

PL series

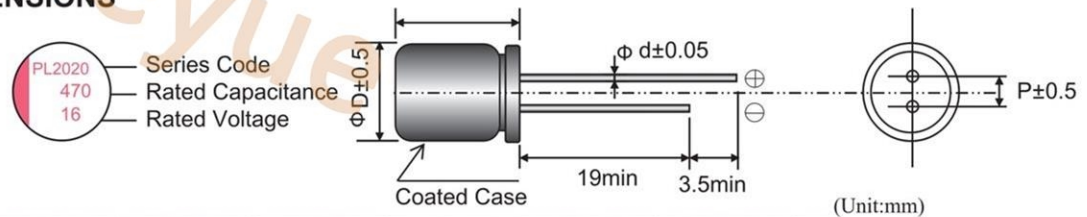
- Super low ESR, High ripple current capability
- Rated voltage :2.5~50V
- Endurance:20,000hours at 105°C
- Applications: Servers, LCD-TV power, Inverter etc.
- ROHS compliant
- Halogen Free compliant

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	$I \leq 0.2CV$ or $300(\mu A)$ Whichever is greater measured, after 2 minutes application of rated working voltage at +20°C.
Dissipation Factor (tan δ)	at 20°C, 120Hz	Please see the attached characteristics list
Characteristics of Impedance at low, high temperature	at -55°C, 100kHz	$Z(-55^\circ C)/Z(+20^\circ C) \leq 1.25$
	at -25°C, 100kHz	$Z(-25^\circ C)/Z(+20^\circ C) \leq 1.15$
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 20,000 hours at 105°C.	Appearance NO significant damage.
		Capacitance change $\leq \pm 20\%$ of the initial value.
		DF(tanδ) $\leq 150\%$ of the initial specified value.
		ESR $\leq 150\%$ of the initial specified value.
		Leakage current \leq 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 $\leq \pm 20\%$ of the initial value.
		DF(tanδ) $\leq 150\%$ of the initial specified value.
		ESR $\leq 150\%$ of the initial specified value.
		Leakage current \leq 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 a protective resistor (R=1kΩ) and discharge for 5 minutes 30seconds	Appearance NO significant damage.
		Capacitance change $\leq \pm 20\%$ of the initial value.
		DF(tanδ) $\leq 150\%$ of the initial specified value.
		ESR $\leq 150\%$ of the initial specified value.
		Leakage current \leq 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



Size Code	6.3×6	6.3×9	8×8	8×12	10×10	10×12
φ D	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
φ d	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

注：以上所提供的设计及特性参数仅供参考，任何修改不作预先通知，如有使用上任何疑问，请在采购前与我们联系，以便提供技术上的协助。

PL SERIES STANDARD CHARACTERISTICS 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

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

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