

# Miniature Size Aluminum Electrolytic Capacitors

# LG [ For 105°C, 2000 Hours General ]

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



## DESCRIPTION (LG Series 105°C 2000 Hours Assured)

Assured)

LG type capacitors are combined with snaplock terminals for easy to mount on P.C. Board.

They are ideally suitable to be used in switching power supplies and other industrial or commercial applications.

### Multiplier for Ripple Current

Frequency coefficient

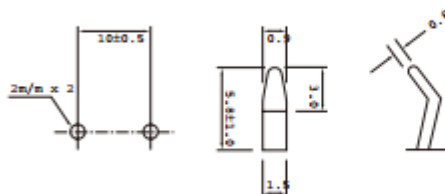
Frequency(Hz)	50	60	120	1K	10K-00K
6.3~100V	0.88	0.90	1.00	1.15	1.16
160~250V	0.85	0.88	1.00	1.15	1.20
315~450V	0.88	0.9	1.00	1.10	1.15

Temperature coefficient

Temperature(°C)	60	70	85	105
Factor	2.37	2.17	1.67	1.00

## DIAGRAM OF DIMENSIONS

Location of P.C.B. Holes

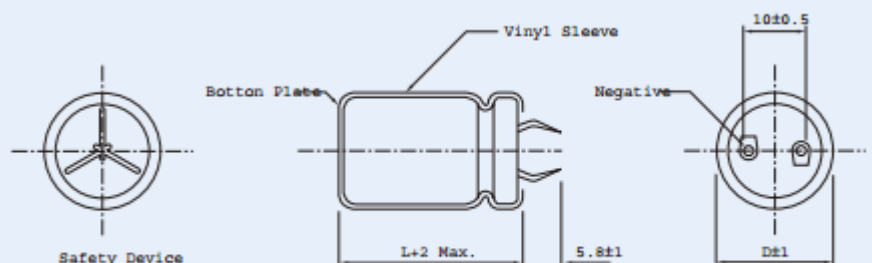


## ELECTRICAL CHARACTERISTICS

Rated Voltage Range	6.3 to 100VDC	160 to 450VDC
Operating Temperature Range	-40 to +105°C	-25 to +105°C
Capacitance Tolerance	±20% (At 20°C, 120Hz)	
Leakage Current	I = 0.02CV, L = 20m/m, I = 0.03CV or 3mA Whichever is smaller. (At 25°C, After 5 Minutes) Where, I; Leakage Current (μA) C: Nominal Capacitance (μF) V: Rated Voltage (V)	
Dissipation Factor (tanδ)	Rate Voltage (V) 6.3 10 16 25 35 50 63-100 160-450 D.F (%) 60 55 50 45 35 30 30 15 * Note : 15% For D = 35m/m or L = 20m/m (At 20°C, 120Hz) (WV = 6.3 ~ 100V For Capacitor Whose Capacitance Exceeds 1000μF) The value of D.F (%) is increased by 2% for every addition of 1000μF	
Low Temperature Characteristics (120Hz)	Rated Voltage (V) 6.3~16 25 35 50~63 80~100 160~400 450 Z(-25°C) / Z(20°C) 4 3 3 2 2 4 8 Z(-40°C) / Z(20°C) 15 10 8 6 5 - -	
Load Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage with maximum ripple current is applied for 2000 hours at 105°C. Capacitance Change ≤ ±20% of the Initial Value D.F ≤ 200% of the Initial Specified Value Leakage Current ≤ the Initial Specified Value	
Shelf Life (25°C)	The following specifications shall be satisfied when the capacitor are restored to after exposing them for 1000 hours at 105°C without voltage applied. Capacitance Change ≤ ±20% of the Initial Value D.F ≤ 150% of the Initial Specified Value Leakage Current ≤ 150% of Initial Specified Value	



Unit : mm



## CASE SIZE OF STANDARD PRODUCTS AND PERMISSIBLE RIPPLE CURRENT

CAP. (μF)	RATED VOLTAGE WV							
	6.3		10		16		25	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
3900							20 x 25	1.58
4700							22 x 25	1.50
							20 x 30	1.65
5600					20 x 25	1.68	20 x 35	1.65
							22 x 30	1.65
							25 x 25	1.65
6800			20 x 25	1.31	22 x 25	1.55	22 x 40	1.85
					20 x 30	1.80	25 x 25	1.85
8200			20 x 30	1.59	22 x 30	1.70	22 x 35	2.10
					25 x 25	1.70	25 x 30	2.10
					20 x 35	1.70	30 x 25	2.15
10000			25 x 25	1.55	22 x 30	1.95	22 x 40	2.40
			20 x 30	1.88	25 x 25	1.95	25 x 35	2.40
					20 x 40	1.95	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
			20 x 35	2.18	25 x 30	2.25		
			25 x 25	1.94	30 x 25	2.30	25 x 40	2.75
							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	2.58	30 x 35	3.15
			22 x 40	2.41	30 x 30	2.57	35 x 30	3.25
			22 x 35	2.23	35 x 25	2.65		
			25 x 30	2.10				
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
			22 x 40	2.41	30 x 30	2.90	35 x 35	3.55
			30 x 25	2.25	35 x 25	2.95		
22000	22 x 35	2.25	22 x 40	2.50	25 x 45	3.30	30 x 45	4.04
	25 x 30	2.25	25 x 35	2.55	30 x 35	3.30	35 x 35	3.75
	30 x 25	2.25	30 x 25	2.45	35 x 30	3.25		
			22 x 45	2.50				
			30 x 30	2.50				
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	35 x 35	3.93		
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				
			35 x 35	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				
			35 x 40	4.16				
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 : \*1. D x L : mm

\*2. Ripple Current : (A r.m.s 105°C / 120Hz)

## CASE SIZE OF STANDARD PRODUCTS AND PERMISSIBLE RIPPLE CURRENT

CAP. (μF)	RATED VOLTAGE WV							
	35		50		63		80	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
820							22 x 25	1.04
							20 x 25	1.04
1000					20 x 25	1.10	22 x 25	1.19
							22 x 30	1.20
							25 x 25	1.20
							20 x 30	1.20
1200							20 x 35	1.43
					22 x 25	1.20	22 x 30	1.40
					20 x 30	1.20	25 x 25	1.40
1500			20 x 25	1.15	20 x 35	1.30	20 x 35	1.57
					22 x 30	1.30	22 x 30	1.57
					25 x 25	1.30	25 x 25	1.57
							22 x 35	1.60
							25 x 30	1.60
							30 x 25	1.65
1800			22 x 25	1.30	22 x 30	1.50	22 x 40	1.71
			20 x 30	1.39	25 x 25	1.50	25 x 35	1.71
					20 x 35	1.50	30 x 25	1.71
							20 x 40	1.77
							22 x 35	1.77
							25 x 30	1.71
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	1.98
			20 x 35	1.55	30 x 25	1.80	30 x 30	2.05
					20 x 40	1.80	35 x 25	2.05
					22 x 25	1.58	22 x 40	2.03
							30 x 25	2.05
2700	20 x 25	1.29	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
			20 x 35	1.70	30 x 25	1.72	35 x 30	2.35
							22 x 45	2.35
							25 x 40	2.35
							30 x 30	2.35
3300	22 x 25	1.40	22 x 35	1.95	22 x 50	2.30	25 x 50	2.61
	20 x 30	1.57	25 x 30	1.85	25 x 40	2.30	30 x 40	2.70
			20 x 40	1.95	30 x 30	2.24	35 x 30	2.47
					35 x 25	2.10	30 x 35	2.61
					22 x 45	2.30	20 x 45	2.64
					25 x 35	2.27		
3900	22 x 30	1.55	22 x 40	2.15	25 x 45	2.51	30 x 45	3.82
	25 x 25	1.55	25 x 35	2.20	30 x 35	2.55	35 x 35	3.00
	20 x 35	1.55	30 x 25	1.95	35 x 30	2.55	35 x 30	2.97
			25 x 30	2.20	25 x 40	2.51	25 x 50	2.92
							30 x 40	2.82
4700	22 x 35	1.80	22 x 45	2.43	25 x 50	2.85	30 x 50	3.34
	25 x 25	1.80	25 x 40	2.43	30 x 40	2.85	35 x 40	3.40
	20 x 40	1.80	30 x 30	2.25	35 x 30	2.80	35 x 50	3.40
			35 x 25	2.50			30 x 45	3.34
			25 x 35	2.43			35 x 35	3.38
5600	22 x 35	1.95	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 50	3.80
	30 x 25	2.00	30 x 35	2.75	30 x 40	3.20	35 x 70	3.80
			35 x 30	2.75				
			30 x 30	2.64				
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	35 x 45	3.90
	30 x 30	2.30	35 x 30	3.25				
	35 x 25	2.35	25 x 40	3.30				
	30 x 25	2.25	30 x 35	3.30				
8200	22 x 50	2.55	30 x 45	3.60	35 x 45	3.90	35 x 50	4.20
	25 x 40	2.50	35 x 35	3.55				
	30 x 30	2.75	30 x 40	3.60				
	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 40	4.00				
	35 x 30	2.95	30 x 40	3.49				
12000	25 x 50	3.25	35 x 45	4.55				
	30 x 40	3.23						
	35 x 30	3.15						
	35 x 40	3.19						
15000	30 x 45	3.70	35 x 50	4.77				
	35 x 35	3.65						
18000	35 x 40	4.35						
22000	35 x 50	4.90						
	35 x 45	4.90						

Note : \*1. D x L : mm

\*2. Ripple Current : (A r.m.s 105°C / 120Hz)

## CASE SIZE OF STANDARD PRODUCTS AND PERMISSIBLE RIPPLE CURRENT

CAP. (μF)	RATED VOLTAGE WV		100		160		180		200		220	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
150									22 x 20	0.65		
180							22 x 20	0.75	22 x 20	0.70	20 x 25	0.81
220			22 x 20	0.80			22 x 25	0.85	22 x 25	0.80	20 x 30	0.94
							20 x 25	0.81	25 x 20	0.80	22 x 25	0.94
									20 x 25	0.80		
270			22 x 25	0.87			22 x 25	0.95	22 x 25	0.85	20 x 35	1.10
							25 x 20	0.90	25 x 25	0.85	22 x 30	1.09
							20 x 30	0.95	20 x 30	0.85		
330			22 x 25	1.20			22 x 25	1.20	22 x 30	1.20	20 x 40	1.18
			25 x 20	1.15			22 x 30	1.10	25 x 25	1.20	22 x 35	1.24
							25 x 25	1.10	20 x 35	1.17	25 x 25	1.14
							20 x 35	0.11				
390			22 x 30	1.17			22 x 30	1.30	22 x 40	1.27	20 x 45	1.33
			25 x 25	1.30			25 x 25	1.30	22 x 35	1.27	22 x 35	1.30
			20 x 35	1.15			20 x 35	1.28	25 x 30	1.30	25 x 30	1.26
									30 x 25	1.30		
									25 x 25	1.30		
470			22 x 30	1.28			20 x 40	1.35	22 x 35	1.40	22 x 40	1.41
			20 x 40	1.25			22 x 35	1.35	22 x 40	1.40	25 x 30	1.39
			25 x 25	1.29			25 x 30	1.40	25 x 30	1.40	30 x 25	1.37
			22 x 35	1.28			30 x 25	1.40	30 x 25	1.48		
560	22 x 25	1.05	22 x 40	1.45			22 x 40	1.50	22 x 45	1.55	22 x 45	1.60
	20 x 25	0.95	25 x 30	1.45			25 x 35	1.55	25 x 35	1.55	25 x 35	1.56
			30 x 25	1.49			30 x 25	1.50	30 x 30	1.55	30 x 30	1.61
			22 x 35	1.45			25 x 30	1.53			35 x 25	1.52
680	22 x 25	1.20	22 x 45	1.64			22 x 45	1.76	22 x 50	1.75	25 x 40	1.75
	20 x 30	1.15	25 x 35	1.70			22 x 50	1.70	25 x 40	1.75	30 x 35	1.76
			30 x 25	1.63			25 x 35	1.76	30 x 30	1.74	35 x 30	1.72
			22 x 40	1.64			25 x 40	1.75	35 x 25	1.70		
							30 x 30	1.70				
							35 x 25	1.70				
820	22 x 30	1.30	22 x 50	1.85			22 x 50	1.97	25 x 50	2.05	25 x 45	1.97
	25 x 25	1.33	25 x 40	1.92			25 x 40	1.99	30 x 35	2.00	30 x 40	2.06
	20 x 35	1.30	30 x 30	1.91			25 x 45	1.99	35 x 30	2.05	35 x 30	1.95
			35 x 25	1.90			30 x 35	1.93	25 x 45	2.10		
			22 x 45	1.85			35 x 25	1.90				
1000	22 x 35	1.43	25 x 45	2.17			25 x 45	2.24	30 x 45	2.30	30 x 45	2.44
	25 x 30	1.43	30 x 35	2.19			25 x 50	2.20	35 x 35	2.30	35 x 35	2.20
	20 x 35	1.43	35 x 30	2.19			30 x 35	2.20	25 x 50	2.36		
	25 x 25	1.43					30 x 40	2.25	30 x 40	2.40		
							35 x 30	2.25				
1200	22 x 40	1.69	25 x 50	2.43			30 x 40	2.53	30 x 50	2.60	35 x 40	2.37
	25 x 35	1.69	30 x 40	2.45			30 x 45	2.53	35 x 40	2.65		
	30 x 25	1.68	35 x 30	2.25			35 x 35	2.50	30 x 45	2.69		
	22 x 35	1.69							35 x 35	2.53		
	25 x 30	1.68										
	20 x 40	1.61										
1500	22 x 45	1.95	30 x 45	2.80			30 x 50	2.90	35 x 45	2.97	35 x 45	2.64
	25 x 40	1.95	35 x 35	2.62			35 x 40	2.90	35 x 40	2.97		
	30 x 30	1.95										
	35 x 25	1.95										
	22 x 40	1.97										
	25 x 35	1.98										
	30 x 25	1.95										
1800	25 x 45	2.20	30 x 50	3.13			35 x 50	3.30	35 x 50	3.15		
	30 x 35	2.50	35 x 45	2.97			35 x 45	3.25				
	35 x 30	2.45	35 x 40	2.97								
	22 x 45	2.20										
	25 x 40	2.20										
	30 x 30	2.20										
2200	25 x 50	2.55	35 x 50	3.34			35 x 50	3.60	35 x 50	3.80		
	30 x 40	2.50										
	35 x 30	2.55										
	25 x 45	2.53										
	30 x 35	2.55										
2700	30 x 45	2.90										
	35 x 35	2.85										
	25 x 50	2.82										
	30 x 40	2.86										
3300	30 x 50	3.25										
	35 x 40	3.25										
	30 x 45	3.25										
	30 x 45	3.25										
3900	35 x 40	3.67										
	30 x 50	3.60										
	35 x 45	3.67										
4700	30 x 50	3.80										
	35 x 45	3.80										
	35 x 50	3.80										
5600	35 x 50	4.05										

Note : \*1. D x L : mm

\*2. Ripple Current : (A r.m.s 105°C / 120Hz)

## CASE SIZE OF STANDARD PRODUCTS AND PERMISSIBLE RIPPLE CURRENT

CAP. (μF)	RATED VOLTAGE WV														
	250		315		350		385		400		420		450		
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	
47									22 x 20	0.35				20 x 25	0.36
														22 x 25	0.35
56					22 x 20	0.40	20 x 25	0.37	22 x 20	0.40	20 x 25	0.340	22 x 25	0.40	
									20 x 25	0.40			20 x 30	0.41	
68					22 x 25	0.45	20 x 30	0.44	22 x 25	0.49	20 x 30	0.48	22 x 30	0.50	
					20 x 25	0.41	22 x 25	0.45	25 x 20	0.49	22 x 25	0.50	25 x 25	0.50	
									20 x 30	0.48			20 x 35	0.47	
82			20 x 25	0.39	22 x 25	0.50	20 x 30	0.50	22 x 30	0.56	20 x 35	0.53	22 x 35	0.55	
					25 x 20	0.50	22 x 30	0.52	25 x 25	0.56	22 x 30	0.56	25 x 30	0.55	
					20 x 30	0.45					25 x 25	0.56	30 x 25	0.55	
													20 x 40	0.53	
100			20 x 30	0.45	22 x 30	0.70	20x x35	0.56	22 x 35	0.62	20 x 35	0.58	22 x 40	0.64	
					25 x 25	0.70	22 x 30	0.58	25 x 30	0.65	22 x 30	0.63	25 x 30	0.60	
					20 x 30	0.51	25 x 25	0.57	20 x 35	0.60	25 x 25	0.63	30 x 25	0.65	
					22 x 25	0.53			25 x 25	0.61					
									22 x 30	0.62					
120	22 x 20	0.60	20 x 30	0.54	22 x 35	0.61	20 x 40	0.66	22 x 35	0.70	20 x 45	0.71	22 x 45	0.70	
			22 x 25	0.56	25 x 30	0.62	22 x 35	0.68	25 x 30	0.70	22 x 35	0.73	25 x 35	0.70	
					30 x 25	0.62	25 x 30	0.68	30 x 25	0.73	25 x 30	0.72	30 x 30	0.70	
					20 x 35	0.59			20 x 40	0.71	30 x 25	0.75	35 x 25	0.70	
					22 x 30	0.61									
					25 x 25	0.62									
150	22 x 25	0.65	20 x 35	0.64	22 x 40	0.73	22 x 40	0.79	22 x 40	0.80	22 x 45	0.86	22 x 50	0.80	
	20 x 25	0.71	22 x 30	0.66	25 x 30	0.73	25 x 30	0.78	25 x 30	0.85	25 x 35	0.83	25 x 40	0.80	
			25 x 25	0.65	30 x 25	0.73	30 x 25	0.75	25 x 35	0.80	30 x 25	0.83	30 x 30	0.75	
					20 x 40	0.70			30 x 30	0.79			35 x 25	0.75	
					22 x 35	0.73			35 x 25	0.79					
									30 x 25	0.79					
180	22 x 25	0.80	20 x 40	0.75	22 x 45	0.83	22 x 45	0.89	25 x 40	0.95	22 x 50	1.02	25 x 45	0.85	
	25 x 20	0.75	22 x 35	0.78	25 x 35	0.8	25 x 35	0.86	30 x 30	0.92	25 x 40	0.94	30 x 35	0.85	
	20 x 30	0.82	25 x 30	0.71	30 x 30	0.8	30 x 30	0.88	22 x 45	0.95	30 x 30	0.95	35 x 30	0.85	
					22 x 40	0.83			22 x 50	0.95	35 x 25	0.90			
					25 x 30	0.8			22 x 35	0.92					
					30 x 25	0.81									
220	22 x 30	0.95	22 x 40	0.89	22 x 50	0.94	22 x 50	1.01	25 x 45	1.05	25 x 45	1.13	25 x 50	1.00	
	25 x 25	0.95	25 x 30	0.85	25 x 40	0.92	25 x 40	1.00	30 x 35	1.05	30 x 35	1.09	30 x 40	1.00	
	20 x 35	0.95	30 x 25	0.83	30 x 30	0.98	30 x 30	1.00	35 x 30	1.10	35 x 30	1.01	35 x 30	1.00	
					35 x 25	0.98			22 x 50	1.08			30 x 35	1.04	
					22 x 45	0.94			25 x 40	1.05					
					25 x 35	0.92			30 x 30	1.10					
270	22 x 35	1.11	22 x 45	1.01	25 x 45	1.05	25x x45	1.13	25 x 50	1.20	25 x 50	1.37	30 x 45	1.15	
	25 x 30	1.15	25 x 35	0.98	30 x 35	1.03	30 x 40	1.14	30 x 40	1.20	30 x 40	1.25	35 x 35	1.15	
	30 x 25	1.15	30 x 30	1.01	35 x 30	1.03	35 x 30	1.10	35 x 35	1.20	35 x 35	1.25			
	20 x 40	1.08			22 x 50	1.07			25 x 35	1.20					
					25 x 40	1.05			35 x 30	1.18					
					30 x 30	1.03									
330	22 x 40	1.25	22 x 50	1.14	30 x 40	1.18	30 x 45	1.31	30 x 45	1.40	30 x 45	1.49	30 x 50	1.40	
	25 x 30	1.20	25 x 40	1.12	35 x 35	1.18	35 x 35	1.32	35 x 35	1.35	35 x 35	1.42	35 x 40	1.40	
	30 x 25	1.25	30 x 35	1.21	25 x 45	1.24			30 x 40	1.40					
					30 x 35	1.24			35 x 30	1.33					
					35 x 30	1.18									
390	22 x 45	1.41	25 x 45	1.31	30 x 45	1.39	30 x 50	1.48	30 x 50	1.55	30 x 50	1.67	35 x 45	1.55	
	25 x 35	1.42	30 x 35	1.30	35 x 35	1.39	35 x 40	1.48	35 x 40	1.55	35 x 40	1.61			
	30 x 30	1.42	35 x 30	1.23	25 x 50	1.38									
					30 x 40	1.39									
470	22 x 50	1.55	30 x 40	1.53	35 x 40	1.70	35 x 40	1.76	30 x 50	1.75	35 x 45	1.86	35 x 50	1.70	
	25 x 40	1.55	35 x 35	1.47	30 x 45	1.50	35 x 50	1.95	35 x 45	1.75			35 x 45	1.70	
	30 x 30	1.55			35 x 35	1.50			35 x 40	1.75					
	35 x 25	1.55													
560	25 x 45	1.80	30 x 45	1.65	35 x 45	1.69			35 x 45	1.90					
	30 x 35	1.80	35 x 40	1.66	30 x 50	1.75			35 x 50	1.90					
	35 x 30	1.80			35 x 40	1.69									
680	25 x 50	1.95	35 x 45	1.96	35 x 45	1.96			35 x 50	1.95			35 x 50	2.15	
	30 x 40	2.00											35 x 60	2.15	
	35 x 35	1.96													
	35 x 30	1.96													
820	30 x 45	2.15	35 x 50	2.19											
	35 x 35	2.10													
1000	35 x 40	2.30													
	30 x 50	2.64													
1200	35 x 45	2.88													

Note : \*1. D x L : mm

\*2. Ripple Current : (A r.m.s 105°C / 120Hz)