nichicon

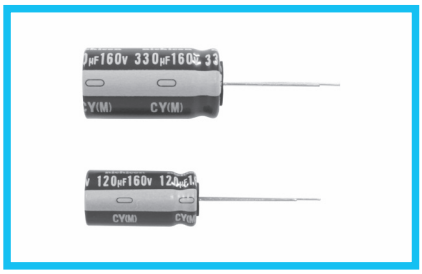
UCY

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).

UCS (Smaller) / ULD (Long Life) / UCY



■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	–	–	–

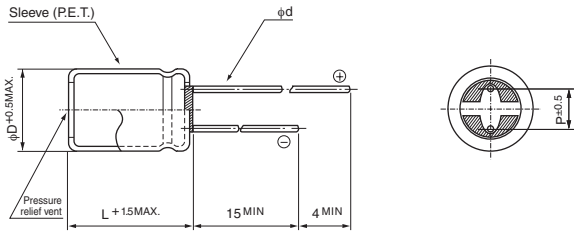
Endurance — The specifications listed at right shall be met when the capacitors are restored to 20˚C after D.C. bias plus rated ripple current is applied for 12000 hours (10000 hours for 20L or less, 500V) at 105˚C, the peak voltage shall not exceed the rated voltage.

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.

UCY

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	220
																	● 16 × 20	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			● 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			● 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			● 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 × 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		
									● 18 × 25	765								
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				
120	121		12.5 × 25	760	16 × 20	775	16 × 25	845	16 × 35.5	925	18 × 31.5	940	18 × 40	930	18 × 40	930		
							○ 12.5 × 35.5	785										
					▲ 12.5 × 31.5	810	● 12.5 × 40	890	▲ 18 × 31.5	940	▲ 16 × 40	950	▲ 18 × 46	945	▲ 18 × 46	945		
							▲ 18 × 20	815			● 18 × 35.5	960						
150	151		12.5 × 31.5	905	12.5 × 35.5	965	18 × 25	970	18 × 35.5	1080	18 × 40	1030						
			○ 12.5 × 25	760	● 16 × 25	945	▲ 12.5 × 40	990	▲ 16 × 40	1000								
			● 16 × 20	945	▲ 18 × 20	910												
180	181		16 × 20	1000	12.5 × 40	1090	16 × 31.5	1110	18 × 40	1205	18 × 46	1110						
			○ 12.5 × 31.5	905	▲ 16 × 25	1035	▲ 18 × 25	1050										
			▲ 12.5 × 35.5	1050	● 18 × 20	910												
220	221		12.5 × 40	1200	16 × 31.5	1230	16 × 40	1295	18 × 46	1300								
			○ 12.5 × 35.5	1050	▲ 12.5 × 40	1090	○ 16 × 35.5	1220										
			● 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												
			▲ 18 × 31.5	1695														
470	471		18 × 35.5	1920	18 × 40	1850												
			▲ 16 × 40	1730	▲ 18 × 46	1900												
560	561		18 × 40	2130													Case size	
680	681		18 × 46	2300													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.