

ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

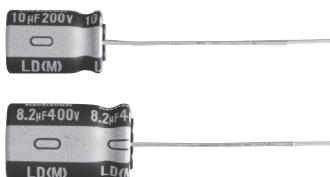
ULD

Miniature sized, Long Life Assurance



- Long Life product withstanding load life of 10000 to 20000 hours at +105°C.
- Suited for the power supply for LED lighting.
- Compliant to the RoHS directive (2011/65/EU).

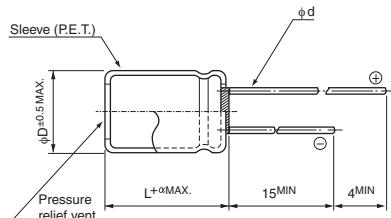
UCY UHE → **ULD**



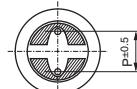
■ Specifications

Item	Performance Characteristics							
Category Temperature Range	-25 to +105°C(10 to 100V, 450V), -40 to +105°C(160 to 400V)							
Rated Voltage Range	10 to 450V							
Rated Capacitance Range	1 to 330μF							
Capacitance Tolerance	±20% at 120Hz, 20°C							
Leakage Current	Rated Voltage(V)	10 to 100					160 to 450	
	—	After 2 minute's application of rated voltage at 20°C, leakage current is not more than 0.01CV or 3(μA), whichever is greater.					After 1 minute's application of rated voltage at 20°C, CV ≤ 1000 : I=0.1CV+40(μA) or less After 1 minute's application of rated voltage at 20°C, CV>1000: I=0.04CV+100(μA) or less	
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C							
	Rated voltage (V)	10	16	25	35	50	63	100 160 to 450
Stability at Low Temperature	tan δ (MAX.)	0.45	0.35	0.3	0.22	0.19	0.17	0.15 0.24
	Measurement frequency : 120Hz							
Endurance	Rated voltage (V)	10	16	25-35	50 to 100	160 to 250	400	450
	Impedance ratio Z-25°C / Z+20°C	8	6	4	3	3	6	6
Shelf Life	ZT / Z20 (MAX.)	—	—	—	—	8	10	—
	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.							
Marking	Printed with white color letter on dark brown sleeve.							

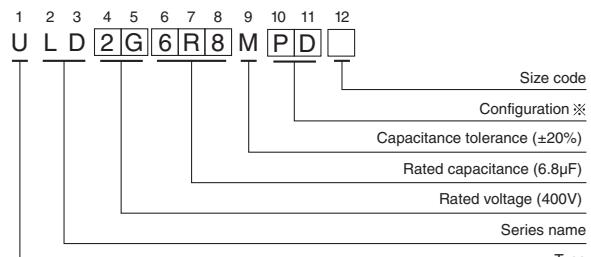
■ Radial Lead Type



(mm)						
φD	5	6.3	8	10	12.5	16
P	2.0	2.5	3.5	5.0	5.0	7.5
φd	0.5	0.5	0.6	0.6	0.6	0.8
α	1.5	1.5	2.0	2.0	2.0	2.0



Type numbering system (Example : 400V 6.8μF)



※ Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
5	DD
6.3	ED
8 • 10	PD
12.5 to 18	HD

- Please refer to page 20 about the end seal configuration.
- Please refer to page 20, 21, 22 about the formed or taped product spec.
- Please refer to page 4 for the minimum order quantity.

ULD

■ Dimensions

Cap	Code	V	10	16	25	35	50	63	100
		1A	1C	1E	1V	1H	1J	2A	
1	010					5x11	25		
2.2	2R2					5x11	35		
3.3	3R3					5x11	70		
4.7	4R7					5x11	80		5x11 70
6.8	6R8					5x11	80		5x11 70
10	100					5x11	90	5x11 80	6.3x11 150
22	220					5x11	135	6.3x11 170	8x11.5 230
33	330			5x11 130	5x11 130	6.3x11 190	6.3x11 170		
47	470		5x11 130	5x11 130	6.3x11 210	6.3x11 190	8x11.5 240		
100	101	5x11 130	6.3x11 210	6.3x11 210	8x11.5 330	8x11.5 270			
150	151		6.3x11 210	8x11.5 330					
220	221	6.3x11 210	8x11.5 330						
270	271		8x11.5 330						
330	331	8x11.5 330							

• Frequency coefficient of rated ripple current

Cap.(μ F)	Frequency	120Hz	1kHz	10kHz	100kHz
	1 to 10 μ F	0.42	0.60	0.80	1.00
22 to 33 μ F		0.55	0.75	0.90	1.00
47 to 330 μ F		0.70	0.85	0.95	1.00

※ : Rated ripple (mA rms) at 105°C 100kHz

Cap	Code	V	160	200	250	400	450
		2C	2D	2E	2G	2W	
1	010				6.3 x 11	24	
1.2	1R2				8 x 9	28	
1.5	1R5				6.3 x 11	29	
1.8	1R8			6.3 x 11	33	8 x 9	33
2.2	2R2		6.3 x 11	36	6.3 x 11	36	8 x 11.5 40
2.7	2R7					▲ 8 x 9	33
3.3	3R3		6.3 x 11	42	6.3 x 11	42	8 x 11.5 43
3.9	3R9					▲ 10 x 9	47
4.7	4R7		6.3 x 11	49	8 x 9	53	10 x 12.5 57
5.6	5R6	6.3 x 11	52	6.3 x 11	50	8 x 11.5 62	10 x 12.5 64
6.8	6R8	6.3 x 11	55	8 x 9	62	10 x 12.5	10 x 16 58
8.2	8R2			8 x 9	66	10 x 16	10 x 16 62
10	100	8 x 9	70	8 x 11.5	80	10 x 16	10 x 20 88
12	120			10 x 9	88	10 x 12.5	10 x 20 92
15	150	8 x 11.5	92				12.5 x 20 140
18	180			10 x 12.5	113	10 x 16	
22	220	10 x 12.5	121				12.5 x 25 240
27	270			10 x 16	149		▲ 16 x 20 292
33	330	10 x 16	158				16 x 20 305
47	470						16 x 25 392
68	680						▲ 18 x 20 312
							18 x 25 480
							18 x 31.5 520

• Frequency coefficient of rated ripple current

※ : Rated ripple current (mA rms) at 105°C 120Hz

▲: In this case, [6] will be put at 12th digit of type numbering system.

Frequency	120Hz	1kHz	10kHz	100kHz or more
1 to 5.6 μ F	1.00	1.60	1.80	2.00
6.8 to 18 μ F	1.00	1.50	1.70	1.90
22 to 68 μ F	1.00	1.40	1.60	1.80