



# 大型铝电解电容器

## LARGE CAN TYPE ALUMINUM ELECTROLYTIC CAPACITORS

LSQ

LSQ 系列  
SERIES

螺栓端子型85℃ 3000小时品  
85℃ 3000 hours, Screw Terminal Type

◆ 特 长 / FEATURES

- 85℃、3000小时品。  
Load Life : 85℃ 3000 hours.
- RoHS指令对应品。  
RoHS compliance.



◆ 规格表 / SPECIFICATIONS

项 目 Items	特 性 Characteristics																																																																										
工作温度范围 Category Temperature Range	-40 ~ +85℃	-25 ~ +85℃																																																																									
额定电压范围 Rated Voltage Range	10 ~ 100V.DC	160 ~ 450V.DC																																																																									
静电容量允许差 Capacitance Tolerance	±20% (20℃, 120Hz)																																																																										
损失角正切值 (tan δ) Dissipation Factor(MAX)	<table border="1"> <thead> <tr> <th>WV \ φ D</th> <th>36</th> <th>51</th> <th>64</th> <th>77</th> <th>90</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>0.75</td> <td>1.0</td> <td>1.3</td> <td>1.5</td> <td>1.5</td> </tr> <tr> <td>16</td> <td>0.6</td> <td>0.7</td> <td>0.8</td> <td>1.0</td> <td>1.0</td> </tr> <tr> <td>25</td> <td>0.4</td> <td>0.5</td> <td>0.7</td> <td>0.8</td> <td>0.8</td> </tr> <tr> <td>35</td> <td>0.3</td> <td>0.5</td> <td>0.6</td> <td>0.7</td> <td>0.7</td> </tr> <tr> <td>50</td> <td>0.25</td> <td>0.3</td> <td>0.5</td> <td>0.6</td> <td>0.6</td> </tr> </tbody> </table>	WV \ φ D	36	51	64	77	90	10	0.75	1.0	1.3	1.5	1.5	16	0.6	0.7	0.8	1.0	1.0	25	0.4	0.5	0.7	0.8	0.8	35	0.3	0.5	0.6	0.7	0.7	50	0.25	0.3	0.5	0.6	0.6	<table border="1"> <thead> <tr> <th>WV \ φ D</th> <th>36</th> <th>51</th> <th>64</th> <th>77</th> <th>90</th> </tr> </thead> <tbody> <tr> <td>63</td> <td>0.2</td> <td>0.25</td> <td>0.3</td> <td>0.4</td> <td>0.4</td> </tr> <tr> <td>80</td> <td>0.2</td> <td>0.2</td> <td>0.25</td> <td>0.3</td> <td>0.3</td> </tr> <tr> <td>100</td> <td>0.15</td> <td>0.2</td> <td>0.25</td> <td>0.25</td> <td>0.25</td> </tr> <tr> <td>160~250</td> <td>0.15</td> <td>0.15</td> <td>0.2</td> <td>0.2</td> <td>0.2</td> </tr> <tr> <td>315~450</td> <td>0.2</td> <td>0.2</td> <td>0.25</td> <td>0.25</td> <td>0.25</td> </tr> </tbody> </table>	WV \ φ D	36	51	64	77	90	63	0.2	0.25	0.3	0.4	0.4	80	0.2	0.2	0.25	0.3	0.3	100	0.15	0.2	0.25	0.25	0.25	160~250	0.15	0.15	0.2	0.2	0.2	315~450	0.2	0.2	0.25	0.25	0.25	(20℃, 120Hz)
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漏 电 流 Leakage Current(MAX)	小于I=0.02CV和5mA中的较小值 (施加额定电压5分钟后) I=0.02CV or 5mA whichever is smaller. (After 5 minutes application of rated voltage) I=漏电流 (μA)                      C=额定静电容量 (μF)                      V=额定电压 (V) Leakage Current                      Rated Capacitance                      Rated Voltage																																																																										
耐 久 性 Endurance	在85℃环境中, 不超过额定电压的范围内叠加额定纹波电流, 连续加载3000小时后, 满足以下各项要求。 After applying rated voltage with rated ripple current for 3000 hours at 85℃, the capacitors shall meet the following requirements. <table border="1"> <tr> <td>静电容量变化率 Capacitance Change</td> <td>初期值的±15%以内 Within ±15% of the initial value.</td> </tr> <tr> <td>损失角正切值 Dissipation Factor</td> <td>规格值的175%以下 Not more than 175% of the specified value.</td> </tr> <tr> <td>漏 电 流 Leakage Current</td> <td>规格值以下 Not more than the specified value.</td> </tr> </table>		静电容量变化率 Capacitance Change	初期值的±15%以内 Within ±15% of the initial value.	损失角正切值 Dissipation Factor	规格值的175%以下 Not more than 175% of the specified value.	漏 电 流 Leakage Current	规格值以下 Not more than the specified value.																																																																			
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高温无负荷特性 Shelf Life	在85℃中无负荷放置500小时, 进行JIS C 5101-4 4.1项的电压处理后, 满足以下各项。 After storage for 500 hours with no voltage applied at 85℃, the capacitors shall be subjected to the voltage treatment in JIS C 5101-4 item 4.1 and shall be meet the following requirements. <table border="1"> <tr> <td>静电容量变化率 Capacitance Change</td> <td>初期值的±15%以内 Within ±15% of the initial value.</td> </tr> <tr> <td>损失角正切值 Dissipation Factor</td> <td>规格值的150%以下 Not more than 150% of the specified value.</td> </tr> <tr> <td>漏 电 流 Leakage Current</td> <td>规格值以下 Not more than the specified value.</td> </tr> </table>		静电容量变化率 Capacitance Change	初期值的±15%以内 Within ±15% of the initial value.	损失角正切值 Dissipation Factor	规格值的150%以下 Not more than 150% of the specified value.	漏 电 流 Leakage Current	规格值以下 Not more than the specified value.																																																																			
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◆ 纹波电流修正系数 / MULTIPLIER FOR RIPPLE CURRENT

频率系数 Frequency Coefficient

频率 (Hz) Frequency	60(50)	120	400	1k	10k ≤
10 ~ 50WV	0.80	1.00	1.03	1.05	1.08
63 ~ 100WV	0.80	1.00	1.05	1.07	1.10
160 ~ 450WV	0.80	1.00	1.10	1.13	1.18

◆ 产品型号体系 / PART NUMBER

LSQ     M     D × L  
 额定电压    系列名称    额定静电容量    静电容量允许差    副记号    固定带记号    铝壳尺寸  
 Rated Voltage    Series    Rated Capacitance    Capacitance Tolerance    Option    Clamp Code    Case Size

◆ 电容器尺寸图 / Dimensions in mm (not to scale)

		(mm)					
	φ D	W1	W2	W3	W4	W5	F
I type	36	24.0	30.0	3.5	7.0	10	12.7
	51	34.0	40.0	3.5	6.0	12	21.8
	64	40.0	45.0	4.5	7.0	12	28.2
	77	47.0	53.0	4.5	6.0	12	31.4
	90	54.0	60.0	4.5	6.0	14	31.4
Y type	51	32.5	37.5	4.5	6.0	12	21.8
	64	38.0	43.0	4.5	8.0	14	28.2
	77	44.5	49.0	4.5	7.0	14	31.4
90	50.8	56.0	4.5	8.0	16	31.4	

※推荐的扭矩与端子容许电流请参考p145

※Please refer to page 145 about recommended tightening torque and permissible current of terminal.

### ◆标准品一览表/STANDARD SIZE

Cap(μF) \ WV	10V		16V		25V		35V		50V		63V		80V		
3300													36×50	2.5	
3900													36×50	2.6	
4700													36×50	2.8	
5600												36×50	3.0	36×63	2.9
6800									36×50	3.3		36×50	3.2	36×83	3.7
8200									36×50	3.7		36×63	3.8	36×83	4.2
10000							36×50	3.6		36×50	4.3	36×83	4.1	36×98	5.0
12000							36×50	3.7		36×63	5.3	36×83	4.4	36×118	5.4
15000							36×50	4.0		36×83	5.5	36×98	5.5	51×83	7.7
18000					36×50	5.0	36×63	4.7		36×83	5.7	36×118	6.2	51×83	7.8
22000					36×63	5.4	36×83	5.6		36×98	6.1	51×83	7.1	51×83	8.0
27000			36×50	5.1	36×83	5.8	36×83	6.2		36×118	6.7	51×83	7.4	51×98	8.7
33000			36×63	5.5	36×83	6.0	36×83	6.3		51×83	7.1	51×98	8.8	51×118	10.5
39000	36×50	5.3	36×83	7.0	36×83	6.7	36×98	7.6		51×83	7.4	51×118	10.0	64×99	12.1
47000	36×63	6.0	36×83	7.3	36×98	8.0	36×118	8.7		51×98	8.7	64×99	11.9	64×99	14.4
56000	36×83	6.3	36×98	7.6	36×118	8.4	51×83	10.0		51×98	9.8	64×99	12.6	64×119	15.0
68000	36×83	7.9	36×98	10.3	51×83	9.3	51×83	10.8		51×118	12.0	64×119	15.0	64×139	16.8
82000	36×83	8.4	36×118	10.5	51×83	10.0	51×98	12.0		64×99	12.3	77×101	16.4	77×121	19.4
100000	36×118	9.3	51×83	10.9	51×98	12.0	51×118	13.6		64×119	14.2	77×121	18.9	77×141	21.5
120000	51×83	10.0	51×98	11.1	51×118	12.9	64×99	13.8		64×119	16.0	77×141	21.6	90×141	22.3
150000	51×83	11.0	51×98	12.6	64×99	15.3	64×99	14.6		77×121	18.6	90×141	26.0		
180000	51×98	12.1	51×118	13.2	64×99	15.5	64×119	16.7		77×141	19.5				
220000	51×98	14.0	64×99	14.7	64×119	18.0	77×101	17.4		90×141	23.3				
270000	51×118	14.2	64×119	15.4	77×101	18.8	77×141	23.1		90×141	24.8				
330000	64×99	17.3	64×139	18.3	77×121	23.2	77×151	25.9							
390000	64×119	18.0	77×121	19.0	77×141	23.5	90×141	26.5							
470000	64×139	19.3	77×141	22.0	90×141	24.7	90×151	28.3							
560000	77×121	20.1	77×151	23.0	90×141	26.2									
680000	77×141	24.0													

Cap(μF) \ WV	100V		160V		200V		250V		350V		400V		450V		
270											36×50	1.3	36×50	1.6	
330											36×50	1.7	36×63	1.8	
390										36×50	1.9	36×63	1.8	36×83	2.2
470							36×50	1.6		36×63	2.1	36×83	2.3	36×83	2.4
560							36×50	1.6		36×83	2.4	36×83	2.7	36×98	2.8
680					36×50	1.6	36×50	1.7		36×83	2.9	36×98	2.9	36×118	3.1
820					36×50	1.7	36×63	1.8		36×98	3.4	36×98	3.4	51×83	3.6
1000					36×63	2.2	36×83	2.4		36×98	3.8	36×118	3.9	51×83	4.0
1200			36×50	2.3	36×63	2.3	36×83	2.4		36×118	4.2	51×83	4.2	51×98	4.8
1500			36×63	3.2	36×83	2.9	36×98	3.1		51×83	4.7	51×98	4.8	51×118	5.7
1800			36×83	3.4	36×83	2.9	36×118	3.4		51×98	6.3	51×98	5.7	64×99	6.5
2200	36×50	2.5	36×83	3.6	36×98	3.6	51×83	3.9		51×98	6.4	51×118	7.0	64×99	7.2
2700	36×50	2.7	36×98	3.8	36×118	4.0	51×83	4.0		64×99	8.8	64×99	7.9	64×119	8.7
3300	36×50	3.2	36×118	4.7	51×83	4.6	51×98	5.4		64×99	8.8	64×119	9.5	77×121	10.5
3900	36×63	3.3	51×83	5.3	51×83	4.7	51×118	6.0		64×119	10.3	77×101	10.7	77×121	12.0
4700	36×83	3.5	51×83	5.6	51×98	7.1	64×99	7.3		77×101	12.0	77×121	12.8	77×141	13.3
5600	36×83	3.8	51×98	6.4	51×118	8.3	64×99	7.3		77×121	12.7	77×141	14.5	90×141	15.8
6800	36×98	4.5	51×98	7.5	64×99	9.5	64×119	8.9		77×141	16.0	77×151	17.5	90×151	18.7
8200	36×118	6.0	51×118	8.1	64×99	10.0	77×101	8.9		90×141	19.0	90×141	18.0		
10000	36×118	6.3	64×99	9.9	64×119	11.1	77×121	11.8		90×141	20.0	90×151	20.5		
12000	51×83	6.6	64×119	10.8	77×101	11.6	77×141	13.1							
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↑ 纹波电流 Ripple Current (A r.m.s./120Hz,85°C)  
↑ 铝壳尺寸 Case Size φD×L(mm)