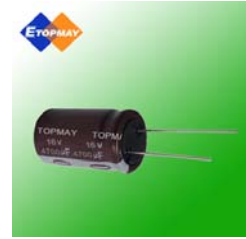




# Features

- 125°C, 5000 hours, Long life.
- Designed for energy-saving lamps, automobile modules and other high temperature applications.

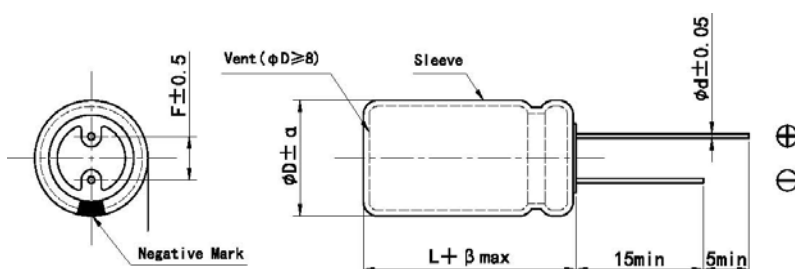


## ◆ Specifications

Items	Characteristics																				
Rated Voltage Range	10~400V. DC																				
Operating Temperature Rang	-40°C~125°C																				
Capacitance Tolerance	±20%(M) (25°C, 100 or 120Hz)																				
Leakage Current	$I \leq 0.02CV$ or $3(\mu A)$ After 2 minutes at 25°C. (6.3V~100V) $I \leq 0.03CV + 10(\mu A)$ After 2 minutes at 25°C. (200V~400V) Where, I:Max. leakage current ( $\mu A$ ), C:Nominal capacitance ( $\mu F$ ), V:Rated voltage (V)																				
Dissipation Factor (tan $\delta$ )	(25°C, 100 or 120Hz) <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Rated voltage (V<sub>dc</sub>)</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50~100</th> <th>200</th> <th>400</th> </tr> </thead> <tbody> <tr> <td>tan <math>\delta</math> (Max.)</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.12</td> <td>0.15</td> </tr> </tbody> </table> When nominal capacitance exceeds 1000 $\mu F$ , add 0.02 to the value above for each 1000 $\mu F$ increase.	Rated voltage (V <sub>dc</sub> )	10	16	25	35	50~100	200	400	tan $\delta$ (Max.)	0.20	0.16	0.14	0.12	0.10	0.12	0.15				
Rated voltage (V <sub>dc</sub> )	10	16	25	35	50~100	200	400														
tan $\delta$ (Max.)	0.20	0.16	0.14	0.12	0.10	0.12	0.15														
Low Temperature Characteristics (Max. Impedance Ratio)	Impedance ratio at 100Hz or 120Hz shall not exceed the values given in the below table. <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Rated voltage (V<sub>dc</sub>)</th> <th>10</th> <th>16~100</th> <th>200</th> <th>400</th> </tr> </thead> <tbody> <tr> <td>Z<sub>-40°C</sub>/Z<sub>+20°C</sub></td> <td>6</td> <td>4</td> <td>6</td> <td>10</td> </tr> </tbody> </table> When nominal capacitance exceeds 1000 $\mu F$ , add 1 to the value above for each 1000 $\mu F$ increase.	Rated voltage (V <sub>dc</sub> )	10	16~100	200	400	Z <sub>-40°C</sub> /Z <sub>+20°C</sub>	6	4	6	10										
Rated voltage (V <sub>dc</sub> )	10	16~100	200	400																	
Z <sub>-40°C</sub> /Z <sub>+20°C</sub>	6	4	6	10																	
Shelf Life	After storage at 125°C for 1000 hours, the capacitors shall meet the following requirements. (500 hours for 400V) . <table border="1" style="margin-left: 20px;"> <tbody> <tr> <td>Capacitance Change</td> <td><math>\leq \pm 20\%</math> of the initial value</td> </tr> <tr> <td>D.F. (tan <math>\delta</math>)</td> <td><math>\leq 200\%</math> of the initial specified value</td> </tr> <tr> <td>Leakage Current</td> <td><math>\leq 500\%</math> of the initial specified value</td> </tr> </tbody> </table>	Capacitance Change	$\leq \pm 20\%$ of the initial value	D.F. (tan $\delta$ )	$\leq 200\%$ of the initial specified value	Leakage Current	$\leq 500\%$ of the initial specified value														
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D.F. (tan $\delta$ )	$\leq 200\%$ of the initial specified value																				
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Load Life	After application of rated voltage with rated ripple current for the specified period of time at +125°C, the capacitors shall meet the following limits. <table border="1" style="margin-left: 20px;"> <tbody> <tr> <td>Capacitance Change</td> <td><math>\leq \pm 20\%</math> of the initial value</td> <td>Dia. (mm)</td> <td>Life Time</td> </tr> <tr> <td>D.F. (tan <math>\delta</math>)</td> <td><math>\leq 200\%</math> of the initial specified value</td> <td>6.3</td> <td>2000 hours</td> </tr> <tr> <td>Leakage Current</td> <td><math>\leq</math> the initial specified value</td> <td>8</td> <td>3000 hours</td> </tr> <tr> <td></td> <td></td> <td>10</td> <td>4000 hours</td> </tr> <tr> <td></td> <td></td> <td>Over 13</td> <td>5000 hours</td> </tr> </tbody> </table>	Capacitance Change	$\leq \pm 20\%$ of the initial value	Dia. (mm)	Life Time	D.F. (tan $\delta$ )	$\leq 200\%$ of the initial specified value	6.3	2000 hours	Leakage Current	$\leq$ the initial specified value	8	3000 hours			10	4000 hours			Over 13	5000 hours
Capacitance Change	$\leq \pm 20\%$ of the initial value	Dia. (mm)	Life Time																		
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		10	4000 hours																		
		Over 13	5000 hours																		
Others	Meet Q/RME 47-2008, GB/T 5993-2003																				

## ◆ Dimensions

mm



D	6.3	8	10	13	16	18
d	0.5		0.6	0.6	0.8	
F	2.5	3.5	5.0		7.5	
α	0.5					
β	1.0	2.0				



◆ Size and Max Ripple Current

Voltage (V)	Capacitance (μF)	Size ΦD×L (mm)	tan δ	Z (Ω, 25°C, 100KHz)	I <sub>R</sub> (mArms, 125°C, 100KHz)
10	330	10×12	0.20	0.17	800
	470	10×12	0.20	0.17	800
	1000	10×20	0.20	0.094	1300
16	220	10×12	0.16	0.17	800
	330	10×12	0.16	0.17	800
	470	10×16	0.16	0.12	1050
25	220	10×12	0.14	0.17	800
	330	10×16	0.14	0.12	1050
	470	10×20	0.14	0.094	1300
35	100	10×12	0.12	0.17	800
	220	10×16	0.12	0.12	1050
	330	10×20	0.12	0.094	1300
50	100	10×12	0.10	0.3	590
	220	10×20	0.10	0.19	970
63	33	8×12	0.10	0.40	250
	47	10×12	0.10	0.27	400
	100	10×16	0.10	0.20	450
	220	13×20	0.10	0.10	820
	330	13×25	0.10	0.072	1000
	470	16×25	0.10	0.069	1500
	1000	16×30	0.10	0.056	1850
	1500	18×40	0.10	0.043	2350
100	4.7	8×12	0.10	1.3	100
	10	8×12	0.10	1.0	200
	22	8×12	0.10	0.67	220
	33	10×12	0.10	0.45	260
	47	10×16	0.10	0.33	330
	100	13×20	0.10	0.17	670
	220	16×25	0.10	0.13	1100
	330	16×30	0.10	0.10	1300
	470	18×30	0.10	0.092	1600

Voltage (V)	Capacitance (μF)	Size ΦD×L (mm)	tan δ	I <sub>R</sub> (mArms, 125°C, 100KHz)	
200	4.7	6.3×11	0.12	100	
	4.7	8×12	0.12	120	
	5.6	8×12	0.12	130	
	5.6	8×16	0.12	180	
	6.8	8×12	0.12	130	
	6.8	8×16	0.12	180	
	10	8×16	0.12	200	
	10	8×20	0.12	240	
	15	8×16	0.12	200	
	15	8×20	0.12	240	
	22	8×20	0.12	240	
	22	10×16	0.12	240	
	33	10×20	0.12	320	
	400	1	6.3×11	0.15	60
		1	8×12	0.15	65
1.5		8×12	0.15	75	
1.5		8×16	0.15	80	
1.8		8×12	0.15	75	
1.8		8×16	0.15	85	
2.2		8×12	0.15	75	
2.2		8×16	0.15	90	
2.2		8×20	0.15	110	
2.7		8×16	0.15	95	
2.7		8×20	0.15	115	
3.3		8×16	0.15	100	
3.3		8×20	0.15	120	
4.7		8×20	0.15	120	
4.7		10×16	0.15	125	
5.6	10×16	0.15	130		
5.6	10×20	0.15	145		
6.8	10×20	0.15	150		



## Ripple Current Multiplier

Frequency Coefficient

10V~100V:

Frequency (Hz)	100/120	1K	10K	100K
4.7 $\mu$ F~100 $\mu$ F	0.40	0.75	0.90	1.00
220 $\mu$ F~470 $\mu$ F	0.50	0.85	0.94	1.00
1000 $\mu$ F~1500 $\mu$ F	0.60	0.87	0.95	1.00

200V~400V:

Frequency (Hz)	100/120	1K	10K	100K
1 $\mu$ F~5.6 $\mu$ F	0.20	0.40	0.80	1.00
6.8 $\mu$ F~15 $\mu$ F	0.30	0.60	0.90	1.00
22 $\mu$ F~33 $\mu$ F	0.50	0.80	0.90	1.00