ALUMINUM ELECTROLYTIC CAPACITORS

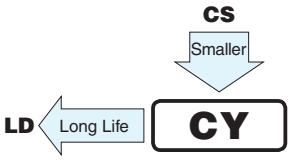
nichicon

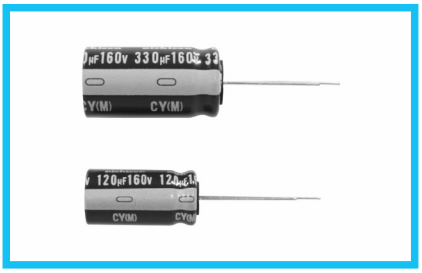
CY series

Miniature Sized, High Ripple Current, High Reliability

Smaller | Long Life | High Ripple Current

- High ripple current and Long Life product withstanding load life of 10000 to 12000 hours at +105°C.
- Suited for ballast application.
- Compliant to the RoHS directive (2011/65/EU).





■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +105°C (160 to 400V), −25 to +105°C (420 to 500V)
Rated Voltage Range	160 to 500V
Rated Capacitance Range	6.8 to 680μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.04CV+100 (μA)
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C

Rated voltage (V)	160	200	250	350	400	420	450	500
tan δ (MAX.)	0.20	0.20	0.20	0.24	0.24	0.24	0.24	0.24

Stability at Low Temperature — Measurement frequency : 120Hz

Rated voltage (V)		160	200	250	350	400	420	450	500
Impedance ratio ZT / Z20 (MAX.)	Z−25°C / Z+20°C	3	3	3	5	5	6	6	6
	Z−40°C / Z+20°C	6	6	6	6	6	–	–	–

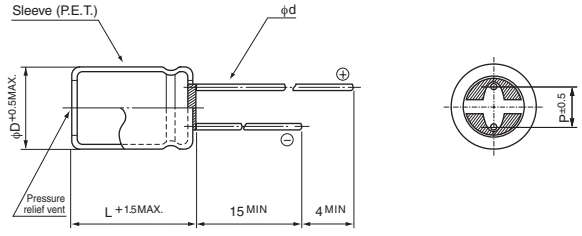
Endurance

The specifications listed at right shall be met when the capacitors are restored to 20˚C after D.C. bias plus rated ripple current is applied for 12000 hours (10000 hours for 20L or less, 500V) at 105˚C, the peak voltage shall not exceed the rated voltage.

Capacitance change	Within ±20% of the initial capacitance value
tan δ	200% or less than the initial specified value
Leakage current	Less than or equal to the initial specified value

Shelf Life	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	10	12.5	16	18
P	5.0	5.0	7.5	7.5
φd	0.6	0.6※	0.8	0.8

※ In case L > 25 for the φ12.5 dia. unit, lead dia. φ d = 0.8mm.

• Please refer to page 20 about the end seal configuration.

Type numbering system (Example : 250V 100μF)

1	2	3	4	5	6	7	8	9	10	11	12
U	C	Y	2	E	1	0	1	M	H	D	

Size code
Configuration ※
Capacitance tolerance (±20%)
Rated capacitance (100μF)
Rated voltage (250V)
Series name
Type

※Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
10	PD
12.5 to 18	HD

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

●Dimension table in next page.

CY series

Dimensions

Cap	Code	V	160		200		250		350		400		420		450		500	
			2C		2D		2E		2V		2G		W6		2W		2H	
6.8	6R8										10 × 16	140	10 × 16	105	10 × 16	105		
10	100										10 × 16	150	10 × 20	135	10 × 20	135	12.5 × 20	160
12	120								10 × 16	160	10 × 20	175	10 × 20	150	10 × 20	150		
15	150								10 × 20	180	10 × 20	180	10 × 25	185	10 × 25	185	12.5 × 25 ● 16 × 20	220 220
18	180								10 × 20	215	10 × 25	235	10 × 31.5	215	10 × 31.5 ▲ 12.5 × 20	215 255	12.5 × 31.5 ● 16 × 20	240 240
22	220				10 × 16	225	10 × 16	225	10 × 25 ○ 10 × 20 ● 12.5 × 20	255 215 325	10 × 31.5	275	12.5 × 20	285	12.5 × 25	300	12.5 × 35.5 ▲ 16 × 25 ● 18 × 20	280 280 280
27	270				10 × 16	235	10 × 20	255	10 × 31.5 ○ 10 × 25	305 255	12.5 × 20	360	12.5 × 25	340	12.5 × 25	340	12.5 × 40 ▲ 16 × 25	310 310
33	330	10 × 16	260	10 × 20	305	10 × 20 ● 12.5 × 20	305 400	12.5 × 20 ● 16 × 20	380 450	12.5 × 25 ● 16 × 20	385 450	12.5 × 31.5 ● 16 × 20	400 385	12.5 × 31.5 ● 16 × 20	400 385	16 × 31.5 ● 18 × 25	350 350	
39	390	10 × 16	295	10 × 20	325	10 × 25	345	12.5 × 25	455	12.5 × 31.5 ○ 12.5 × 25	465 385	12.5 × 31.5	430	12.5 × 35.5 ● 18 × 20	460 440	16 × 35.5	380	
47	470	10 × 20	375	10 × 20 ● 12.5 × 20	360 490	10 × 31.5 ○ 10 × 25 ● 12.5 × 20	405 345 490	12.5 × 25 ● 16 × 20	510 540	16 × 20 ▲ 12.5 × 31.5 ● 18 × 20	520 510 590	12.5 × 35.5 ▲ 16 × 25 ● 18 × 20	505 500 480	12.5 × 40 ▲ 16 × 25	525 500	16 × 40 ▲ 18 × 31.5	440 440	
56	560	10 × 20	380	10 × 25	415	12.5 × 20	515	12.5 × 31.5 ▲ 16 × 20	590 565	12.5 × 35.5 ▲ 16 × 25 ● 18 × 20	630 585 600	12.5 × 40	570	16 × 31.5 ● 18 × 25	585 560	18 × 35.5	480	
68	680	10 × 25 ● 12.5 × 20	455 590	10 × 31.5 ● 12.5 × 20	485 650	12.5 × 25 ● 16 × 20	615 650	12.5 × 35.5 ● 16 × 25 ▲ 18 × 20	695 700 690	12.5 × 40 ○ 16 × 25 ● 18 × 25	720 640 735	16 × 31.5 ● 18 × 25	645 615	16 × 35.5	660	18 × 40	525	
82	820	10 × 31.5 ○ 10 × 25 ● 12.5 × 20	534 455 640	12.5 × 25 ○ 12.5 × 20 ● 16 × 20	645 645 690	12.5 × 31.5 ○ 12.5 × 25 ● 16 × 20	715 615 690	16 × 31.5 ▲ 12.5 × 40 ○ 16 × 25 ● 18 × 25	740 785 700 765	16 × 31.5 ● 18 × 25	805 765	16 × 35.5 ▲ 18 × 31.5	725 730	16 × 40 ▲ 18 × 31.5	750 730			
100	101	12.5 × 20	645	12.5 × 25 ● 16 × 20	695 710	16 × 20 ▲ 12.5 × 35.5	715 785	16 × 31.5 ● 18 × 25	825 790	16 × 35.5 ▲ 18 × 31.5	850 875	16 × 40 ▲ 18 × 35.5	825 835	18 × 35.5	835			
120	121	12.5 × 25	760	16 × 20 ▲ 12.5 × 31.5	775 810	16 × 25 ○ 12.5 × 35.5 ● 12.5 × 40 ▲ 18 × 20	845 785 890 815	16 × 35.5 ▲ 18 × 31.5	925 940	18 × 31.5 ▲ 16 × 40 ● 18 × 35.5	940 950 960	18 × 40 ▲ 18 × 46	930 945	18 × 40 ▲ 18 × 46	930 945			
150	151	12.5 × 31.5 ○ 12.5 × 25 ● 16 × 20	905 760 945	12.5 × 35.5 ● 16 × 25 ▲ 18 × 20	965 945 910	18 × 25 ▲ 12.5 × 40	970 990	18 × 35.5 ▲ 16 × 40	1080 1000	18 × 40	1030							
180	181	16 × 20 ○ 12.5 × 31.5 ▲ 12.5 × 35.5	1000 905 1050	12.5 × 40 ▲ 16 × 25 ● 18 × 20	1090 1035 910	16 × 31.5 ▲ 18 × 25	1110 1050	18 × 40	1205	18 × 46	1110							
220	221	12.5 × 40 ○ 12.5 × 35.5 ● 16 × 25 ▲ 18 × 20	1200 1050 1185 1105	16 × 31.5 ▲ 12.5 × 40 ● 18 × 25	1230 1090 1185	16 × 40 ○ 16 × 35.5 ● 18 × 31.5	1295 1220 1160	18 × 46	1300									
270	271	18 × 25 ▲ 12.5 × 40	1235 1300	16 × 35.5 ▲ 18 × 31.5	1400 1410	18 × 35.5 ▲ 16 × 40	1450 1350											
330	331	16 × 31.5 ▲ 18 × 25	1510 1445	16 × 40 ▲ 18 × 31.5	1595 1560	18 × 46 ○ 18 × 40	1600 1530											
390	391	16 × 40 ○ 16 × 35.5 ▲ 18 × 31.5	1730 1510 1695	18 × 40 ○ 18 × 35.5	1780 1690													
470	471	18 × 35.5 ▲ 16 × 40	1920 1730	18 × 40 ▲ 18 × 46	1850 1900													
560	561	18 × 40	2130														Case size φD × L (mm)	※
680	681	18 × 46	2300															

● Frequency coefficient of rated ripple current

Frequency	50Hz	120Hz	1kHz	10kHz	100kHz or more
Coefficient	0.80	1.00	1.60	1.80	2.00

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

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

● : In this case, 3 will be put at 12th digit of type numbering system.

○ : In this case, 9 will be put at 12th digit of type numbering system.