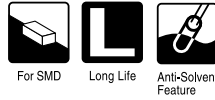


# ALUMINUM ELECTROLYTIC CAPACITORS

**UL series** Chip Type, Long Life Assurance



- Chip type with load life of 5000 hours at +105°C.
- Designed for surface mounting on high density PC board.
- Adapted to the RoHS directive (2002/95/EC).

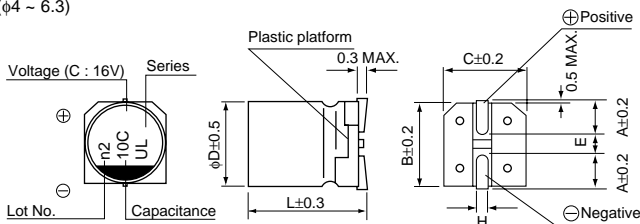


## Specifications

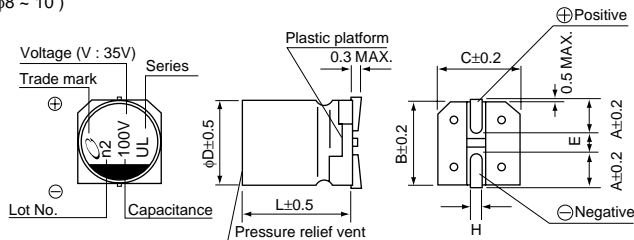
Item	Performance Characteristics							
Category Temperature Range	-40 ~ +105°C							
Rated Voltage Range	6.3 ~ 50V							
Rated Capacitance Range	0.1 ~ 1000μF							
Capacitance Tolerance	±20% at 120Hz, 20°C							
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.01 CV or 3 (μA), Max							
tan δ	Measurement frequency : 120Hz, Temperature : 20°C							
	Rated voltage (V)	6.3	10	16	25	35	50	
Stability at Low Temperature	Measurement frequency : 120Hz							
	Rated voltage (V)		6.3	10	16	25	35	50
	Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C	4	3	2	2	2	2
Endurance	After 5000 hours' application of rated voltage at 105°C, capacitors meet the characteristic requirements listed at right.							
	Capacitance change	Within ±30% of initial value						
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they will meet the specified value for endurance characteristics listed above.							
	tan δ	300% or less of initial specified value						
Resistance to soldering heat	The capacitors shall be kept on the hot plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the characteristic requirements listed at right.							
	Leakage current	Initial specified value or less						
Marking	Black print on the case top.							

## Chip Type

(φ4 ~ 6.3)

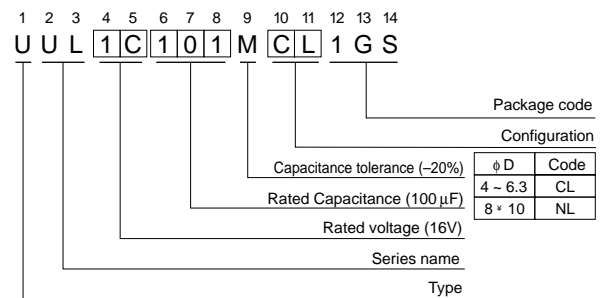


(φ8 ~ 10)



Voltage	V	6.3	10	16	25	35	50
Code	j	A	C	E	V	H	

## Type numbering system (Example : 16V 100μF)



φD × L	(mm)					
	4 × 5.8	5 × 5.8	6.3 × 5.8	6.3 × 7.7	8 × 10	10 × 10
A	1.8	2.1	2.4	2.4	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	3.1	4.5
L	5.8	5.8	5.8	7.7	10	10
H	0.5 ~ 0.8	0.5 ~ 0.8	0.5 ~ 0.8	0.5 ~ 0.8	0.8 ~ 1.1	0.8 ~ 1.1

● Dimension table in next page.

## UL series

### ■ Dimensions

Cap. ( $\mu$ F)	Code	V		6.3	10	16	25	35	50				
		0J	1A	1C	1E	1V	1H						
0.1	0R1									4×5.8	1.0		
0.22	R22									4×5.8	2.6		
0.33	R33									4×5.8	3.2		
0.47	R47									4×5.8	3.8		
1	010									4×5.8	6.2		
2.2	2R2									4×5.8	11		
3.3	3R3									4×5.8	14		
4.7	4R7							4×5.8	15	5×5.8	19		
10	100					4×5.8	18	5×5.8	25	5×5.8	25	6.3×5.8	30
22	220			5×5.8	30	5×5.8	30	6.3×5.8	42	6.3×5.8	42	6.3×7.7	49
33	330	5×5.8	35	5×5.8	35	6.3×5.8	48	6.3×5.8	48	6.3×7.7	57	8×10	77
47	470	5×5.8	36	6.3×5.8	50	6.3×5.8	50	6.3×7.7	63	8×10	92	8×10	92
100	101	6.3×5.8	60	6.3×7.7	81	6.3×7.7	81	8×10	116	10×10	151	10×10	151
220	221	6.3×7.7	101	8×10	141	10×10	216	10×10	216	10×10	216		
330	331	8×10	160	10×10	238	10×10	238	10×10	238				
470	471	10×10	254	10×10	254	10×10	254						
1000	102	10×10	313									Case size $\phi$ D×L(mm)	Rated ripple

Rated Ripple (mArms) at 105°C 120Hz

### ● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz~
Coefficient	0.70	1.00	1.17	1.36	1.50

- Taping specifications are given in page 24.
- Recommended land size, soldering by reflow are given in page 25, 26.
- Please refer to page 3 for the minimum order quantity.