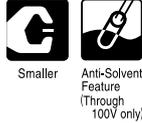
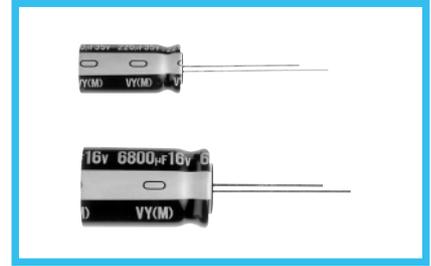
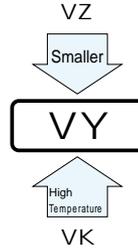


**VY series** Wide Temperature Range



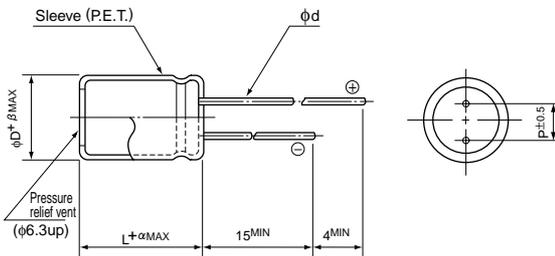
- One rank smaller case sizes than VZ series.
- Compliant to the RoHS directive (2002/95/EC).



## Specifications

Item	Performance Characteristics																																
Category Temperature Range	-55 to +105°C (6.3 to 100V), -40 to +105°C (160 to 400V), -25 to +105°C (450V)																																
Rated Voltage Range	6.3 to 450V																																
Rated Capacitance Range	0.1 to 68000µF																																
Capacitance Tolerance	±20% at 120Hz, 20°C																																
Leakage Current	<table border="1"> <tr> <th>Rated voltage (V)</th> <th>6.3 to 100</th> <th>160 to 450</th> </tr> <tr> <td>After 1 minute's application of rated voltage, leakage current is not more than 0.03CV or 4 (µA), whichever is greater.</td> <td colspan="2">After 1 minute's application of rated voltage, CV ≤ 1000: I = 0.1CV + 40 (µA) or less</td> </tr> <tr> <td>After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 (µA), whichever is greater.</td> <td colspan="2">After 1 minute's application of rated voltage, CV &gt; 1000: I = 0.04CV + 100 (µA) or less</td> </tr> </table>	Rated voltage (V)	6.3 to 100	160 to 450	After 1 minute's application of rated voltage, leakage current is not more than 0.03CV or 4 (µA), whichever is greater.	After 1 minute's application of rated voltage, CV ≤ 1000: I = 0.1CV + 40 (µA) or less		After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 (µA), whichever is greater.	After 1 minute's application of rated voltage, CV > 1000: I = 0.04CV + 100 (µA) or less																								
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Tangent of loss angle (tan δ)	For capacitance of more than 1000µF, add 0.02 for every increase of 1000µF. Measurement frequency : 120Hz, Temperature : 20°C <table border="1"> <tr> <th>Rated voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>160 to 250</th> <th>350 to 450</th> </tr> <tr> <td>tan δ (MAX.)</td> <td>0.28</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.08</td> <td>0.20</td> <td>0.25</td> </tr> </table>	Rated voltage (V)	6.3	10	16	25	35	50	63	100	160 to 250	350 to 450	tan δ (MAX.)	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20	0.25										
Rated voltage (V)	6.3	10	16	25	35	50	63	100	160 to 250	350 to 450																							
tan δ (MAX.)	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20	0.25																							
Stability at Low Temperature	Measurement frequency : 120Hz																																
	<table border="1"> <tr> <th>Rated voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35 to 50</th> <th>63 to 100</th> <th>160 to 200</th> <th>250 to 350</th> <th>400</th> <th>450</th> </tr> <tr> <td>Impedance ratio</td> <td>Z-25°C / Z+20°C</td> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>3</td> <td>4</td> <td>6</td> <td>15</td> </tr> <tr> <td>ZT / Z20 (MAX.)</td> <td>Z-40°C / Z+20°C</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>4</td> <td>8</td> <td>10</td> <td>—</td> </tr> </table>	Rated voltage (V)	6.3	10	16	25	35 to 50	63 to 100	160 to 200	250 to 350	400	450	Impedance ratio	Z-25°C / Z+20°C	5	4	3	2	2	3	4	6	15	ZT / Z20 (MAX.)	Z-40°C / Z+20°C	10	8	6	4	3	4	8	10
Rated voltage (V)	6.3	10	16	25	35 to 50	63 to 100	160 to 200	250 to 350	400	450																							
Impedance ratio	Z-25°C / Z+20°C	5	4	3	2	2	3	4	6	15																							
ZT / Z20 (MAX.)	Z-40°C / Z+20°C	10	8	6	4	3	4	8	10	—																							
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 105°C. <table border="1"> <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> </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 black sleeve.																																

## Radial Lead Type



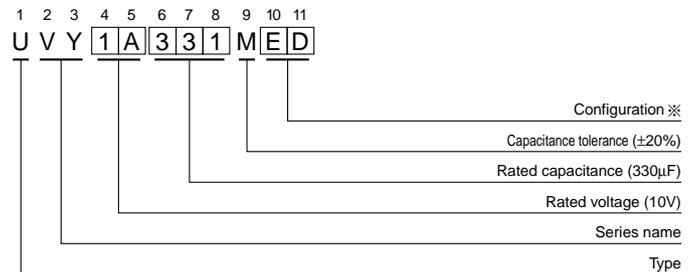
(mm)

φD	5	6.3	8	10	12.5	16	18	20	22	25
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0	10.0	12.5
φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8	1.0	1.0	1.0
β	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0

α	(L < 20) 1.5
	(L ≥ 20) 2.0

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

## Type numbering system (Example : 10V 330µF)



### ※ Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
5	DD
6.3	ED
8 · 10	PD
12.5 to 18	HD
20 to 25	RD

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.

