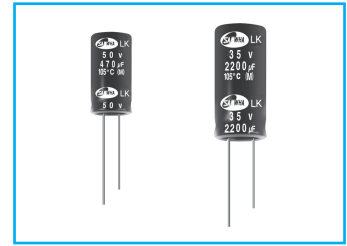


# MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

**LK** High Ripple Current Series

**IZI** Low Impedance **S** Solvent Proof



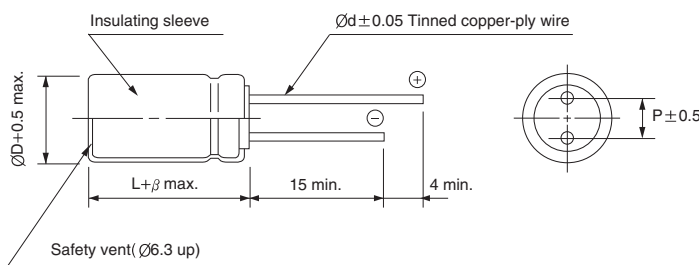
- Enabled high ripple current by a reduction of impedance at high frequency
- High reliability withstanding 5000 hours load life at 105°C (2000 ~ 4000 hours for smaller case sizes as specified below)
- Complied to the RoHS directive

WL → **LK**  
High Ripple

Item	Characteristics								
Operating temperature range	WV			6.3 ~ 63			100		
	temperature range			-55 ~ +105°C			-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.								
	WV	6.3	10	16	25	35	50	63	100
	tanδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08
Low temperature characteristics (Impedance ratio at 120Hz)	Z-55°C / Z+20°C				Z-25°C / Z+20°C				
	3				2				
Load life	After an application of DC bias voltage plus the rated AC ripple current for 5000 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.								
	Leakage current			Less than specified value					
	Capacitance change			Within ±25% of the initial value					
	tanδ			Less than 200% of the specified value					
	∅D	∅D = 5, 6.3	∅D = 8	∅D = 10	∅D = 12.5	∅D = 16	∅D = 18		
	Life time	2000 hours	3000 hours	4000 hours	5000 hours	5000 hours	5000 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

## LK series

### ● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV Item μF	6.3			10			16			25		
	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz
33										5×11	0.800	200
47							5×11	0.800	200	5×11	0.550	200
100	5×11	0.850	200	5×11	0.600	200	8×11.5	0.350	550	8×11.5	0.240	550
150	8×11.5	0.490	550	8×11.5	0.350	550	8×11.5	0.240	550	10×12.5	0.160	927
220	8×11.5	0.300	550	8×11.5	0.240	550	10×12.5	0.160	927	10×12.5	0.130	927
330	8×11.5	0.240	550	10×12.5	0.160	927	10×12.5	0.130	927	10×16	0.095	1100
470	10×12.5	0.140	927	10×12.5	0.130	927	10×16	0.095	1100	10×20	0.075	1280
680	10×16	0.110	1100	10×16	0.095	1100	10×20	0.075	1280	10×25	0.055	1495
1000	10×20	0.075	1280	10×20	0.075	1280	10×25	0.055	1495	12.5×25	0.043	2100
1500	10×25	0.055	1495	10×25	0.055	1495	12.5×25	0.043	2100	16×25	0.034	2607
2200	12.5×25	0.043	2100	12.5×25	0.043	2100	12.5×30	0.034	2480	16×31.5	0.032	2840
3300	12.5×30	0.034	2480	16×25	0.034	2607	16×31.5	0.032	2840	16×35.5	0.029	3017
4700	16×31.5	0.032	2840	16×31.5	0.032	2840	16×35.5	0.029	3017	18×40	0.027	3379
6800	16×35.5	0.029	3017	16×35.5	0.029	3017	18×40	0.027	3379			

WV Item μF	35			50			63			100		
	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz
1.0				5×11	4.00	36						
2.2				5×11	3.50	54				5×11	5.00	38
3.3				5×11	3.00	66				5×11	5.00	44
4.7				5×11	2.20	74				5×11	5.00	53
10				5×11	2.000	115	5×11	1.06	135	6.3×11	2.00	89
22	5×11	2.000	200	5×11	1.800	160	6.3×11	0.520	215	8×11.5	1.200	159
33	5×11	1.500	200	6.3×11	1.200	285	8×11.5	0.350	320	10×12.5	0.800	221
47	8×11.5	0.700	550	8×11.5	0.700	550	8×11.5	0.250	365	10×16	0.600	350
100	10×12.5	0.200	927	10×12.5	0.200	927	10×20	0.120	750	12.5×20	0.300	405
150	10×12.5	0.160	927	10×16	0.120	1100	10×25	0.090	950	12.5×25	0.250	541
220	10×16	0.120	1100	10×20	0.095	1280	12.5×20	0.065	1140	16×25	0.150	885
330	10×20	0.095	1280	10×25	0.075	1495	12.5×25	0.049	1420	16×31.5	0.100	991
470	10×25	0.075	1495	12.5×25	0.055	2100	16×25	0.042	1700	18×40	0.068	1401
680	12.5×25	0.055	2100	16×25	0.043	2770	16×31.5	0.032	2050			
1000	12.5×30	0.043	2480	16×31.5	0.034	2840	18×35.5	0.029	2280			
1500	16×31.5	0.034	2840	16×35.5	0.032	3017						
2200	16×35.5	0.032	3017	18×40	0.029	3379						
3300	18×40	0.029	3379									