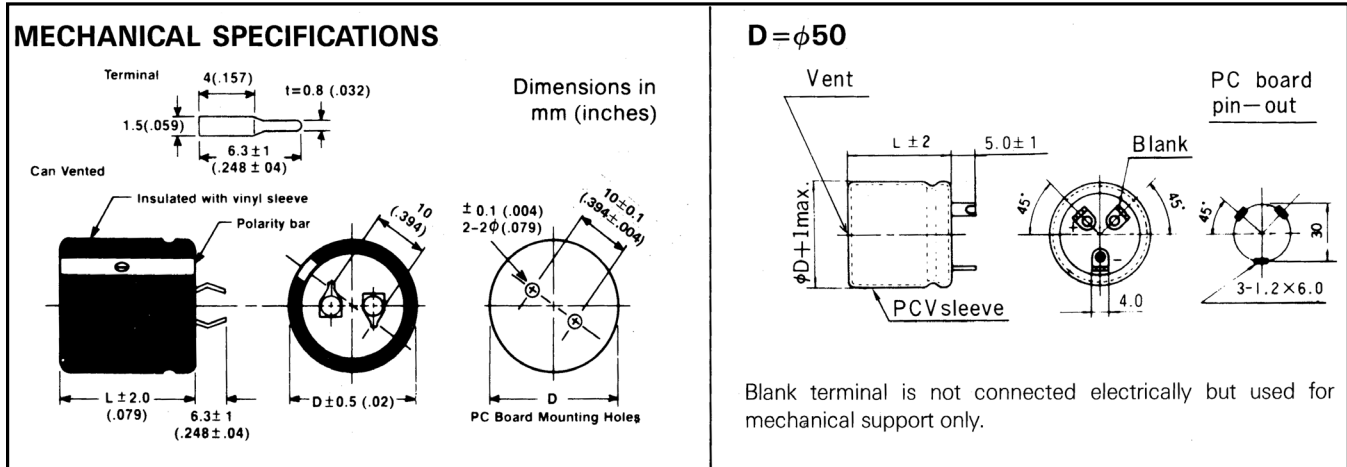
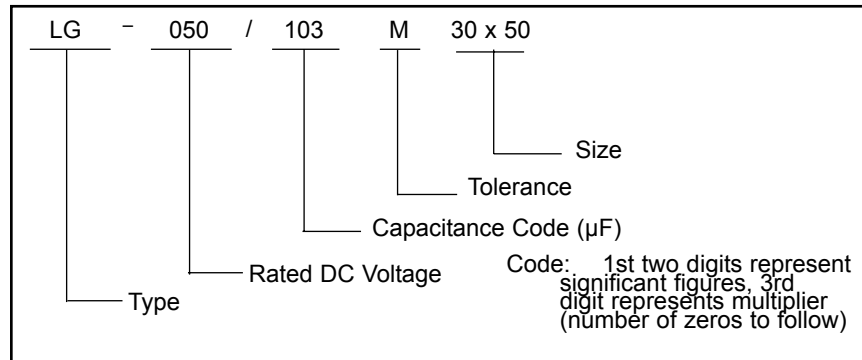


POWER SUPPLY INPUT & OUTPUT FILTER CAPACITORS



PART NUMBER EXAMPLE



SPECIFICATIONS

Performance Characteristics							
	Type LG			Type LGE			
Operating Temperature Range	-40°C ~ +85°C @ 10VDC ~ 200VDC. -25°C ~ +85°C @ 250VDC ~ 450VDC.			-40°C ~ +105°C @ 10VDC ~ 100VDC. -25°C ~ +105°C @ 160VDC ~ 450VDC.			
Temperature Characteristics (120Hz)	Impedance Ratio						
	Rated Voltage (WVDC)	10 - 16	25	35	50 - 63	80 - 100	160 - 450
	Z (-25°C) / Z (+20°C)	4	3	3	2	2	4
Capacitance Tolerance (20°C, 120Hz)	±20%. (-10%, +30% (Q) is available at request).			±20%.			
Maximum Dissipation Factor % (20°C, 120Hz)	Dissipation factor shall not exceed the values given in the table of standard rating.						
Maximum Leakage Current (20°C) (after 5 minutes)	0.02CV or 3mA, whichever is smaller. (I = Maximum leakage current (µA), C = Nominal capacitance (µF), V = Rated working voltage).						
Applicable Standards	Satisfies characteristic of JIS C5141.						
Load Life Test	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated working voltage applied for 1000 hours @ 85°C.						
	Capacitance Change	Within ±20% of initial value.					
	Dissipation Factor	150% of initial specified value.					
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them @ 85°C for 500 hours without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements.						
	Capacitance Change	Within ±20% of initial value.					
	Dissipation Factor	150% of initial specified value.					
	Leakage Current	Initial specified value.					

WVDC	Rated Capacitance (μF)	Dimensions	Maximum DCL (mA)	Maximum DF (tan δ)	Maximum ESR (Ω @ 20°C)		Maximum RMS Ripple Current (mA) @ 120Hz, 85°C
		D x L (mm)			@ 120Hz	@ 10KHz ~ 30KHz	
10	10000	22 x 40	2.00	0.40	0.053	0.043	2400
		30 x 25					
	15000	22 x 40	3.00	0.40	0.040	0.036	2500
		30 x 30					
	22000	25 x 50	3.00	0.40	0.032	0.028	3800
35 x 30							
33000	30 x 50	3.00	0.50	0.020	0.018	4500	
47000	35 x 50	3.00	0.50	0.015	0.013	5000	
16	4700	25 x 25	1.50	0.25	0.079	0.060	2450
	6800	22 x 30	2.18	0.25	0.055	0.040	3100
		25 x 25					
	10000	22 x 40	3.00	0.35	0.052	0.035	3850
		30 x 25					
	15000	22 x 50	3.00	0.35	0.035	0.025	4600
		35 x 30					
22000	30 x 50	3.00	0.40	0.025	0.020	4700	
	35 x 35						
33000	35 x 50	3.00	0.45	0.020	0.017	4800	
3300	25 x 25	1.65	0.20	0.060	0.065	2400	
25	4700	22 x 30	2.35	0.25	0.079	0.050	2900
		25 x 25					
	6800	22 x 40	3.00	0.25	0.055	0.040	3500
		30 x 25					
	10000	22 x 50	3.00	0.35	0.052	0.035	4200
		30 x 30					
	15000	25 x 50	3.00	0.35	0.035	0.025	4800
35 x 30							
22000	30 x 50	3.00	0.40	0.025	0.022	4900	
	40 x 40						
2200	25 x 25	1.54	0.20	0.130	0.110	2400	
35	3300	22 x 30	2.31	0.20	0.090	0.060	3000
		25 x 25					
	4700	22 x 40	3.00	0.25	0.050	0.060	3600
		30 x 25					
	6800	22 x 40	3.00	0.25	0.055	0.040	4000
		30 x 30					
	10000	25 x 50	3.00	0.30	0.045	0.035	4600
35 x 30							
15000	30 x 50	3.00	0.35	0.035	0.025	4700	
	35 x 40						
22000	35 x 50	3.00	0.40	0.035	0.025	4800	
	40 x 40						
50	1000	25 x 25	1.00	0.18	0.260	0.140	1400
	2200	22 x 30	2.20	0.20	0.130	0.100	2500
		25 x 25					
	3300	22 x 40	3.00	0.20	0.090	0.055	3100
		30 x 25					
	4700	22 x 50	3.00	0.25	0.078	0.050	3700
		35 x 30					
	6800	25 x 50	3.00	0.25	0.055	0.040	4200
		35 x 30					
10000	30 x 50	3.00	0.35	0.050	0.038	4300	
	35 x 35						
15000	35 x 50	3.00	0.35	0.033	0.030	4500	
	40 x 40						
22000	50 x 40	3.00	0.45	0.032	0.028	4700	

WVDC	Rated Capacitance (μF)	Dimensions	Maximum DCL (mA)	Maximum DF (tan δ)	Maximum ESR (Ω @ 20°C)		Maximum RMS Ripple Current (mA) @ 120Hz, 85°C
		D x L (mm)			@ 120Hz	@ 10KHz ~ 30KHz	
65	1000	22 x 25	1.26	0.18	0.265	0.140	1900
		25 x 25					
	2200	22 x 40	2.77	0.20	0.100	0.100	2900
		30 x 25					
	3300	22 x 50	3.00	0.20	0.090	0.050	3300
		30 x 30					
	4700	25 x 50	3.00	0.25	0.075	0.050	3800
		35 x 30					
6800	30 x 50	3.00	0.25	0.050	0.048	4300	
	35 x 35						
10000	35 x 50	3.00	0.35	0.048	0.046	4400	
	40 x 40						
15000	50 x 40	3.00	0.45	0.042	0.040	4500	
80	1000	22 x 30	1.60	0.15	0.220	0.130	2000
		25 x 25					
	2200	22 x 40	3.00	0.20	0.130	0.090	3000
		35 x 30					
	3300	25 x 50	3.00	0.20	0.090	0.050	3500
		35 x 30					
	4700	30 x 50	3.00	0.25	0.075	0.050	3900
		35 x 35					
6800	35 x 50	3.00	0.25	0.050	0.048	4500	
	40 x 40						
10000	50 x 40	3.00	0.35	0.048	0.046	4600	
100	1000	22 x 40	2.00	0.15	0.220	0.140	2000
		30 x 25					
	2200	25 x 50	3.00	0.20	0.130	0.090	2800
		35 x 50					
	3300	30 x 50	3.00	0.20	0.100	0.080	3500
		35 x 35					
4700	35 x 50	3.00	0.20	0.080	0.060	4000	
	40 x 40						
6800	50 x 40	3.00	0.25	0.070	0.050	4600	
160	330	22 x 30	1.06	0.10	0.045	0.160	1300
		25 x 25					
	470	22 x 40	1.50	0.10	0.310	0.150	1600
		30 x 25					
	680	22 x 50	2.18	0.10	0.217	0.140	1800
		35 x 25					
820	25 x 50	2.62	0.10	0.180	0.130	2000	
	35 x 50						
1000	30 x 40	3.00	0.10	0.135	0.120	2500	
	35 x 35						
180	220	22 x 30	0.80	0.10	0.670	0.200	1100
		25 x 25					
	330	22 x 40	1.19	0.10	0.440	0.180	1500
		30 x 25					
	470	22 x 50	1.69	0.10	0.314	0.150	1800
		30 x 30					
	680	25 x 50	2.45	0.10	0.220	0.140	2100
		35 x 30					
820	30 x 40	2.95	0.10	0.180	0.130	2200	
	35 x 30						
1000	30 x 50	3.00	0.10	0.160	0.120	2500	
	35 x 35						

WVDC	Rated Capacitance (μF)	Dimensions	Maximum DCL (mA)	Maximum DF (tan δ)	Maximum ESR (Ω @ 20°C)	Maximum RMS Ripple Current (mA) @ 120Hz, 85°C
		D x L (mm)			@ 120Hz	
200	150	22 x 30	0.60	0.10	0.983	1250
		25 x 25				
	220	22 x 30	0.88	0.10	0.905	1150
		25 x 25				
		25 x 30				
		30 x 25				
	270	25 x 40	1.08	0.10	0.540	1950
		30 x 30				
	330	22 x 40	1.32	0.10	0.600	1400
		30 x 25				
		30 x 30				
	390	25 x 50	1.56	0.10	0.380	2500
		35 x 30				
	470	22 x 50	1.88	0.10	0.320	1900
		30 x 30				
		30 x 40				
	560	25 x 50	2.24	0.10	0.350	1800
		30 x 30				
30 x 50						
35 x 40						
680	25 x 50	2.72	0.10	0.290	2150	
	35 x 30					
	35 x 40					
820	30 x 50	3.00	0.10	0.250	2400	
	35 x 35					
	35 x 50					
1000	35 x 40	3.00	0.10	0.190	2800	
250	100	22 x 30	0.50	0.15	0.150	1000
		25 x 25				
	150	22 x 30	0.75	0.15	0.133	900
		25 x 25				
		25 x 30				
		30 x 25				
	180	25 x 30	0.90	0.15	0.81	1500
	220	22 x 40	1.10	0.15	0.90	1150
		30 x 25				
		25 x 40				
	270	30 x 30	1.35	0.15	0.54	2000
		30 x 30				
	330	22 x 50	1.65	0.15	0.60	1400
		30 x 30				
		25 x 50				
		35 x 30				
	390	25 x 50	1.95	0.15	0.51	1500
		35 x 30				
470	25 x 50	2.35	0.15	0.42	1700	
	35 x 30					
	30 x 50					
	35 x 40					
560	30 x 50	2.80	0.15	0.35	1800	
680	30 x 50	3.00	0.15	0.29	2100	
	35 x 50					
820	35 x 50	3.00	0.15	0.21	3800	
820	35 x 50	3.00	0.15	0.20	2500	
	35 x 50					
1000	35 x 50	3.00	0.15	0.18	2800	

WVDC	Rated Capacitance (μF)	Dimensions	Maximum DCL (mA)	Maximum DF (tan δ)	Maximum ESR (Ω @ 20°C)	Maximum RMS Ripple Current (mA) @ 120Hz, 85°C
		D x L (mm)			@ 120Hz	
315	150	22 x 30	0.63	0.15	1.99	900
		25 x 25				
	220	22 x 50	1.38	0.15	0.90	1300
		30 x 30				
330	25 x 50	2.08	0.15	0.60	1800	
	35 x 30					
	470	30 x 50	2.96	0.15	0.42	2400
350	82	22 x 30	0.57	0.15	2.42	700
		25 x 25				
	100	22 x 30	0.70	0.15	1.99	850
		25 x 25				
	220	22 x 50	1.54	0.15	0.90	1400
		30 x 30				
330	30 x 40	2.31	0.15	0.60	1800	
	35 x 30					
400	82	22 x 30	0.66	0.15	2.42	700
		25 x 25				
	100	22 x 40	0.80	0.15	1.99	900
		30 x 25				
	150	25 x 40	1.20	0.15	1.32	1100
		30 x 30				
220	25 x 50	1.76	0.15	0.90	1500	
	35 x 30					
	330	30 x 50	2.64	0.15	0.60	1900
		35 x 35				
450	82	22 x 40	0.74	0.15	2.42	700
	100	22 x 40	0.90	0.15	1.99	900
	150	25 x 50	1.35	0.15	1.32	1100
	220	30 x 50	1.98	0.15	0.90	1600
	330	35 x 50	2.97	0.15	0.60	2000

WVDC	Rated Capacitance (µF)	Dimensions	Maximum DCL (mA)	Maximum DF @ 120Hz, 20°C (tan δ)	Maximum ESR (@ 120Hz, 20°C)	Maximum RMS Ripple Current (A)	
		D x L (mm)				85°C, 120Hz	105°C, 120Hz
10	6800	22 x 25	1.36	0.35	0.068	2.20	1.30
	10000	22 x 40	2.00	0.40	0.053	3.20	1.80
		30 x 25					
	15000	22 x 40	3.00	0.40	0.035	4.00	2.30
		30 x 30					
	22000	25 x 50	3.00	0.40	0.021	5.50	3.10
33000	30 x 50	3.00	0.40	0.020	7.00	4.00	
47000	35 x 50	3.00	0.50	0.015	9.00	5.20	
16	4700	25 x 25	1.50	0.35	0.098	2.1	1.2
	6800	22 x 30	2.18	0.35	0.068	2.7	1.5
		25 x 25					
	10000	22 x 40	3.00	0.40	0.053	3.6	2.0
		30 x 25					
	15000	22 x 50	3.00	0.40	0.035	4.7	2.7
35 x 30							
22000	30 x 50	3.00	0.40	0.024	7.0	4.0	
33000	35 x 50	3.00	0.40	0.016	8.0	4.2	
25	3300	22 x 25	1.65	0.30	0.120	2.0	1.1
	4700	22 x 30	2.35	0.35	0.098	2.6	1.5
		25 x 25					
	6800	22 x 40	3.00	0.35	0.068	3.4	1.9
		30 x 25					
	10000	22 x 50	3.00	0.40	0.053	4.5	2.5
30 x 30							
15000	25 x 50	3.00	0.40	0.035	5.5	3.1	
	30 x 40						
22000	30 x 50	3.00	0.40	0.024	7.5	4.2	
35	2200	22 x 25	1.54	0.20	0.120	1.8	1.0
	3300	22 x 30	2.31	0.20	0.080	2.2	1.3
		30 x 25					
	4700	22 x 40	3.00	0.25	0.070	3.1	1.8
		30 x 30					
	6800	22 x 50	3.00	0.25	0.048	4.6	2.3
35 x 30							
10000	25 x 50	3.00	0.30	0.039	5.0	2.8	
	35 x 35						
15000	30 x 50	3.00	0.30	0.026	6.0	3.5	
50	1000	22 x 25	1.00	0.20	0.265	1.3	0.8
	2200	22 x 40	2.20	0.20	0.120	2.3	1.3
		30 x 25					
	3300	25 x 40	3.00	0.20	0.080	3.0	1.7
		30 x 30					
	4700	25 x 50	3.00	0.25	0.070	4.0	2.3
35 x 30							
6800	30 x 50	3.00	0.25	0.048	5.5	3.1	
	35 x 35						
10000	35 x 50	3.00	0.25	0.033	6.6	3.7	
63	1000	22 x 30	1.26	0.20	0.265	1.5	0.9
		25 x 25					
	2200	22 x 50	2.77	0.20	0.120	2.8	1.6
		30 x 30					
	3300	25 x 50	3.00	0.20	0.080	3.6	2.0
		30 x 40					
4700	30 x 50	3.00	0.25	0.070	4.9	2.8	
	35 x 40						
6800	35 x 50	3.00	0.25	0.048	5.8	3.3	

WVDC	Rated Capacitance (µF)	Dimensions	Maximum DCL (mA)	Maximum DF @ 120Hz, 20°C (tan δ)	Maximum ESR (@ 120Hz, 20°C)	Maximum RMS Ripple Current (A)	
		D x L (mm)				85°C, 120Hz	105°C, 120Hz
80	1000	22 x 40	1.60	0.15	0.199	1.7	1.0
		30 x 25					
	2200	22 x 50	3.00	0.20	0.120	2.8	1.7
		35 x 35					
3300	30 x 50	3.00	0.20	0.080	4.1	2.3	
	35 x 40						
4700	35 x 50	3.00	0.20	0.056	5.1	2.9	
100	1000	25 x 40	2.00	0.15	0.199	1.9	1.2
		30 x 30					
	2200	30 x 50	3.00	0.20	0.120	2.6	2.1
		35 x 40					
3300	35 x 50	3.00	0.20	0.080	4.2	2.5	
160	330	22 x 30	1.06	0.10	0.402	1.4	0.8
		25 x 25					
	470	22 x 50	1.50	0.10	0.282	1.5	0.9
		30 x 30					
	680	25 x 50	2.18	0.10	0.195	2.0	1.2
		35 x 30					
820	25 x 50	2.62	0.10	0.161	2.8	1.6	
	35 x 35						
1000	30 x 50	3.00	0.10	0.132	3.4	1.9	
	35 x 40						
180	220	22 x 30	0.80	0.10	0.603	1.1	0.7
		25 x 25					
	330	22 x 40	1.19	0.10	0.402	1.5	0.8
		30 x 25					
	470	22 x 50	1.69	0.10	0.282	1.9	1.1
		30 x 30					
	680	25 x 50	2.45	0.10	0.195	2.5	1.5
35 x 30							
820	30 x 50	2.95	0.10	0.161	2.9	1.6	
	35 x 35						
1000	30 x 50	3.00	0.10	0.132	3.3	1.9	
200	220	22 x 30	0.88	0.10	0.603	1.1	0.7
		25 x 25					
	330	22 x 40	1.32	0.10	0.402	1.5	0.9
		30 x 30					
	470	22 x 50	1.88	0.10	0.282	1.9	1.1
		35 x 30					
	680	30 x 50	2.72	0.10	0.195	2.3	1.3
35 x 35							
820	30 x 50	3.00	0.10	0.161	3.0	1.7	
	35 x 40						
1000	35 x 50	3.00	0.10	0.132	3.2	1.9	
250	220	22 x 40	1.10	0.10	0.603	1.2	0.7
		30 x 25					
	330	22 x 50	1.65	0.10	0.402	1.6	0.9
		30 x 30					
	470	25 x 50	2.32	0.10	0.282	2.1	1.3
35 x 35							
680	30 x 50	3.00	0.10	0.195	2.6	1.5	
	35 x 40						

WVDC	Rated Capacitance (μF)	Dimensions	Maximum DCL (mA)	Maximum DF @ 120Hz, 20°C (tan δ)	Maximum ESR (@ 120Hz, 20°C)	Maximum RMS Ripple Current (A)	
		D x L (mm)				85°C, 120Hz	105°C, 120Hz
315	100	22 x 30	0.63	0.15	1.990	0.8	0.4
		25 x 25					
	220	25 x 50	1.38	0.15	0.904	1.4	0.8
		35 x 30					
	330	30 x 50	2.08	0.15	0.603	1.8	1.0
35 x 35							
470	35 x 50	2.96	0.15	0.423	2.4	1.4	
100	82	22 x 30	0.57	0.15	2.427	0.7	0.4
		25 x 25					
	100	22 x 40	0.70	0.15	1.990	0.8	0.5
		30 x 25					
	220	25 x 50	1.54	0.15	0.904	1.4	0.8
		35 x 30					
330	30 x 50	2.31	0.15	0.603	1.9	1.1	
470	35 x 50	3.00	0.15	0.423	2.4	1.4	
160	82	22 x 40	0.66	0.15	2.427	0.7	0.4
		30 x 25					
	100	22 x 40	0.80	0.15	1.990	0.8	0.5
		30 x 30					
	150	25 x 50	1.20	0.15	1.326	1.2	0.6
		35 x 30					
	220	30 x 50	1.76	0.15	0.904	1.5	0.9
35 x 40							
330	35 x 50	2.64	0.15	0.603	2.0	1.1	

TYPICAL CHARACTERISTIC CURVES

