5	1260	12	5000	0.12
	1200	10×10	1512	15	5200	0.12
	1800	10×11.5	2268	12	5500	0.12
10 (11.5)	120	6.3×6	300	24	2400	0.12
	330	6.3×9	660	15	3500	0.12
	560	8×8	1120	15	4000	0.12
	680	8×11.5	1360	15	4800	0.12
	1000	10×10	2000	15	4800	0.12
	1200	10×11.5	2400	12	5500	0.12
16 (18.4)	82	6.3×6	300	24	2400	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	8×11.5	1504	12	4500	0.12
	470	10×11.5	1504	10	5100	0.12
	680	10×10	2176	15	5100	0.12
	820	10×11.5	2624	15	5400	0.12
	1000	10×11.5	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	8×11.5	1100	30	3520	0.12
	330	10×10	1650	20	3850	0.12
	470	10×11.5	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	8×11.5	1050	26	2800	0.12
	220	10×10	1540	30	3050	0.12
	270	10×11.5	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	8×11.5	680	28	2200	0.12
	100	10×10	1000	32	2350	0.12
	100	10×11.5	1000	28	2550	0.12

FREQUENCY COEFFICIENT FOR RIPPLE CURRENT

Frequency	120Hz ≤ f < 1kHz	1kHz ≤ f < 10kHz	10kHz ≤ f < 100kHz	100kHz ≤ f < 500kHz
Coefficient	0.05	0.3	0.7	1.0