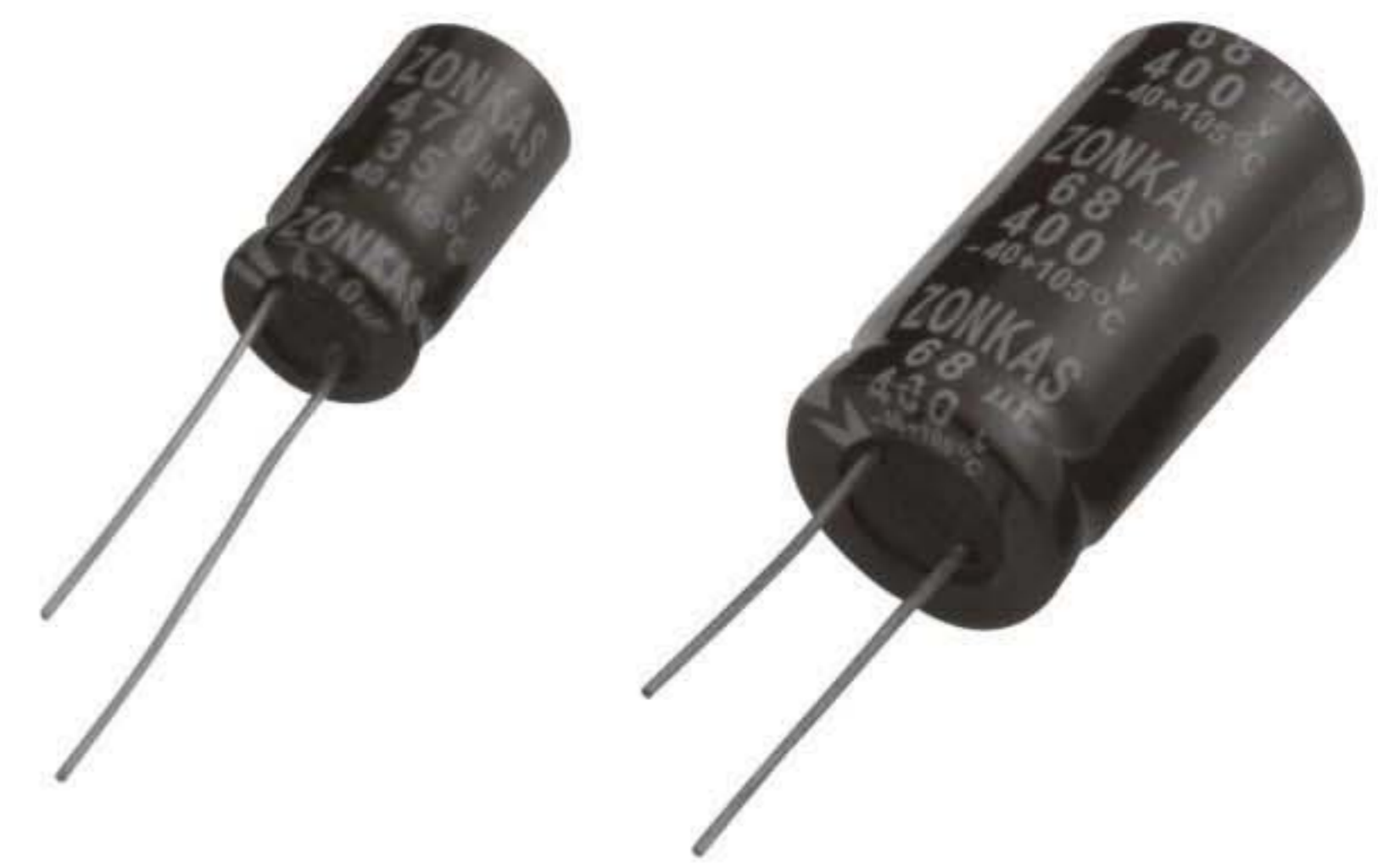


## LLR series Low Leakage Current 低泄漏電流品

- 在常溫或高溫無負荷狀況下經長期放置後，尚能保持穩定之低漏泄電流特性。
- After storage under normal or high temperature with no voltage applied, the LL series can still keep good low-leakage current in good stability.

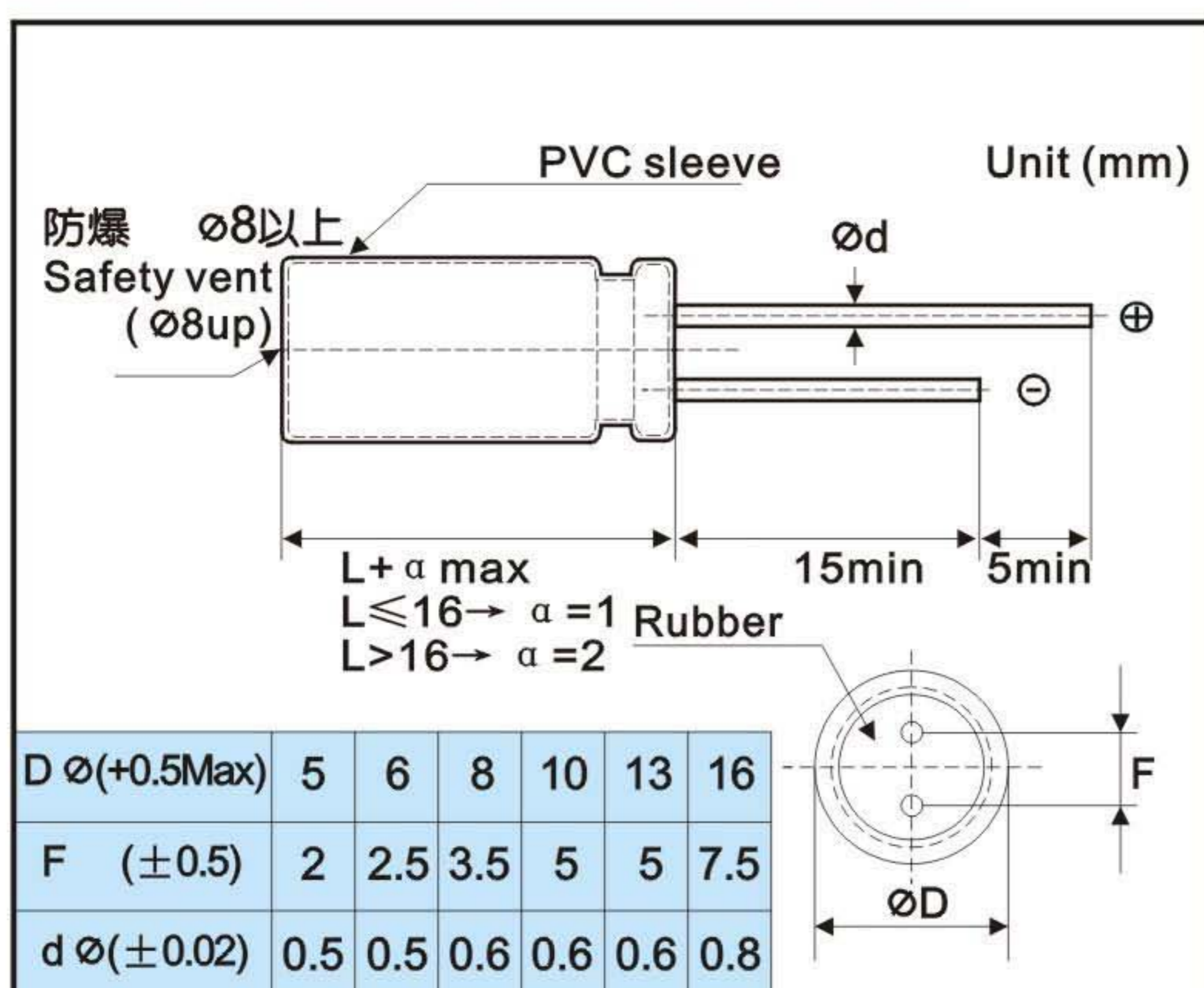


### SPECIFICATIONS

NO	Item	Performance characteristics																								
1	使用溫度範圍 Operating Temperature Range	-40 to +105°C																								
2	定格電壓範圍 Rated Working Voltage Rang	10-63v.DC																								
3	靜電容量範圍 Nominal Capacitance Range	0.1 to 2200uF																								
4	靜電容量容許差 Capacitance Tolerance	±20% (±10% units are available on request)(at+ 20°C, 120Hz)																								
5	漏電電流 Leakage Current	$I \leq 0.002CV$ or $0.4(\mu A)$ Where $I$ =DC Leakage Current( $\mu A$ ). (after two minutes) $C$ =Rated Capacitance ( $\mu F$ ). $V$ =Working Voltage (V).																								
6	損失角 Dissipation Factor( $\tan \sigma$ ) (120Hz \ 25°C)	<table border="1"> <tr> <td>Working Voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> </tr> <tr> <td><math>\tan \sigma</math> max.</td> <td>0.20</td> <td>0.17</td> <td>0.13</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> <td>0.08</td> </tr> </table>	Working Voltage (V)	6.3	10	16	25	35	50	63	$\tan \sigma$ max.	0.20	0.17	0.13	0.10	0.09	0.08	0.08								
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$\tan \sigma$ max.	0.20	0.17	0.13	0.10	0.09	0.08	0.08																			
7	溫度特性 (at 120Hz) Characteristics at low temperature (stability at 120Hz)	<table border="1"> <tr> <td>Working Voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>60</td> </tr> <tr> <td>Z-25°C/ +20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40°C/ +20°C</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> </tr> </table>	Working Voltage (V)	6.3	10	16	25	35	50	60	Z-25°C/ +20°C	4	3	2	2	2	2	2	Z-40°C/ +20°C	8	6	4	4	4	3	3
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8	高溫負荷特性 High Temperature Loading	<p>After 1000 hrs. application of DC rated working voltage at + 105°C The capacitor shall meet the following limits; Post test requirements at + 20°C</p> <table border="1"> <tr> <td>Leakage current</td> <td><math>\leq</math>the initial specified value</td> </tr> <tr> <td>Capacitance change</td> <td><math>\leq \pm 15\%</math> of initial measured value</td> </tr> <tr> <td>Dissipation Factor(<math>\tan \sigma</math>)</td> <td><math>\leq 150\%</math> of initial specified value</td> </tr> </table>	Leakage current	$\leq$ the initial specified value	Capacitance change	$\leq \pm 15\%$ of initial measured value	Dissipation Factor( $\tan \sigma$ )	$\leq 150\%$ of initial specified value																		
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9	高溫無負荷特性 Shelf Life	<p>After storage for 1000 hrs. at+105°C with no voltage applied. Post test requirements at +20°C same limits for high temperature loading.</p>																								
10	耐洗淨性 Solvent proof	<p>This capacitor can withstand circuit-board cleaning within 5 min dipped in Freon TE, TES, at 40°C (ultrasonic also permitted) or in the steam of these cleaners.</p>																								

136

### Outline drawing :(Unit:mm)



### Case size Table

W.V.(SV) $\mu F$	$\phi DXL(mm)$					
	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)
0.1~10					5×11	8 5×11
22					5×11	15 6.3×11
33			5×11	15 6.3×11	20 6.3×11	25 6.3×11
47		5×11	20 6.3×11	25 6.3×11	30 6.3×11	35 8×12
100	5×11	25 6.3×11	30 6.3×11	35 8×12	40 8×12	50 8×16
220		6.3×11	40 8×12	45 8×16	60 10×17	75 10×21
330		8×12	50 8×16	65 10×21	90 13×21	110 13×26
470	8×12	80 8×14	100 10×17	120 13×21	150 13×26	200 16×26
1,000	10×15	140 10×17	150 13×21	170 13×26	200 16×26	280 16×32
2,200	10×21	220 13×21	240 13×26	250 16×32	300	