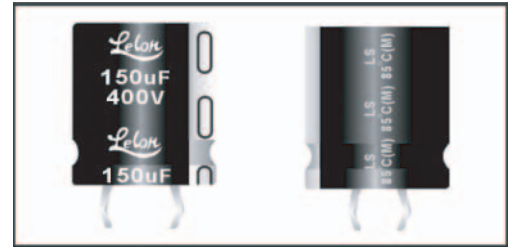


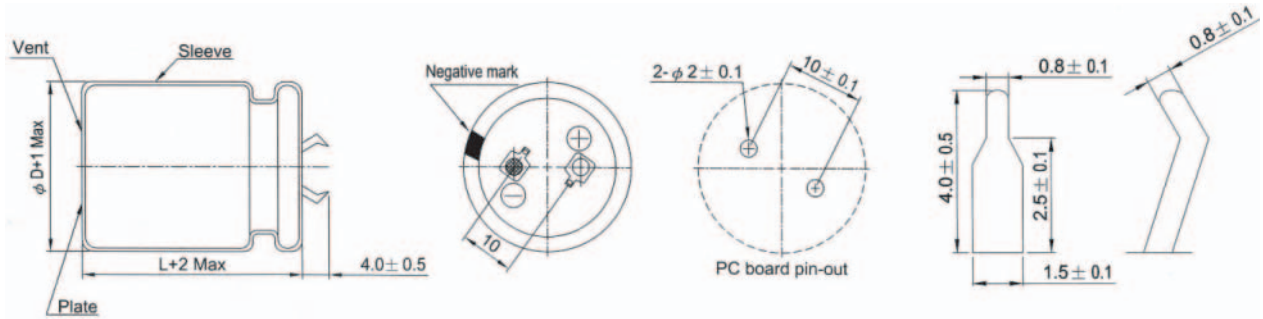
## ■ Features:

- Has a snap-in terminal which can solder to PCB directly and need not fixture to save processing time
- Suitable for electronic equipment with medium-high voltage circuits
- Printed circuit board terminal snap-in type and lug terminal type available.
- RoHS Compliant



## ■ Specifications:

Items	Performance													
Operating Temperature Range	-40°C ~ +85°C													
Capacitance Tolerance	±20% (at 120Hz, 20°C)													
Leakage Current (at 20°C)	I = 0.02CV or 1.5 mA whichever is smaller (after 5 minutes) Where, C= rated capacitance in $\mu$ F. V = rated DC working voltage in V.													
Dissipation Factor (Tan $\delta$ at 120Hz, 20°C)	Rated Voltage	16	25	35	50	63	100	160	200	250	350	400	450	
	Tan_(max)	0.40	0.30	0.25	0.20	0.15	0.15	0.15	0.15	0.15	0.20	0.20	0.20	
Low Temperature Characteristics (at 120 Hz)	Impedance ratio shall not exceed the values given in the table below.													
	Rated Voltage		16	25	35	50	63	100	160	200	250	350	400	450
	Impedance	Z(-25°C)/Z(+20°C)	4	3	3	2	2	2	4	4	4	4	8	8
	Ratio	Z(-40°C)/Z(+20°C)	15	10	8	6	6	5	4	8	10	16	18	20
Load Life Test	Test Time		2000 Hrs											
	Capacitance Change		Within ±20% of initial value											
	Dissipation Factor		Less than 200% of specified value											
	Leakage Current		Within specified value											
* The above specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied with rated ripple current for 2000 hrs at 85°C.														
Shelf Life Test	Test Time		1000 Hrs											
	Capacitance Change		Within ±20% of initial value											
	Dissipation Factor		Less than 150% of specified value											
	Leakage Current		Within specified value											
* The above specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hrs at 85°C without voltage applied. The rated voltage shall be applied to the capacitors before the measurements (Refer to JIS C 5102).														
Ripple Current & Frequency Multipliers	W. V.(V) \ Freq. (Hz)		60	120	500	1K	10K up							
	Under 100		0.92	1.00	1.13	1.19	1.20							
	160 ~ 250		0.81	1.00	1.32	1.45	1.50							
	350 to up		0.77	1.00	1.30	1.41	1.43							



### Dimensions & Permissible Ripple Current:

Dimension:  $\phi D \times L$  (mm)  
Ripple Current: A/rms at 120 Hz, 85°C

$\mu F$	V.DC $\phi D$	16V (1C)				25V (1E)				35V (1V)			
		22	25	30	35	22	25	30	35	22	25	30	35
4700	472									22x30 2.41	25x25 2.42		
5600	562					22x25 2.31				22x35 2.79			
6800	682					22x30 2.56	25x25 2.78			22x40 2.89	25x30 2.89	30x25 3.09	
8200	822	22x25 2.56				22x35 2.81	25x25 2.78			22x45 3.47	25x35 3.33	30x30 3.29	
10000	103	22x30 2.81	25x30 3.03			22x35 3.18	25x30 3.16	30x25 3.21		22x50 3.59	25x40 3.59	30x30 3.61	35x25 3.32
12000	123	22x30 3.13	25x25 2.96			22x40 3.53	25x35 3.48	30x30 3.86	35x25 3.58		25x45 4.01	30x35 4.01	35x30 4.02
15000	153	22x35 3.69	25x30 3.64	30x25 3.73		22x50 4.08	25x40 4.00	30x35 4.12				30x40 4.80	35x35 5.01
18000	183	22x40 3.98	25x35 3.98				25x45 4.68	30x35 4.66	35x30 4.68			30x45 5.18	35x40 5.71
22000	223	22x50 4.52	25x40 4.44	30x30 4.38	35x25 4.15			30x45 5.26	35x35 5.20				35x45 6.38

$\mu F$	V.DC $\phi D$	50V (1H)				63V (1J)				100V (2A)			
		22	25	30	35	22	25	30	35	22	25	30	35
1200	122									22x30 2.12	25x25 2.10		
1500	152									22x35 2.45	25x30 2.43	30x25 2.46	
1800	182					22x25 1.90				22x40 2.77	25x35 2.77	30x25 2.65	
2200	222	22x25 1.93				22x30 2.35	25x25 2.30			22x45 3.12	25x40 3.20	30x30 3.10	35x25 3.14
2700	272	22x30 2.21				22x35 2.50	25x30 2.52				25x45 3.61	30x35 3.60	35x30 3.71
3300	332	22x30 2.41	25x25 2.38			22x35 2.62	25x30 2.69	30x25 2.78			25x50 4.06	30x40 4.05	35x35 4.07
3900	392	22x35 2.72	25x30 2.68			22x45 3.10	25x35 3.09	30x30 3.09				30x45 4.60	35x35 4.50
4700	472	22x40 3.01	25x30 3.03	30x25 3.01		22x50 3.49	25x40 3.37	30x30 3.37	35x25 3.36			30x50 5.13	35x40 5.12
5600	562	22x45 3.43	25x35 3.37	30x30 3.43	35x25 3.47		25x45 3.77	30x35 3.75		Case Size $\phi \times L$ (mm) $\rightarrow$ 35x45			
6800	682	22x50 3.94	25x40 3.87	30x35 3.87			25x50 4.41	30x40 4.41	35x35 4.33	Ripple current A/rms $\rightarrow$ 5.75			
8200	822		25x45 4.37	30x35 4.42	35x30 4.41			30x45 4.90	35x35 4.80				
10000	103			30x40 5.02	35x35 4.92			30x50 5.49	35x40 5.47				
12000	123			30x50 5.60	35x40 5.60				35x50 6.30				
15000	153				35x45 6.44								



# Snap Mount Aluminum Electrolytic Capacitors

# LS Series

## ■ Dimensions & Permissible Ripple Current:

Dimension:  $\phi D \times L$  (mm)

Ripple Current: A/rms at 120 Hz, 85°C

V.DC $\mu F$ / $\phi D$		160V (2C)				200V (2D)				250V (2E)			
		22	25	30	35	22	25	30	35	22	25	30	35
150	151	22x25 0.95				22x25 0.95				22x25 0.91			
180	181	22x25 1.04				22x25 1.04				22x25 1.01			
220	221	22x25 1.15				22x25 1.15				22x30 1.27	25x25 1.24		
										22x25 1.18			
270	271	22x25 1.27				22x25 1.30				22x35 1.52	25x25 1.49		
										22x30 1.43			
330	331	22x25 1.40				22x30 1.44	25x25 1.43			22x35 1.67	25x30 1.62	30x25 1.59	
										22x30 1.58	25x25 1.53		
390	391	22x30 1.62				22x35 1.76	25x30 1.74			22x40 1.89	25x35 1.87	30x30 1.85	
						22x30 1.65	25x25 1.63			22x35 1.79	25x30 1.79	30x25 1.77	
470	471	22x30 1.77	25x25 1.77			22x40 1.97	25x30 1.86	30x25 1.85		22x45 2.14	25x35 2.05	30x30 2.03	
						22x35 1.88				22x40 2.05			
560	561	22x35 2.05	25x30 2.05	30x25 2.02		22x45 2.18	25x35 2.16	30x30 2.15		25x50 2.43	25x45 2.41	30x35 2.32	35x30 2.30
		22x30 1.92	25x25 1.92			22x40 2.08	25x30 2.05	30x25 2.05			25x40 2.32	30x30 2.24	35x25 2.21
680	681	22x40 2.24	25x35 2.31	30x25 2.22		22x50 2.47	25x40 2.43	30x35 2.43			25x50 2.70	30x40 2.65	35x35 2.62
		22x35 2.12	25x30 2.22			22x45 2.36	25x35 2.36	30x30 2.36			25x45 2.62	30x35 2.58	35x30 2.54
820	821	22x45 2.55	25x35 2.52	30x30 2.51	35x25 2.50	22x50 2.68	25x45 2.79	30x35 2.77				30x45 3.00	35x40 2.98
		22x40 2.32	25x30 2.32	30x25 2.31			25x40 2.66	30x30 2.62	35x30 2.72			30x45 2.92	35x35 2.90
1000	102	22x50 2.88	25x45 2.98	30x35 2.94	35x30 2.92		25x50 2.96	30x40 3.10	35x35 3.09			30x50 3.47	35x45 3.45
			25x40 2.86	30x30 2.82	35x25 2.79		25x45 3.12	30x35 3.00	35x30 2.96	Case Size $\phi L$ (mm) $\longrightarrow$			35x40
1200	122		25x50 3.43	30x40 3.42	35x35 3.40		25x50 3.44	30x45 3.53	35x40 3.50	Ripple Current A/rms $\longrightarrow$			35x50 3.81
			25x45 3.27	30x35 3.25	35x30 3.24			30x40 3.44	35x35 3.40				35x45 3.74
1500	152			30x45 3.92	35x40 3.90			30x50 3.93	35x45 3.95				
				30x40 3.77	35x35 3.75				35x40 3.87				
1800	182			30x50 4.32	35x40 4.30				35x50 4.45				
				30x45 4.10	35x35 4.08				35x45 4.37				
2200	222				35x50 4.88				35x50 5.00				
					35x45 4.72								





# Snap Mount Aluminum Electrolytic Capacitors

# LS Series

## ■ Dimensions & Permissible Ripple Current:

Dimension:  $\phi D \times L$  (mm)  
Ripple Current: A/rms at 120 Hz, 85°C

V.DC $\mu F$ / $\phi D$		350V (2V)				400V (2G)				450V (2W)			
		22	25	30	35	22	25	30	35	22	25	30	35
56	560									22x25 0.68			
68	680					22x25 0.72				22x30 0.80			
82	820	22x25 0.81				22x25 0.80				22x30 0.87	25x25 0.85		
100	101	22x25 0.90				22x30 0.94	25x25 0.97			25x35 1.00	25x25 0.98		
120	121	22x30 1.05	25x25 1.04			25x35 1.12	25x30 1.16			22x40 1.15	25x35 1.12	30x25 1.10	
		22x25 0.99				22x30 1.04	25x25 1.08			25x35 1.05	25x30 1.09		
150	151	22x35 1.24	25x30 1.24	30x25 1.24		22x40 1.25	25x30 1.21	30x25 1.24		22x45 1.25	25x40 1.35	30x30 1.32	
		22x30 1.14	25x25 1.16			22x35 1.18				22x40 1.20	25x35 1.27		
180	181	22x40 1.38	25x35 1.37	30x25 1.37		22x45 1.40	25x35 1.37	30x30 1.52	35x25 1.54	22x50 1.51	25x45 1.50	30x35 1.49	35x30 1.49
		22x35 1.28	25x30 1.30			22x40 1.34		30x25 1.45			25x40 1.45	30x30 1.43	
220	221	22x45 1.49	25x40 1.51	30x30 1.52		22x50 1.56	25x40 1.62	30x35 1.64	35x25 1.60		25x50 1.73	30x40 1.72	35x30 1.61
		22x40 1.40	25x35 1.46	30x25 1.47		22x45 1.50	25x35 1.56	30x30 1.58			25x45 1.65	30x35 1.63	
270	271	22x50 1.69	25x40 1.73	30x35 1.76	35x25 1.72		22x45 1.76	30x40 1.79	35x30 1.75		25x50 1.72	30x45 1.95	35x35 1.86
		22x45 1.62	25x35 1.65	30x30 1.71			25x40 1.70	30x35 1.73				30x40 1.83	
330	331	22x50 1.94	25x45 1.96	30x40 1.98	35x30 1.96		25x50 1.90	30x45 2.02	35x35 2.02			30x50 2.19	35x40 2.13
			25x40 1.88	30x35 1.93				30x40 1.98	35x30 1.95			30x45 2.10	35x35 2.06
390	391		25x45 2.04	30x40 2.18	35x35 2.24			30x45 2.22	35x40 2.24			30x50 2.24	35x45 2.34
				30x35 2.12	35x30 2.19			30x40 2.15	35x35 2.17				
470	471			30x45 2.48	35x40 2.50			30x50 2.40	35x45 2.48				35x50 2.63
				30x40 2.41	35x35 2.43				35x40 2.42				
560	561			30x45 2.60	35x40 2.69		Case size $\phi \times L$ (mm) $\rightarrow$					35x50	
					35x35 2.62		Ripple current A/rms $\rightarrow$					2.78	
680	681				35x45 3.08							35x50 2.95	

## ■ Part Numbering System

