

# Large Can Aluminum Electrolytic Capacitors

# LG [ For General ]

For Printed Circuit Board High-Performance Aluminum Electrolytic Power Supply Input and Output Filter Capacitors



## DESCRIPTION

Endurance : 105°C 2000 hours, higher temperature than LH.

Ideally suitable for using in switching power supplies and other industrial / commercial applications.

### MULTIPLIER FOR RIPPLE CURRENT

Frequency Coefficient

FREQUENCY (Hz)	50	60	120	1K	10K
6.3~100V	0.88	0.90	1.00	1.15	1.16
160~250V	0.85	0.88	1.00	1.15	1.20
315~450V	0.88	0.90	1.00	1.10	1.15

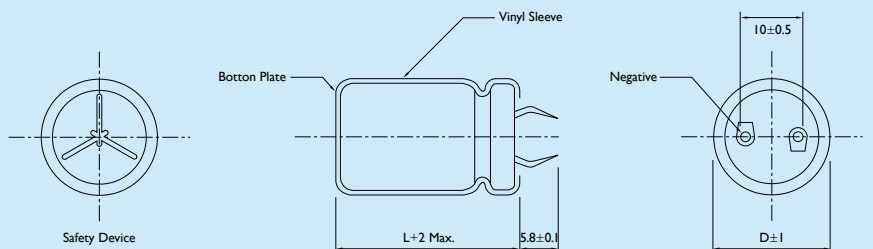
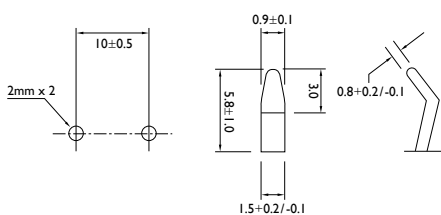
## ELECTRICAL CHARACTERISTICS

Operating Temperature Range	-40 to +105°C	-25 to +105°C																								
Rated Voltage Range	6.3 to 100VDC	160 to 450VDC																								
Rated Capacitance Range	560 ~ 82000µF	47 ~ 2200µF																								
Capacitance Tolerance	±20% at 120Hz, 20°C																									
Leakage Current	I = 0.02CV, L = 20m/m, I = 0.03CV or 3mA whichever is smaller. (After 5 Minutes Application of DC Working Voltage at 20°C) I = Leakage Current (µA), C = Nominal Capacitance (µF), V = Rated Voltage (V)																									
Dissipation Factor (tanδ)	<table border="1"> <thead> <tr> <th>Rate Voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63-100</th> <th>160-400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>D.F. (%)</td> <td>60</td> <td>55</td> <td>55</td> <td>45</td> <td>35</td> <td>30</td> <td>25</td> <td>15</td> <td>20</td> </tr> </tbody> </table>		Rate Voltage (V)	6.3	10	16	25	35	50	63-100	160-400	450	D.F. (%)	60	55	55	45	35	30	25	15	20				
Rate Voltage (V)	6.3	10	16	25	35	50	63-100	160-400	450																	
D.F. (%)	60	55	55	45	35	30	25	15	20																	
Low Temperature Stability	Measurement frequency: 120Hz																									
Impedance Ratio (Max.)	<table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>6.3~16</th> <th>25</th> <th>35</th> <th>50~63</th> <th>80~10</th> <th>160~400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Z(-25°C) / Z(20°C)</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>4</td> <td>8</td> </tr> <tr> <td>Z(-40°C) / Z(20°C)</td> <td>15</td> <td>10</td> <td>8</td> <td>6</td> <td>5</td> <td>-</td> <td>-</td> </tr> </tbody> </table>		Rated Voltage (V)	6.3~16	25	35	50~63	80~10	160~400	450	Z(-25°C) / Z(20°C)	4	3	3	2	2	4	8	Z(-40°C) / Z(20°C)	15	10	8	6	5	-	-
Rated Voltage (V)	6.3~16	25	35	50~63	80~10	160~400	450																			
Z(-25°C) / Z(20°C)	4	3	3	2	2	4	8																			
Z(-40°C) / Z(20°C)	15	10	8	6	5	-	-																			
Endurance	After the rated voltage and rated ripple current have been applied at 105°C for 2000 hours, the capacitors shall meet the following requirements. (a) Capacitance Change: ≤ ±20% of the Initial Value (b) Dissipation Factor: ≤ 200% of the Initial Specified Value (c) Leakage Current: ≤ the Initial Specified Value																									
Shelf Life	After having been placed at 105°C without voltage applied for 1000 hours, the capacitors shall meet the same requirements as Endurance.																									

## DIAGRAM OF DIMENSIONS

Unit: mm

Location of P.C.B. Holes



## CASE SIZE & PERMISSIBLE RIPPLE CURRENT OF STANDARD PRODUCTS

D x L: mm

CAP. (μF)	RATED VOLTAGE WV (SURGE VOLTAGE WV)							
	6.3 (8)		10 (13)		16 (20)		25 (32)	
	SIZE	RIPPLE	SIZE	RIPPLE	SIZE	RIPPLE	SIZE	RIPPLE
4700							22 x 25	1.50
5600							22 x 30	1.65
							25 x 25	1.65
6800					22 x 25	1.55	22 x 30	1.85
							25 x 25	1.85
8200					22 x 30	1.70	22 x 35	2.10
					25 x 25	1.70	25 x 30	2.10
							30 x 25	2.15
10000			22 x 25	1.55	22 x 30	1.95	22 x 40	2.40
			25 x 25	1.55	25 x 25	1.95	25 x 35	2.40
							30 x 30	2.40
							35 x 25	2.40
12000	22 x 25	1.55	22 x 30	1.75	22 x 35	2.20	22 x 45	2.70
					25 x 30	2.25	25 x 40	2.75
					30 x 25	2.30	30 x 30	2.70
							35 x 25	2.75
15000	22 x 30	1.70	22 x 30	1.90	22 x 40	2.55	25 x 45	3.15
	25 x 25	1.70	25 x 25	1.90	25 x 35	2.60	30 x 35	3.15
					30 x 30	2.60	35 x 30	3.25
					35 x 25	2.65		
18000	22 x 30	1.95	22 x 35	2.20	22 x 45	2.90	25 x 50	3.55
	25 x 25	1.95	25 x 30	2.25	25 x 40	2.90	30 x 40	3.55
					30 x 30	2.90	35 x 35	3.55
					35 x 25	2.95		
22000	22 x 35	2.25	22 x 40	2.50	25 x 45	3.30	30 x 45	4.05
	25 x 30	2.25	25 x 35	2.55	30 x 35	3.30	35 x 35	3.80
	30 x 25	2.25	30 x 25	2.45	35 x 30	3.30		
27000	22 x 40	2.55	22 x 50	2.95	25 x 50	3.80	35 x 45	4.70
	25 x 35	2.55	25 x 40	2.90	30 x 40	3.75		
	30 x 30	2.55	30 x 30	2.85	35 x 30	3.75		
	35 x 25	2.55	35 x 25	2.80				
33000	22 x 45	2.90	25 x 45	3.30	30 x 45	4.30	35 x 50	5.40
	25 x 40	2.95	30 x 35	3.30	35 x 35	4.25		
	30 x 30	2.90	35 x 30	3.30				
	35 x 25	2.95						
39000	25 x 50	3.25	25 x 50	3.70	30 x 50	4.80		
	30 x 35	3.25	30 x 40	3.70	35 x 40	4.80		
	35 x 30	3.30	35 x 30	3.65				
47000	25 x 50	3.70	30 x 45	4.20	35 x 45	5.45		
	30 x 40	3.70	35 x 35	3.80				
56000	30 x 45	4.15	30 x 50	4.65				
	35 x 35	4.10	35 x 40	4.65				
68000	30 x 50	4.70	35 x 50	5.50				
	35 x 40	4.70						
82000	35 x 45	5.30						

Note: I. Ripple Current: (A/rms) 105°C, 120Hz



## CASE SIZE & PERMISSIBLE RIPPLE CURRENT OF STANDARD PRODUCTS

D x L: mm

CAP. (μF)	RATED VOLTAGE WV (SURGE VOLTAGE WV)							
	35 (44) SIZE		50 (63) SIZE		63 (79) SIZE		80 (100) SIZE	
		RIPPLE		RIPPLE		RIPPLE		RIPPLE
820							22 x 25	1.10
1000							22 x 30	1.20
							25 x 25	1.20
1200					22 x 25	1.20	22 x 30	1.40
							25 x 25	1.40
1500					22 x 30	1.30	22 x 35	1.60
					25 x 25	1.30	25 x 30	1.60
							30 x 25	1.65
1800			22 x 25	1.30	22 x 30	1.50	22 x 40	1.80
					25 x 25	1.50	25 x 35	1.85
							30 x 25	1.80
2200			22 x 30	1.55	22 x 35	1.70	22 x 45	2.05
			25 x 25	1.55	25 x 30	1.75	25 x 35	2.00
					30 x 25	1.80	30 x 30	2.05
							35 x 25	2.05
2700			22 x 30	1.70	22 x 40	2.00	25 x 45	2.35
			25 x 25	1.70	25 x 35	2.00	30 x 35	2.35
					30 x 25	1.95	35 x 30	2.35
3300	22 x 25	1.40	22 x 35	1.95	22 x 50	2.30	25 x 50	2.70
			25 x 30	1.85	25 x 40	2.30	30 x 40	2.70
					30 x 30	2.25	35 x 30	2.55
					35 x 25	2.10		
3900	22 x 30	1.55	22 x 40	2.15	25 x 45	2.55	30 x 45	3.00
	25 x 25	1.55	25 x 35	2.20	30 x 35	2.55	35 x 35	3.00
			30 x 25	1.95	35 x 30	2.55		
4700	22 x 35	1.80	22 x 45	2.45	25 x 50	2.85	30 x 50	3.40
	25 x 25	1.80	25 x 40	2.45	30 x 40	2.85	35 x 40	3.40
			30 x 30	2.45	35 x 30	2.80		
			35 x 25	2.50				

Note: I. Ripple Current: (A/rms) 105°C, 120Hz

## CASE SIZE & PERMISSIBLE RIPPLE CURRENT OF STANDARD PRODUCTS

D x L: mm

CAP. (μF)	RATED VOLTAGE WV (SURGE VOLTAGE WV)							
	35 (44) SIZE		50 (63) SIZE		63 (79) SIZE		80 (100) SIZE	
		RIPPLE		RIPPLE		RIPPLE		RIPPLE
5600	22 x 35	19.5	22 x 50	2.75	30 x 45	3.20	35 x 45	3.80
	25 x 30	1.95	25 x 40	2.70	35 x 35	3.20		
	30 x 25	2.00	30 x 35	2.75				
				35 x 30	2.75			
6800	22 x 40	2.20	25 x 50	3.30	30 x 50	3.65	35 x 50	3.90
	25 x 35	2.25	30 x 40	3.30	35 x 40	3.65		
	30 x 30	2.30	35 x 30	3.25				
	35 x 25	2.35						
8200	22 x 50	2.55	30 x 45	3.60	35 x 45	3.90	35 x 60	4.00
	25 x 40	2.50	35 x 35	3.55				
	30 x 30	2.75						
	35 x 25	2.75						
10000	25 x 45	2.85	30 x 50	4.05	35 x 50	4.40		
	30 x 35	2.90	35 x 50	4.05				
	35 x 30	2.95	35 x 40	4.00				
12000	25 x 50	3.25	35 x 45	4.55				
	30 x 40	3.25						
	35 x 30	3.15						
15000	30 x 45	3.70						
	35 x 35	3.65						
18000	35 x 40	4.35						
22000	35 x 50	4.90						

Note: I. Ripple Current: (A/rms) 105°C, 120Hz



## CASE SIZE & PERMISSIBLE RIPPLE CURRENT OF STANDARD PRODUCTS

D × L: mm

CAP. (μF)	RATED VOLTAGE WV (SURGE VOLTAGE WV)							
	100 (125) SIZE		160 (200) SIZE		180 (225) SIZE		200 (250) SIZE	
		RIPPLE		RIPPLE		RIPPLE		RIPPLE
150							22 × 20	0.65
180					22 × 20	0.75	22 × 20	0.70
220			22 × 20	0.80	22 × 25	0.85	22 × 25 25 × 20	0.80 0.80
270			22 × 25	1.00	22 × 25 25 × 20	0.95 0.90	22 × 25 25 × 25	0.85 0.85
330			22 × 25 25 × 20	1.20 1.15	22 × 25 22 × 30 25 × 25	1.20 1.10 1.10	22 × 30 25 × 25	1.20 1.20
390			22 × 30 25 × 25	1.30 1.30	22 × 30 25 × 25	1.30 1.30	22 × 30 22 × 35 25 × 30 30 × 25	1.30 1.30 1.30 1.30
470			22 × 30 22 × 35 25 × 25	1.30 1.40 1.40	22 × 30 22 × 35 25 × 30 30 × 25	1.30 1.35 1.40 1.40	22 × 35 22 × 40 25 × 30 30 × 25	1.40 1.40 1.40 1.50
560	22 × 25	1.05	22 × 40 25 × 30 30 × 25	1.50 1.50 1.50	22 × 40 25 × 35 30 × 25	1.50 1.55 1.50	22 × 45 25 × 35 30 × 30	1.55 1.55 1.55
680	22 × 25	1.20	22 × 45 25 × 35 30 × 25	1.70 1.70 1.70	22 × 45 22 × 50 25 × 35 25 × 40 30 × 30 35 × 25	1.70 1.70 1.70 1.75 1.70 1.70	22 × 50 25 × 40 30 × 30 35 × 25	1.75 1.75 1.75 1.70
820	22 × 30 25 × 25	1.30 1.33	22 × 50 25 × 40 30 × 30 35 × 25	1.95 2.00 2.00 1.90	22 × 50 25 × 40 25 × 45 30 × 35 35 × 25	1.95 2.00 2.00 2.00 1.90	25 × 50 30 × 35 35 × 30	2.05 2.00 2.05

Note: I<sub>r</sub> Ripple Current: (A/rms) 105°C, 120Hz

## CASE SIZE & PERMISSIBLE RIPPLE CURRENT OF STANDARD PRODUCTS

D x L: mm

CAP. (μF)	RATED VOLTAGE WV (SURGE VOLTAGE WV)							
	100 (125) SIZE		160 (200) SIZE		180 (225) SIZE		200 (250) SIZE	
		RIPPLE		RIPPLE		RIPPLE		RIPPLE
1000	22 x 35	1.50	25 x 45	2.20	25 x 45	2.20	30 x 40	2.30
	25 x 30	1.50	30 x 35	2.20	25 x 50	2.20	30 x 45	2.30
			35 x 30	2.20	30 x 35	2.25	35 x 30	2.30
					30 x 40	2.25	35 x 35	2.30
					35 x 30	2.25		
1200	22 x 40	1.70	25 x 50	2.45	25 x 50	2.45	30 x 50	2.60
	25 x 35	1.70	30 x 40	2.45	30 x 40	2.45	35 x 40	2.65
	30 x 25	1.70	35 x 30	2.45	30 x 45	2.50		
					35 x 35	2.50		
1500	22 x 45	1.95	30 x 45	2.80	30 x 45	2.80	35 x 45	3.10
	25 x 40	2.00	35 x 35	2.80	30 x 50	2.90		
	30 x 30	1.95			35 x 40	2.90		
	35 x 25	2.00						
1800	25 x 45	2.20	30 x 50	3.30	30 x 50	3.30	35 x 50	3.15
	30 x 35	2.50	35 x 45	3.30	35 x 50	3.30		
	35 x 30	2.45						
2200	25 x 50	2.55	35 x 50	3.75	35 x 50	3.60	35 x 50	4.80
	30 x 40	2.70						
	35 x 30	2.55						
2700	30 x 45	2.90						
	35 x 35	2.85						
3300	30 x 50	3.25						
	35 x 40	3.25						
3900	35 x 45	3.70						
4700	30 x 50	3.80						
	35 x 50	3.80						

Note: I. Ripple Current: (A/rms) 105°C, 120Hz



## CASE SIZE & PERMISSIBLE RIPPLE CURRENT OF STANDARD PRODUCTS

D x L: mm

CAP. (μF)	RATED VOLTAGE WV (SURGE VOLTAGE WV)													
	250 (300) SIZE		350 (400) SIZE		400 (450) SIZE		420 (470) SIZE		450 (500) SIZE					
		RIPPLE		RIPPLE		RIPPLE		RIPPLE		RIPPLE				
47					22 x 20	0.35			22 x 25	0.38				
56			22 x 20	0.40	22 x 20	0.40			22 x 25	0.40				
68			22 x 25	0.45	22 x 25	0.50			22 x 30	0.50				
					25 x 20	0.50			25 x 25	0.50				
82			22 x 25	0.55	22 x 25	0.52			22 x 30	0.52				
					25 x 20	0.50	22 x 30	0.60		22 x 35	0.55			
							25 x 25	0.65		25 x 30	0.55			
										30 x 25	0.55			
100	22 x 25	0.56	22 x 30	0.70	22 x 30	0.60			22 x 30	0.55				
							25 x 25	0.65		22 x 40	0.65			
							25 x 25	0.65		25 x 30	0.60			
							25 x 30	0.65		30 x 25	0.65			
120	22 x 20	0.60	22 x 35	0.75	22 x 35	0.70			22 x 35	0.60				
							25 x 30	0.70		22 x 45	0.70			
							30 x 25	0.75	30 x 25	0.75		25 x 35	0.70	
												30 x 30	0.70	
												35 x 25	0.70	
150	22 x 25	0.65	22 x 40	0.80	22 x 35	0.72	22 x 35	0.58	22 x 40	0.68				
							25 x 30	0.80	22 x 40	0.65	22 x 50	0.80		
							30 x 25	0.85	25 x 30	0.85	25 x 30	0.70	25 x 40	0.80
									25 x 35	0.85			30 x 30	0.75
									30 x 30	0.85			35 x 25	0.75
180	22 x 25	0.80	22 x 45	0.90	22 x 40	0.81	22 x 40	0.68	22 x 45	0.75				
							22 x 50	0.95	25 x 35	0.68	25 x 45	0.85		
	25 x 20	0.75			25 x 35	0.90	25 x 40	0.95			30 x 35	0.85		
							30 x 30	0.90	30 x 30	0.90		35 x 30	0.85	
220	22 x 30	0.95	22 x 50	1.05	25 x 45	1.05	25 x 40	0.85	22 x 50	0.85				
							25 x 25	0.95	30 x 30	1.05	25 x 45	0.95	25 x 50	1.00
					30 x 30	1.00	30 x 35	1.05	30 x 40	0.95	30 x 40	1.00		
					35 x 25	1.05	35 x 30	1.10			35 x 30	1.00		

Note: I. Ripple Current: (A/rms) 105°C, 120Hz

**CASE SIZE & PERMISSIBLE RIPPLE CURRENT OF STANDARD PRODUCTS**

D x L: mm

CAP. (μF)	RATED VOLTAGE WV (SURGE VOLTAGE WV)									
	250 (300) SIZE		350 (400) SIZE		400 (450) SIZE		420 (470) SIZE		450 (500) SIZE	
		RIPPLE		RIPPLE		RIPPLE		RIPPLE		RIPPLE
270	22 x 35	1.15	25 x 45	1.20	22 x 45	1.10	25 x 45	1.05	25 x 50	1.05
	25 x 30	1.15	30 x 35	1.20	25 x 50	1.20	30 x 40	1.05	30 x 45	1.15
	30 x 25	1.15	35 x 30	1.20	30 x 40	1.20	35 x 30	1.05	35 x 35	1.15
					35 x 35	1.20				
330	22 x 40	1.25	30 x 40	1.35	25 x 50	1.25	25 x 50	1.15	30 x 45	1.25
	25 x 30	1.20	30 x 45	1.35	30 x 45	1.40	30 x 40	1.15	30 x 50	1.40
	30 x 25	1.25	35 x 35	1.35	35 x 35	1.35	35 x 35	1.15	35 x 40	1.40
390	22 x 45	1.50	30 x 45	1.50	30 x 45	1.42	30 x 45	1.25	30 x 50	1.40
	25 x 35	1.50	35 x 35	1.50	30 x 50	1.55			35 x 45	1.55
	30 x 30	1.50			35 x 40	1.55				
470	22 x 50	1.55	35 x 40	1.70	30 x 45	1.45	30 x 50	1.40	35 x 40	1.47
	25 x 40	1.55			30 x 50	1.75	35 x 40	1.35	35 x 45	1.68
	30 x 30	1.55			35 x 40	1.65			35 x 50	1.70
	35 x 25	1.55			35 x 45	1.75				
					35 x 50	1.75				
560	25 x 45	1.80	35 x 45	1.90	30 x 60	1.90	35 x 45	1.65	35 x 50	1.80
	30 x 35	1.80			35 x 45	1.80			35 x 60	2.10
	35 x 30	1.80			35 x 50	1.90				
680	25 x 50	1.95	35 x 50	2.10	35 x 50	2.10				
	30 x 40	2.00			35 x 60	2.15				
	35 x 35	2.00								
820	30 x 45	2.15								
	35 x 35	2.10								
1000	30 x 45	2.10								
	35 x 40	2.30								
1500	35 x 50	3.63								

Note: I. Ripple Current: (A/rms) 105°C, 120Hz