

LSW シリーズ  
SERIES

105°C 3000時間品  
Load Life : 105°C 3000 hours

RoHS  
compliance



◆規格表 / SPECIFICATIONS

項目 Items	特 性 Characteristics																																																																															
カテゴリ温度範囲 Category Temperature Range	-40~+105°C	-25~+105°C																																																																														
定格電圧範囲 Rated Voltage Range	10~100Vdc	160~400Vdc																																																																														
静電容量許容差 Capacitance Tolerance	±20% (20°C, 120Hz)																																																																															
漏れ電流 Leakage Current (MAX)	I=0.02CV又は5mAいずれか小なる値以下 (定格電圧印加5分後) I=0.02CV or 5mA whichever is smaller. (After 5 minutes application of rated voltage) I=漏れ電流(µA)      C=静電容量(µF)      V=定格電圧(Vdc) Leakage Current      Capacitance      Rated Voltage																																																																															
損失角の正接 (tanδ) Dissipation Factor (MAX)	<table border="1"> <thead> <tr> <th>Vdc \ φD</th> <th>36</th> <th>51</th> <th>64</th> <th>77</th> <th>90</th> <th>Vdc \ φD</th> <th>36</th> <th>51</th> <th>64</th> <th>77</th> <th>90</th> <th>(20°C, 120Hz)</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> <td>63</td> <td>0.2</td> <td>0.25</td> <td>0.3</td> <td>0.4</td> <td>0.4</td> <td></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> <td>80</td> <td>0.2</td> <td>0.2</td> <td>0.25</td> <td>0.3</td> <td>0.3</td> <td></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> <td>100</td> <td>0.15</td> <td>0.2</td> <td>0.25</td> <td>0.25</td> <td>0.25</td> <td></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> <td>160~250</td> <td>0.15</td> <td>0.15</td> <td>0.2</td> <td>0.2</td> <td>0.2</td> <td></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> <td>315~400</td> <td>0.2</td> <td>0.2</td> <td>0.25</td> <td>0.25</td> <td>0.25</td> <td></td> </tr> </tbody> </table>		Vdc \ φD	36	51	64	77	90	Vdc \ φD	36	51	64	77	90	(20°C, 120Hz)	10	0.75	1.0	1.3	1.5	1.5	63	0.2	0.25	0.3	0.4	0.4		16	0.6	0.7	0.8	1.0	1.0	80	0.2	0.2	0.25	0.3	0.3		25	0.4	0.5	0.7	0.8	0.8	100	0.15	0.2	0.25	0.25	0.25		35	0.3	0.5	0.6	0.7	0.7	160~250	0.15	0.15	0.2	0.2	0.2		50	0.25	0.3	0.5	0.6	0.6	315~400	0.2	0.2	0.25	0.25	0.25	
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耐 久 性 Endurance	<p>105°C中で3000時間定格電圧(リップル重畳)印加後、下記項目を満足すること。 After applying rated voltage with rated ripple current for 3000 hours at 105°C, the capacitors shall meet the following requirements.</p> <table border="1"> <tr> <td>静電容量変化率 Capacitance Change</td> <td>初期値の±15%以内 Within ±15% of the initial value.</td> </tr> <tr> <td>損失角の正接 Dissipation Factor</td> <td>規格値の175%以下 Not more than 175% of the specified value.</td> </tr> <tr> <td>漏れ電流 Leakage Current</td> <td>規格値以下 Not more than the specified value.</td> </tr> </table>		静電容量変化率 Capacitance Change	初期値の±15%以内 Within ±15% of the initial value.	損失角の正接 Dissipation Factor	規格値の175%以下 Not more than 175% of the specified value.	漏れ電流 Leakage Current	規格値以下 Not more than the specified value.																																																																								
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高温無負荷特性 Shelf Life	<p>105°C中で500時間無負荷放置した後、JIS C 5101-4 4.1項の電圧処理を行い下記を満足すること。 After storage for 500 hours with no voltage applied at 105°C, the capacitors shall be subjected to the voltage treatment in JIS C 5101-4 item 4.1 and shall be meet the following requirements.</p> <table border="1"> <tr> <td>静電容量変化率 Capacitance Change</td> <td>初期値の±15%以内 Within ±15% of the initial value.</td> </tr> <tr> <td>損失角の正接 Dissipation Factor</td> <td>規格値の150%以下 Not more than 150% of the specified value.</td> </tr> <tr> <td>漏れ電流 Leakage Current</td> <td>規格値以下 Not more than the specified value.</td> </tr> </table>		静電容量変化率 Capacitance Change	初期値の±15%以内 Within ±15% of the initial value.	損失角の正接 Dissipation Factor	規格値の150%以下 Not more than 150% of the specified value.	漏れ電流 Leakage Current	規格値以下 Not more than the specified value.																																																																								
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◆リップル電流補正係数 / MULTIPLIER FOR RIPPLE CURRENT

周波数 (Hz) Frequency	60 (50)	120 (100)	300	500	10k ≤
10~50Vdc	0.80	1.00	1.03	1.04	1.08
63~100Vdc	0.80	1.00	1.04	1.05	1.10
160~400Vdc	0.80	1.00	1.06	1.10	1.18

◆呼称方法 / PART NUMBER

□□□	LSW	□□□□□	M	□□□	□□	D×L
定格電圧 Rated Voltage	シリーズ名 Series	静電容量 Capacitance	静電容量許容差 Capacitance Tolerance	副記号 Option	バンド記号 Clamp Code	ケースサイズ Case Size

◆寸法図 / DIMENSIONS

		(mm)						
		φD	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	
Y type	90	54.0	60.0	4.5	6.0	14	31.4	
	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		

**◆標準品一覧表 / STANDARD SIZE**

Cap(μF) \ Vdc	10		16		25		35		50		63		80		
3300													36×50	3.0	
3900													36×63	3.3	
4700												36×50	3.2	36×83	3.6
5600												36×63	3.5	36×83	3.9
6800							36×50	2.5	36×50	3.6	36×63	3.8	36×83	4.3	
8200							36×50	2.8	36×63	3.9	36×83	4.3	36×98	5.1	
10000							36×50	3.8	36×83	4.2	36×83	4.7	36×118	5.8	
12000							36×63	4.3	36×83	5.0	36×98	5.6	51×83	7.0	
15000						36×50	4.2	36×83	4.7	36×98	5.5	36×118	6.4	51×83	7.6
18000						36×63	4.6	36×83	5.1	36×98	5.7	51×83	7.5	51×98	7.7
22000			36×50	4.0	36×83	5.2	36×98	6.6	36×118	7.5	51×83	7.5	51×118	9.0	
27000	36×50	4.4	36×63	5.0	36×83	5.4	36×118	6.7	51×83	7.5	51×98	8.7	64×99	10.1	
33000	36×63	5.5	36×83	5.2	36×98	6.5	51×83	7.1	51×98	9.3	51×118	10.3	64×119	11.6	
39000	36×63	6.0	36×83	5.8	36×98	7.5	51×83	8.4	51×98	9.4	64×99	11.2	64×139	13.5	
47000	36×83	6.6	36×98	6.8	36×118	8.9	51×98	9.9	51×118	11.7	64×119	12.9	77×101	15.8	
56000	36×83	7.5	36×98	6.9	51×83	10.0	51×98	10.3	64×99	12.4	64×139	15.2	77×121	17.0	
68000	36×98	7.6	36×118	8.4	51×98	10.7	51×118	11.4	64×119	15.1	77×101	16.0	77×141	20.4	
82000	36×118	9.0	51×83	8.4	51×98	12.0	64×99	12.5	77×101	15.5	77×121	17.7	77×151	21.5	
100000	51×83	10.2	51×98	11.3	51×118	13.1	64×119	15.5	77×101	16.3	77×141	21.5	90×151	22.3	
120000	51×83	11.0	51×98	11.4	64×99	13.7	77×101	15.5	77×121	19.1	90×141	22.4			
150000	51×98	13.4	51×118	12.5	64×119	16.4	77×121	17.9	77×141	23.4					
180000	51×118	14.0	64×99	14.2	77×101	16.7	77×141	20.0	90×141	23.7					
220000	64×99	14.5	64×119	16.6	77×121	20.5	77×151	24.1							
270000	64×119	16.0	77×101	17.5	77×141	21.3	90×141	26.5							
330000	77×101	18.0	77×121	24.3	77×151	26.0									
390000	77×101	19.5	77×141	25.2	90×141	27.2									
470000	77×121	20.0	77×151	26.7											
560000	77×141	24.1	90×141	29.1											
680000	90×141	26.5													

Cap(μF) \ Vdc	100		160		200		250		315		350		400	
220											36×50	0.9	36×50	1.0
270									36×50	1.0	36×50	1.0	36×63	1.0
330									36×50	1.2	36×63	1.2	36×63	1.2
390									36×63	1.3	36×83	1.3	36×83	1.4
470							36×50	1.3	36×83	1.5	36×83	1.5	36×98	1.5
560					36×50	1.4	36×63	1.6	36×83	1.6	36×98	1.7	36×98	1.7
680					36×50	1.5	36×83	1.7	36×98	1.9	36×98	1.9	51×83	2.3
820			36×50	1.4	36×83	1.9	36×83	1.9	36×118	2.2	36×118	2.1	51×98	2.4
1000			36×63	1.9	36×83	2.2	36×98	2.3	51×83	2.3	51×98	2.5	51×118	2.7
1200			36×83	2.3	36×83	2.3	36×98	2.4	51×98	2.7	51×98	2.7	51×118	3.0
1500			36×83	2.6	36×98	2.9	36×118	2.9	51×98	3.1	51×118	3.3	64×99	3.5
1800			36×83	2.6	36×98	2.9	36×118	3.0	51×118	3.6	64×99	3.8	64×119	3.6
2200	36×50	2.9	36×98	3.2	36×118	3.3	51×98	3.8	64×99	4.2	64×119	4.6	77×101	4.1
2700	36×63	3.4	36×118	3.2	51×83	3.8	51×118	4.5	64×119	4.3	77×101	4.6	77×121	4.8
3300	36×83	3.9	36×118	3.7	51×98	4.7	64×99	5.2	77×101	4.9	77×121	5.3	77×141	5.7
3900	36×83	4.2	51×98	4.3	51×118	5.4	64×119	5.2	77×121	5.8	77×141	6.2	90×141	6.7
4700	36×83	4.6	51×98	4.8	64×99	6.2	64×119	5.7	77×121	6.3	90×141	7.4	90×141	7.4
5600	36×98	4.9	51×118	5.5	64×99	6.3	77×101	6.4	77×141	7.3	90×141	8.1		
6800	36×118	5.5	64×99	6.3	64×119	7.3	77×121	7.6	90×141	8.9				
8200	51×83	6.2	64×119	7.1	77×101	8.5	77×141	8.3						
10000	51×98	6.7	77×101	7.9	77×121	9.5	90×141	9.9						
12000	51×98	7.3	77×121	9.0	77×141	10.5	90×141	10.8						
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47000	77×141	18.3												
56000	90×141	19.2												
68000	90×151	20.1												

↑ リプル電流 Ripple Current (A r.m.s./120Hz, 105°C)  
↑ ケースサイズ Case Size φD×L(mm)

**◆ネジの締め付けトルクと許容電流値 / Tightening torque of bolt and Permissible current of terminal**

取り付けバンドネジ Clamp Bolt	推奨締め付けトルク Recommended Tightening torque
M3	0.6 [N·m]
M4	1.3 [N·m]

端子 Terminal	推奨締め付けトルク(許容値) Recommended Tightening torque (Permissible Range)	端子許容電流 Permissible Current of Terminal
M5	2.2(1.5~3.2) [N·m]	60[A r.m.s.]