

ALUMINUM ELECTROLYTIC CAPACITORS

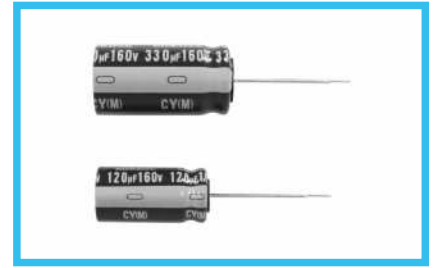
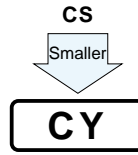
CY series

Miniature Sized, High Ripple Current, High Reliability



Upgrade

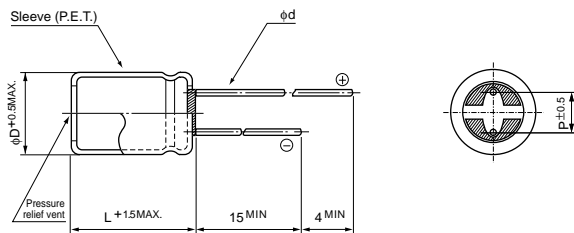
- High ripple current and Long Life product withstanding load life of 10000 to 12000 hours at +105°C.
- Suited for ballast application.
- Compliant to the RoHS directive (2002/95/EC).



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 560µF																															
Capacitance Tolerance	±20% at 120Hz, 20°C																															
Leakage Current	After 1 minute's application of rated voltage, leakage current is not more than 0.04CV+100 (µA)																															
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C																															
	<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>420</th> <th>450</th> <th>500</th> </tr> </thead> <tbody> <tr> <td>tan δ (MAX.)</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> <td>0.24</td> <td>0.24</td> <td>0.24</td> <td>0.24</td> <td>0.24</td> </tr> </tbody> </table>	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													
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																															
	<table border="1"> <thead> <tr> <th rowspan="2">Rated voltage (V)</th> <th colspan="2"></th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>420</th> <th>450</th> <th>500</th> </tr> <tr> <th>Z-25°C / Z+20°C</th> <th>Z-40°C / Z+20°C</th> <td>3</td> <td>3</td> <td>3</td> <td>5</td> <td>5</td> <td>6</td> <td>6</td> <td>6</td> </tr> </thead> <tbody> <tr> <td>Impedance ratio ZT / Z20 (MAX.)</td> <td></td> <td></td> <td>6</td> <td>6</td> <td>6</td> <td>6</td> <td>6</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	Rated voltage (V)			160	200	250	350	400	420	450	500	Z-25°C / Z+20°C	Z-40°C / Z+20°C	3	3	3	5	5	6	6	6	Impedance ratio ZT / Z20 (MAX.)			6	6	6	6	6	-	-
Rated voltage (V)			160	200	250	350	400	420	450	500																						
	Z-25°C / Z+20°C	Z-40°C / Z+20°C	3	3	3	5	5	6	6	6																						
Impedance ratio ZT / Z20 (MAX.)			6	6	6	6	6	-	-	-																						
Endurance	<p>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.</p> <table border="1"> <tbody> <tr> <td>Capacitance change</td> <td>Within ±20% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td>200% or less than the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Less than or equal to the initial specified value</td> </tr> </tbody> </table>	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																									
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

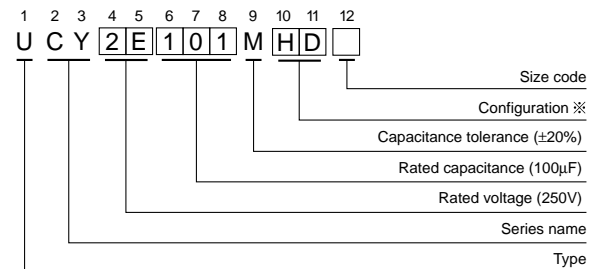


	(mm)			
φD	10	12.5	16	18
P	5.0	5.0	7.5	7.5
φd	0.6	0.6 ¹⁾	0.8	0.8

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

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

Type numbering system (Example : 250V 100µF)



※ 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.

ALUMINUM ELECTROLYTIC CAPACITORS



■ Dimensions

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

● 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.