

## UCY

Miniature Sized, High Ripple Current,  
High Reliability

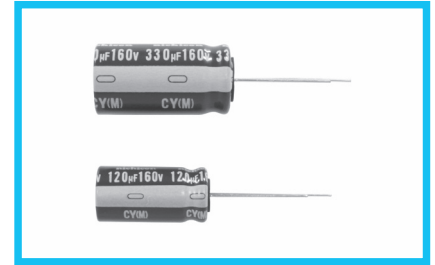
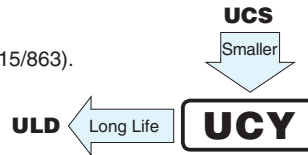


Smaller

Long Life

High Ripple  
Current

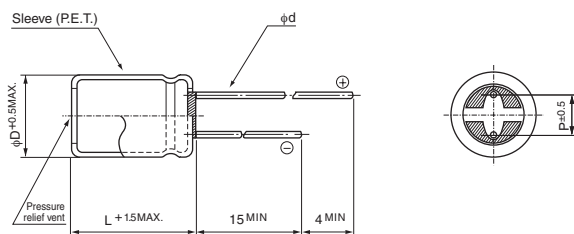
- High ripple current and Long Life product withstanding load life of 10000 to 12000 hours at +105°C.
- Suited for power supply and ballast application.
- Compliant to the RoHS directive (2011/65/EU, (EU) 2015/863).
- AEC-Q200 compliant. Please contact us for details.



## 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 (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

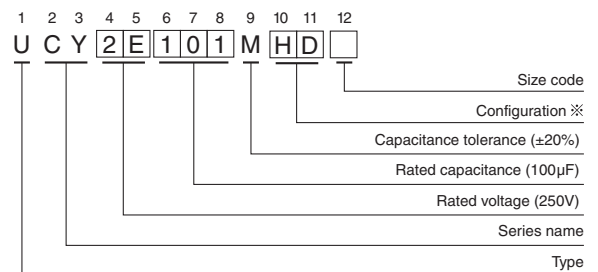


|    | (mm) |                  |     |     |
|----|------|------------------|-----|-----|
| φD | 10   | 12.5             | 16  | 18  |
| P  | 5.0  | 5.0              | 7.5 | 7.5 |
| φd | 0.6  | 0.6 <sup>※</sup> | 0.8 | 0.8 |

※ 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<br>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.

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## ■ Dimensions

| Cap.(μF) | 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 | ● 16 × 20                | 240 |
|          |      |               |      |               |      |               |      |             |      |               |      |             |     | ▲ 12.5 × 20 | 255 |             |     |                          |     |
| 22       | 220  |               |      | 10 × 16       | 225  | 10 × 16       | 225  | 10 × 25     | 255  | ○ 10 × 20     | 215  | 10 × 31.5   | 275 | 12.5 × 20   | 285 | 12.5 × 25   | 300 | 12.5 × 35.5              | 280 |
|          |      |               |      |               |      |               |      | ● 12.5 × 20 | 325  |               |      |             |     |             |     |             |     | ▲ 16 × 25                | 280 |
|          |      |               |      |               |      |               |      |             |      |               |      |             |     |             |     |             |     | ● 18 × 20                | 280 |
| 27       | 270  |               |      | 10 × 16       | 235  | 10 × 20       | 255  | 10 × 31.5   | 305  | ○ 10 × 25     | 255  | 12.5 × 20   | 360 | 12.5 × 25   | 340 | 12.5 × 25   | 340 | 12.5 × 40                | 310 |
|          |      |               |      |               |      |               |      |             |      |               |      |             |     |             |     |             |     | ▲ 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  | ● 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  | ▲ 16 × 20     | 565  | 12.5 × 35.5 | 630 | 12.5 × 40   | 570 | 16 × 31.5   | 585 | 18 × 35.5                | 480 |
|          |      |               |      |               |      |               |      |             |      |               |      | ▲ 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  | ○ 16 × 25     | 700  | ▲ 18 × 31.5 | 730 | ▲ 18 × 31.5 | 730 |             |     |                          |     |
|          |      | ● 12.5 × 20   | 640  | ● 16 × 20     | 690  | ● 16 × 20     | 690  | ● 18 × 25   | 765  | ● 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 × 31.5 | 810  | ○ 12.5 × 35.5 | 785  | ▲ 18 × 31.5 | 940  | ▲ 16 × 40     | 950  | ▲ 18 × 46   | 945 | ▲ 18 × 46   | 945 |             |     |                          |     |
|          |      |               |      |               |      | ● 12.5 × 40   | 890  |             |      | ● 18 × 35.5   | 960  |             |     |             |     |             |     |                          |     |
|          |      |               |      |               |      | ▲ 18 × 20     | 815  |             |      |               |      |             |     |             |     |             |     |                          |     |
| 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 |               |      |               |      |             |      |               |      |             |     |             |     |             |     |                          |     |
| 680      | 681  | 18 × 46       | 2300 |               |      |               |      |             |      |               |      |             |     |             |     |             |     | Case size<br>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 (mA rms) 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.