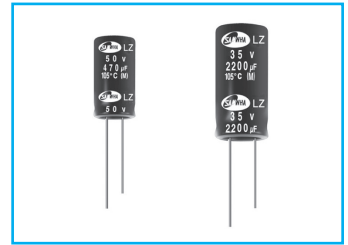


MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS



LZ Low Impedance, Long Life Series



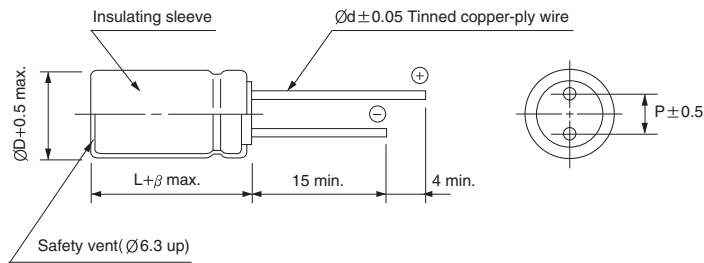
- Operating temperature range of -40 ~ +105°C
- Enabled high ripple current by a reduction of impedance at high frequency range
- High reliability withstanding 10000 hours load life at 105°C (6000 / 8000 hours for as specified below)
- Complied to the RoHS directive



Item	Characteristics													
Operating temperature range	-40 ~ +105°C													
Leakage current max.	I = 0.01CV or 3µA whichever is greater (after 2 minutes) I = 0.03CV or 4µA whichever is greater (after 1 minute)													
Capacitance tolerance	±20% at 120Hz, 20°C													
Dissipation factor max. (at 120Hz, 20°C)	Capacitance > 1000µF : tanδ increases by 0.02 for each 1000µF from below value.													
	<table border="1"> <thead> <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> </tr> </thead> <tbody> <tr> <td>tanδ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> </tr> </tbody> </table>	Rated Voltage(V)	6.3	10	16	25	35	50	tanδ	0.22	0.19	0.16	0.14	0.12
Rated Voltage(V)	6.3	10	16	25	35	50								
tanδ	0.22	0.19	0.16	0.14	0.12	0.10								
Low temperature characteristics (Impedance ratio at 120Hz)	Z-40°C / Z+20°C													
	Z-25°C / Z+20°C													
Load life	After an application of DC bias voltage plus the rated AC ripple current for 10000 hours at 105°C. The measurement shall meet the following limits. The DC voltage plus the peak AC voltage combined must not exceed the rated voltage.													
	<table border="1"> <tbody> <tr> <td>Leakage current</td> <td>Less than specified value</td> </tr> <tr> <td>Capacitance change</td> <td>Within ±25% of initial value</td> </tr> <tr> <td>tanδ</td> <td>Less than 200% of specified value</td> </tr> </tbody> </table>	Leakage current	Less than specified value	Capacitance change	Within ±25% of initial value	tanδ	Less than 200% of specified value							
	Leakage current	Less than specified value												
	Capacitance change	Within ±25% of initial value												
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<table border="1"> <thead> <tr> <th>∅D</th> <th>∅D = 5, 6.3</th> <th>∅D = 8</th> <th>∅D ≥ 10</th> </tr> </thead> <tbody> <tr> <td>Life time</td> <td>6000 hours</td> <td>8000 hours</td> <td>10000 hours</td> </tr> </tbody> </table>	∅D	∅D = 5, 6.3	∅D = 8	∅D ≥ 10	Life time	6000 hours	8000 hours	10000 hours						
∅D	∅D = 5, 6.3	∅D = 8	∅D ≥ 10											
Life time	6000 hours	8000 hours	10000 hours											
Shelf life (at 105°C)	After 1000 hours no load test, leakage current, capacitance and tanδ are same as load life value. The measurement shall be performed at 20°C by the KS C IEC 60384 - 4													

DRAWING

Unit : mm



∅D	5	6.3	8	10	12.5	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
∅d	0.5	0.5	0.6	0.6	0.6	0.8	0.8
β	1.5			2.0			

FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

µF \ Frequency	120Hz	1kHz	10kHz	50kHz	100kHz
~ 33	0.32	0.60	0.80	0.90	1.00
39 ~ 270	0.40	0.63	0.82	0.91	1.00
330 ~ 680	0.45	0.67	0.84	0.92	1.00
820 ~ 1800	0.50	0.70	0.86	0.93	1.00
2200 ~	0.60	0.75	0.88	0.94	1.00

MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

LZ series

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV Item μF	6.3			10			16		
	$\varnothing\text{D} \times \text{L}$ (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	$\varnothing\text{D} \times \text{L}$ (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	$\varnothing\text{D} \times \text{L}$ (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz
47	5 × 11	0.600	300	5 × 11	0.600	300	5 × 11	0.600	300
100	5 × 11	0.600	345	5 × 11	0.600	345	6.3 × 11	0.300	345
150	6.3 × 11	0.300	345	6.3 × 11	0.300	345	6.3 × 11	0.300	540
220	6.3 × 11	0.300	345	6.3 × 11	0.300	345	8 × 11.5	0.200	540
330	6.3 × 11	0.300	540	8 × 11.5	0.250	608	8 × 11.5	0.200	945
470	8 × 11.5	0.140	540	8 × 11.5	0.200	630	10 × 12.5	0.105	945
680	10 × 12.5	0.105	945	10 × 12.5	0.105	945	8 × 20	0.105	945
820	10 × 12.5	0.105	945	10 × 16	0.075	945	10 × 16	0.075	1250
				10 × 20	0.054	1760	10 × 20	0.054	1760
1000	10 × 16	0.075	1250	8 × 20	0.105	945	8 × 20	0.075	1250
				10 × 12.5	0.105	945	10 × 20	0.054	1760
				10 × 16	0.075	1250			
				10 × 20	0.054	1650			
1200	10 × 16	0.075	1500	10 × 16	0.075	1760	10 × 20	0.054	1960
1500	10 × 20	0.054	1760	10 × 20	0.054	1760	12.5 × 20	0.050	1960
1800	10 × 20	0.054	1760	10 × 20	0.054	1760	12.5 × 20	0.050	2250
2200	12.5 × 20	0.050	1960	12.5 × 20	0.050	1960	12.5 × 25	0.040	2480
2700	12.5 × 20	0.050	2250	12.5 × 25	0.040	2250	12.5 × 25	0.040	2900
3300	12.5 × 20	0.050	2480	12.5 × 25	0.040	2480	16 × 25	0.030	3250
3900	12.5 × 25	0.040	2480	16 × 25	0.030	2480	16 × 25	0.030	3570
4700	16 × 25	0.030	3250	16 × 25	0.030	3250	16 × 31.5	0.027	3630
5600	16 × 25	0.030	3570	16 × 25	0.030	3570			
6800	16 × 25	0.030	3630	16 × 31.5	0.027	3630			
8200	16 × 31.5	0.027	3700	18 × 35.5	0.025	3700			

WV Item μF	25			35			50		
	$\varnothing\text{D} \times \text{L}$ (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	$\varnothing\text{D} \times \text{L}$ (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	$\varnothing\text{D} \times \text{L}$ (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz
10							5 × 11	3.000	160
22							5 × 11	1.800	240
33							5 × 11	1.800	292
47				6.3 × 11	0.450	345	6.3 × 11	1.000	450
56				6.3 × 11	0.450	345	6.3 × 11	0.700	450
68	6.3 × 11	0.400	345	6.3 × 11	0.450	345	8 × 11.5	0.500	490
100	6.3 × 11	0.400	345	6.3 × 11	0.350	500	8 × 11.5	0.300	724
120	6.3 × 11	0.400	345	8 × 11.5	0.250	540			
150	8 × 11.5	0.250	740	8 × 11.5	0.250	945	10 × 12.5	0.120	979
180	8 × 11.5	0.200	740	8 × 11.5	0.190	945	8 × 20	0.120	1200
							10 × 12.5	0.120	1190
220	8 × 11.5	0.180	740	8 × 11.5	0.190	945	8 × 20	0.120	1370
				10 × 12.5	0.105	945	10 × 16	0.075	1370
270	10 × 12.5	0.105	945	8 × 15	0.120	945	10 × 20	0.064	1580
				10 × 16	0.085	1250			
330	10 × 12.5	0.105	945	10 × 16	0.085	1330	10 × 20	0.064	1870
390	8 × 15	0.135	1250	10 × 20	0.054	1500	10 × 20	0.064	2050
	10 × 12.5	0.105	1250						
470	10 × 16	0.075	1330	8 × 20	0.095	1430	12.5 × 20	0.050	2050
				10 × 16	0.085	1600			
				10 × 20	0.054	1760			
560	8 × 20	0.075	1700	12.5 × 20	0.050	1960	12.5 × 25	0.040	2410
	10 × 20	0.054							
680	10 × 16	0.075	1760	10 × 20	0.054	1850	12.5 × 25	0.040	2410
	10 × 20	0.054		10 × 25	0.050	2250			
820	10 × 20	0.054	2300	12.5 × 25	0.040	2350	16 × 20	0.040	2730
	12.5 × 20	0.050							
1000	12.5 × 20	0.050	2350	12.5 × 25	0.040	2480	16 × 25	0.036	3010
1200	12.5 × 20	0.050	2480	16 × 20	0.040	2900			
1500	16 × 20	0.040	2480	16 × 25	0.030	3250			
1800	16 × 20	0.040	2900	16 × 25	0.030	3570			
2200	12.5 × 30	0.040	2900	16 × 31.5	0.027	3630			
	16 × 25	0.030	3250						
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