

Aluminum Electrolytic Capacitors



EL Series

LONG LIFE ASSURANCE

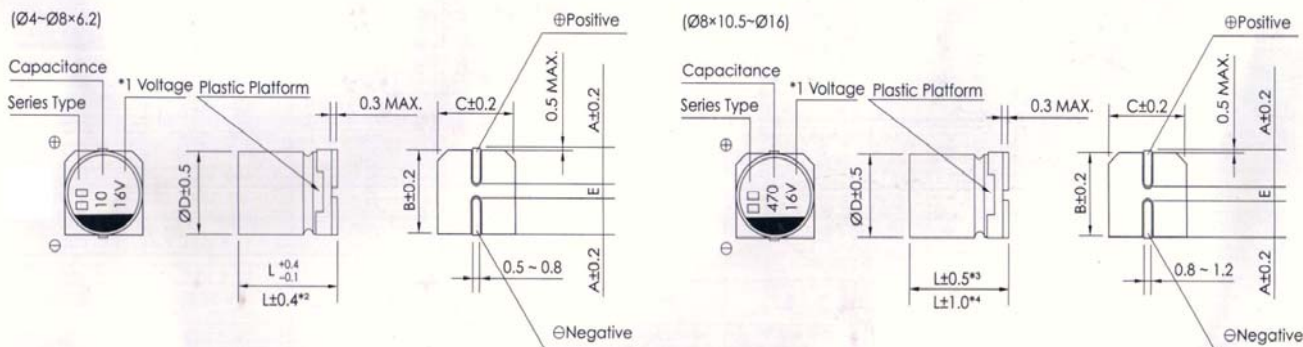
- Wide temperature range -55~+105 °C
- Load life of 2000~3000 hours
- Comply with the RoHS directive



SPECIFICATIONS

Item	Characteristics								
Operating Temperature Range	-55 ~ +105℃								
Voltage Range	6.3 ~ 50 V								
Capacitance Range	0.1 ~ 1500 μ F								
Capacitance Tolerance	- 20% ~ + 20% at 20℃, 120Hz								
Leakage Current	Leakage current(Φ4~Φ10) ≤0.01CV or 3uA,whichever is greater (after 2 minutes application of rated voltage) Leakage current(Φ12.5~Φ16) ≤0.03CV or 4uA,whichever is greater (after 1 minute application of rated voltage)								
Dissipation Factor(tanδ)	Measurement frequency:120Hz ,Temperature:20℃								
	Rated Voltage (V)		6.3	10	16	25	35	50	
	tan δ(max.)	Φ4~Φ10	0.28	0.24	0.2	0.16	0.13	0.12	
		Φ12.5~Φ16	0.38	0.34	0.3	0.26	0.22	0.18	
Stability at Low Temperature	Measurement frequency:120Hz								
	Rated Voltage (V)			6.3	10	16	25	35	50
	Impedance Ratio ZT/Z20(max.)	Φ4~Φ10	Z(- 25℃) / Z (+ 20℃)	3	3	2	2	2	2
			Z(- 55℃) / Z (+ 20℃)	8	5	4	3	3	3
		Φ12.5~Φ16	Z(- 25℃) / Z (+ 20℃)	5	4	3	2	2	2
			Z(- 55℃) / Z (+ 20℃)	12	10	8	5	4	3
Load Life	After 3000 hrs.(2000 hrs.forΦ4~Φ6.3×5.4&Φ8×6.2) application of the rated voltage at 105℃, they meet the characteristics listed below.								
	Capacitance Change		Within ±25% of initial value						
	Dissipation Factor		200% or less of initial specified value						
	Leakage Current		initial specified value or less						
Shelf Life	After leaving capacitors under no load at 105℃ for 1000 hours,they meet the specified value for load life characteristics listed above.								
Resistance to Soldering Heat	After reflow soldering and restored at room temperature, they meet the characteristics listed below.								
	Capacitance Change		Within ±10% of initial value						
	Dissipation Factor		initial specified value or less						
	Leakage Current		initial specified value or less						
Marking	Black print on the case top.								

DRAWING (Unit: mm) 外形圖



- *1. Voltage mark for 6.3V is [6V] 6.3V的產品標識為 [6V]
*2. Applicable to Ø6.3×7.7 適用於Ø6.3×7.7
*3. Applicable to Ø8×10.5~Ø10 適用於Ø8×10.5~Ø10
*4. Applicable to Ø12.5~Ø16 適用於Ø12.5~Ø16

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● DIMENSIONS(Unit:mm)

(ΦD×L)	4×5.4	5×5.4	6.3×5.4	6.3×7.7	8×6.2	8×10.5	10×10.5	10×13.5	12.5×13.5	12.5×16	16×16.5
A	1.8	2.1	2.4	2.4	3.3	2.9	3.2	3.2	4.7	4.7	5.5
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	13.0	13.0	17.0
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	13.0	13.0	17.0
E±0.2	1.0	1.3	2.2	2.2	3.1	3.1	4.4	4.4	4.4	4.4	6.7
L	5.4	5.4	5.4	7.7	6.2	10.5	10.5	13.5	13.5	16.0	16.5

■ DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT & IMPEDANCE

WV(Vdc)		6.3		10		16		25		35		50	
μF													
0.1	0R1											4×5.8	1
0.22	R22											4×5.8	2
0.33	R33											4×5.8	3
0.47	R47											4×5.8	5
1	0 10											4×5.8	10
2.2	2R2											4×5.8	16
3.3	3R3											4×5.8	16
4.7	4R7							4×5.8	13	4×5.8	14	5×5.8	23
10	100					4×5.8	18	5×5.8	20	5×5.8	21	6.3×5.8	35
22	220	4×5.8	22	5×5.8	25	5×5.8	27	6.3×5.8	36	6.3×5.8	38	6.3×7.7 (8×6.2)	70 (70)
33	330	5×5.8	27	5×5.8	30	6.3×5.8	40.00	6.3×5.8	60	6.3×7.7 (8×6.2)	84 (84)	8×10.5	90
47	470	5×5.8	33	6.3×5.8	41	6.3×5.8	48.00	6.3×7.7 (8×6.2)	90 (91)	8×10.5	98	8×10.5	90
100	101	6.3×5.8	50	6.3×5.8 (8×6.2)	53 (110)	6.3×5.8	60	8×10.5	130	8×10.5	130	10×10.5	100
150	151	6.3×5.8	55	6.3×7.7	105	6.3×7.7	95	8×10.5	140	10×10.5	315	10×10.5	100
220	221	6.3×7.7	100	8×10.5	210	8×10.5	210	10×10.5	190	10×10.5	315	10×13.5 (10×10.5)	250 (100)
330	331	8×10.5	210	8×10.5	210	8×10.5	210	10×10.5	315	10×10.5	315	12.5×13.5	400
470	471	8×10.5	210	10×10.5	315	10×10.5	315	10×10.5	315	12.5×13.5 (10×13.5)	500 (360)	16×16.5 (12.5×16)	650 (500)
680	681	8×10.5	210	10×10.5	315	10×10.5	315	10×13.5	380	12.5×13.5	500		
1000	102	10×10.5	315	10×13.5 (10×10.5)	360 (315)	12.5×13.5 (10×13.5) (10×10.5)	450 (350) (315)	12.5× 13.5	550	16×16.5 (12.5×16)	700 (550)		
1500	152	10×13.5 (10×10.5)	450 (315)	12.5×13.5	500	12.5×13.5	500	12.5×16	800				
2200	222	12.5× 13.5	620	12.5×16 (12.5×13.5)	650 (600)	16×16.5	900	16×16.5	1000				
3300	332	12.5×16	750	16×16.5	950								

Rated Ripple Current (mA rms) at 105 °C 120Hz

Case Size: Φ D×L (mm)

EL Series

□FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT

Frequency			50HZ	120HZ	300HZ	1KHZ	10KHZ~
Coefficient	Φ4~Φ10	0.1~100μF	0.70	1.00	1.17	1.36	1.50
		100~1500μF	0.85	1.00	1.08	1.20	1.30
	12.5~Φ16	~470μF	0.75	1.00	1.35	1.57	2.00
		680~3300μF	0.85	1.00	1.23	1.34	1.50