

LG Series

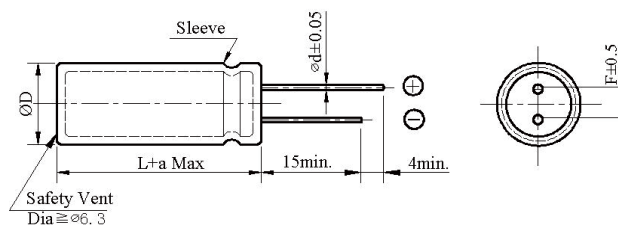
- “GBL” system, high reliability, especially suitable for cold starting.
- Low impedance and high ripple current.
- Load life 2,000~10,000 hours at 105℃
- RoHS Compliant



◆ SPECIFICATIONS

Item	Performance Characteristics																										
Category Temperature Range	-55 ~ +105℃																										
Working Voltage Range	6.3 ~ 100Vdc																										
Capacitance Range	6.8 ~ 18,000μF																										
Capacitance Tolerance	±20% (at 20℃ and 120Hz)																										
Dissipation Factor (tanδ) (at 20℃, 120Hz)	<table><tr><td>Rated Voltage (V)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td></tr><tr><td>tanδ(Max)</td><td>0.22</td><td>0.19</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.10</td><td>0.09</td><td>0.08</td></tr></table>									Rated Voltage (V)	6.3	10	16	25	35	50	63	100	tanδ(Max)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08
	Rated Voltage (V)	6.3	10	16	25	35	50	63	100																		
	tanδ(Max)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08																		
The above values should be increased by 0.02 for every additional 1000μF																											
Leakage Current	I=0.01CV or 3μA whichever is greater I : Leakage current (μA) C : Rated capacitance (μF) V : Rated voltage (V) Impress the rated voltage for 2 minutes																										
Low Temperature Characteristics Impedance Ratio(MAX)	<table><tr><td>Rated voltage (V)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td></tr><tr><td>Z(-55℃)/Z(+20℃)</td><td>4</td><td>3</td><td>3</td><td>3</td><td>3</td><td>3</td><td>3</td><td>3</td></tr></table> (at 120Hz)									Rated voltage (V)	6.3	10	16	25	35	50	63	100	Z(-55℃)/Z(+20℃)	4	3	3	3	3	3	3	3
Rated voltage (V)	6.3	10	16	25	35	50	63	100																			
Z(-55℃)/Z(+20℃)	4	3	3	3	3	3	3	3																			
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated ripple current is applied for 2,000 to 10,000 hours at 105℃.																										
	Capacitance change		≒ ±25% of the initial value																								
	Dissipation factor(tanδ)		≒ 200% of the specified value																								
	Leakage current		≒ specified value																								
		Size		Life time (hours)																							
		6.3 Φ		2,000																							
		8 Φ		3,000																							
		10 Φ		5,000																							
		12.5 Φ		7,000																							
		≧16Φ		10,000																							
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 20℃ after the rated voltage applied for 1,000 hours at 105℃ without voltage applied.																										
	Capacitance change		≒ ±25% of the initial value																								
	Dissipation factor(tanδ)		≒ 200% of the specified value																								
	Leakage current		≒ 200% of the specified value																								

◆ **DIMENSIONS (mm)**



ΦD	5	6.3	8	10	12.5	16	18
ΦD	$\Phi D + 0.5 \text{ Max}$						
Φd	0.5	0.5	0.5/0.6	0.6	0.6	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
a	$L + 2.0 \text{ Max}$						

◆ **PART NUMBER SYSTEM(Example : 50V 100μF)**

E L G 1 H 1 0 1 M 0 8 1 2 0 0 Y

Sleeve code(Yellow)

Lead length code

Lead forming Type code

Size code(0812 : 8×12)

Capacitance tolerance code(M: $\pm 20\%$)

Capacitance code (100μF)

Voltage code(50V)

Series code(LG)

Category code(E)

LG Series

◆ Case size & Permissible rated ripple current

Nominal capacitance (μF)	6.3V				10V			
	Case size ΦD×L (mm)	Impedance (Ω _{max} /100KHz)		Max. Rated ripple current @105℃ 100KHz (mA rms)	Case size ΦD×L (mm)	Impedance (Ω _{max} /100KHz)		Max. Rated ripple current @105℃ 100KHz (mA rms)
		20℃	-10℃			20℃	-10℃	
100					5×11	1.740	4.200	215
150	5×11	1.700	4.100	210	5×11	1.740	4.200	230
220	6.3×11	0.750	2.700	320	6.3×11	0.660	2.300	340
330	6.3×11	0.630	2.200	350	6.3×11	0.660	2.300	380
470	8×12	0.450	1.700	410	8×12	0.390	1.500	640
680	8×12	0.390	1.500	645	8×16	0.258	0.875	845
					10×12	0.240	0.930	865
820	10×12	0.240	0.950	865	10×16	0.210	0.880	1015
1000	8×16	0.250	1.00	870	8×20	0.200	0.860	1050
					10×16	0.180	0.720	1215
1200	8×20	0.207	0.780	1050	10×20	0.135	0.540	1410
	10×16	0.180	0.720	1215				
1500	10×20	0.140	0.540	1410	10×25	0.120	0.510	1610
					12.5×16	0.140	0.480	1450
1800	12.5×16	0.130	0.480	1460	12.5×20	0.120	0.450	1710
2200	10×20	0.120	0.510	1650	10×30	0.090	0.360	1920
					12.5×20	0.105	0.360	1910
					16×16	0.125	0.360	1900
2700	10×30	0.090	0.330	1910	18×16	0.126	0.330	2220
	16×16	0.120	0.360	1945				
3300	12.5×20	0.100	0.360	1950	12.5×25	0.078	0.260	2250
3900	12.5×25	0.078	0.260	2240	12.5×30	0.069	0.230	2660
	18×16	0.126	0.330	2210	16×20	0.078	0.230	2540
4700	12.5×30	0.069	0.230	2670	12.5×35	0.060	0.180	2890
5600	12.5×35	0.060	0.190	2890	12.5×40	0.048	0.165	3360
	16×20	0.078	0.230	2540	16×25	0.060	0.180	2940
					18×20	0.075	0.190	2870
6800	12.5×40	0.048	0.160	3350	16×30	0.048	0.150	3460
	16×25	0.060	0.180	2940	18×25	0.054	0.140	3150
	18×20	0.075	0.195	2870				
8200	16×30	0.048	0.150	3460	16×35	0.045	0.130	3610
					18×30	0.045	0.120	4180
10000	16×35	0.042	0.130	3620	16×40	0.039	0.110	4090
	18×25	0.054	0.145	3150	18×35	0.036	0.110	4150
12000	16×40	0.036	0.110	4090	18×40	0.033	0.096	4290
	18×30	0.042	0.120	4180				
15000	18×35	0.039	0.115	4230				
18000	18×40	0.036	0.096	4290				

LG Series

◆ Case size & Permissible rated ripple current

Nominal capacitance (μF)	16V				25V			
	Case size ΦD×L (mm)	Impedance (Ω _{max} /100KHz)		Max. Rated ripple current @105°C 100KHz (mA rms)	Case size ΦD×L (mm)	Impedance (Ω _{max} /100KHz)		Max. Rated ripple current @105°C 100KHz (mA rms)
		20°C	-10°C			20°C	-10°C	
10	5×11	3.300	7.500	96	5×11	3.30	7.500	100
22	5×11	2.250	5.200	120	5×11	2.100	5.000	140
47	5×11	1.800	4.750	180	5×11	1.710	4.600	205
56	5×11	1.710	4.600	220	5×11	1.710	4.600	240
100	5×11	1.050	3.500	260	6.3×11	0.630	2.600	360
	6.3×11	0.630	2.600	310				
120	6.3×11	0.630	2.600	340	6.3×11	0.540	2.100	450
220	6.3×11	0.450	1.950	450	8×12	0.360	1.170	650
	8×12	0.570	1.850	650				
330	8×12	0.360	1.170	760	8×16	0.261	0.780	850
					10×12	0.243	0.730	870
470	8×19	0.258	0.840	850	8×20	0.210	0.630	1050
	10×12	0.240	0.780	865	10×16	0.180	0.540	1210
680	8×20	0.207	0.670	1060	10×20	0.135	0.405	1410
	10×16	0.180	0.585	1210	12.5×16	0.140	0.440	1460
820	10×20	0.156	0.505	1310	10×25	0.120	0.360	1660
	10×20	0.135	0.440	1410	10×30	0.090	0.270	1920
1000	12.5×16	0.150	0.490	1450	12.5×20	0.102	0.300	1910
					16×16	0.120	0.370	1940
1200	10×25	0.129	0.420	1650	18×16	0.129	0.380	2220
1500	10×30	0.090	0.290	1920	12.5×25	0.078	0.230	2240
	12.5×20	0.105	0.340	1910				
	16×16	0.126	0.410	1940				
1800	12.5×25	0.084	0.270	2140	12.5×30	0.072	0.210	2660
					16×20	0.078	0.230	2540
2200	12.5×25	0.078	0.250	2240	12.5×35	0.060	0.180	2890
	18×16	0.126	0.410	2220	18×20	0.075	0.225	2870
2700	12.5×30	0.069	0.220	2650	12.5×40	0.048	0.144	3360
	16×20	0.078	0.250	2540	16×25	0.063	0.189	2940
3300	12.5×35	0.060	0.190	2890	16×30	0.048	0.144	3460
					18×25	0.054	0.162	3150
3900	12.5×40	0.048	0.150	3350	16×35	0.042	0.126	3620
	16×25	0.063	0.205	2930	18×30	0.045	0.135	4180
	16×20	0.075	0.240	2860				
4700	16×30	0.048	0.150	3450	16×40	0.036	0.108	4090
	18×25	0.054	0.170	3150	18×35	0.039	0.117	4230
5600	16×35	0.045	0.140	3620	18×40	0.033	0.099	4290
	18×30	0.045	0.140	4180				
6800	16×40	0.036	0.110	4080				
8200	18×35	0.042	0.130	4230				
18000	18×40	0.033	0.107	4290				

LG Series

◆ Case size & Permissible rated ripple current

Nominal capacitance (μF)	35V				50V			
	Case size ΦD×L (mm)	Impedance (Ω _{max} /100KHz)		Max. Rated ripple current @105℃ 100KHz (mA rms)	Case size ΦD×L (mm)	Impedance (Ω _{max} /100KHz)		Max. Rated ripple current @105℃ 100KHz (mA rms)
		20℃	-10℃			20℃	-10℃	
10					5×11	3.600	4.000	135
22					5×11	1.900	3.000	190
33	5×11	1.650	2.900	220	6.3×11	1.600	2.800	225
47	6.3×11	1.100	1.950	280	6.3×11	1.050	1.800	230
56	6.3×11	0.630	0.830	340	8×12	0.840	1.500	300
100	8×12	0.450	0.590	510	8×12	0.550	0.750	560
150	8×12	0.390	0.500	650	8×16	0.500	0.620	740
220	8×16	0.250	0.390	850	10×16	0.420	0.550	1060
330	10×16	0.180	0.280	1210	10×25	0.360	0.460	1460
470	10×20	0.130	0.330	1410	12.5×20	0.300	0.420	1670
560	10×25	0.120	0.220	1670	12.5×25	0.230	0.360	1960
680	10×30	0.090	0.160	1920	12.5×30	0.210	0.320	2320
820	12.5×25	0.087	0.150	2050	12.5×35	0.160	0.280	2530
1000	12.5×25	0.084	0.145	2250	16×25	0.125	0.220	2565
1200	12.5×30	0.069	0.140	2660	16×30	0.100	0.190	3020
1500	12.5×35	0.060	0.130	2890	16×35	0.089	0.160	3160
2200	16×31	0.048	0.085	3470	18×35	0.081	0.140	3690
2700	18×35	0.045	0.080	3620	18×40	0.070	0.120	3810
3300	16×40	0.039	0.070	4090				
3900	18×40	0.036	0.060	4290				

Nominal capacitance (μF)	63V				100V			
	Case size ΦD×L (mm)	Impedance (Ω _{max} /100KHz)		Max. Rated ripple current @105℃ 100KHz (mA rms)	Case size ΦD×L (mm)	Impedance (Ω _{max} /100KHz)		Max. Rated ripple current @105℃ 100KHz (mA rms)
		20℃	-10℃			20℃	-10℃	
6.8					5×11	5.900	9.200	56
15	5×11	6.160	9.500	56	6.3×11	3.200	5.000	120
33	6.3×11	3.360	5.000	120	8×16	1.500	3.200	160
47	8×12	1.900	3.100	190	10×12	1.150	1.900	290
68	8×12	1.680	2.900	255	10×16	0.800	1.600	350
100	10×16	0.980	1.800	320	10×25	0.540	0.900	535
120	10×16	0.840	1.500	355	10×30	0.400	0.800	665
180	10×20	0.560	0.940	470	12.5×25	0.320	0.480	790
220	10×25	0.500	0.880	535	12.5×30	0.270	0.450	905
330	12.5×25	0.330	0.450	790	12.5×40	0.240	0.380	1190
470	12.5×30	0.280	0.420	910	16×35	0.200	0.300	1790
560	12.5×35	0.230	0.350	1050	16×40	0.170	0.270	2030
680	12.5×40	0.190	0.300	1190	18×35	0.140	0.230	2100
820	16×30	0.150	0.250	1580	18×40	0.110	0.190	2340
1000	18×35	0.110	0.190	1790				
1200	16×40	0.098	0.180	2020				
1500	18×40	0.092	0.150	2340				

◆ RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Vdc	Cap(μF)	Frequency (Hz)			
		120	1K	10K	100K
6.3 ~ 100	Cap < 82	0.30	0.55	0.80	1.00
	82 ≤ Cap < 330	0.40	0.60	0.85	1.00
	330 ≤ Cap < 1000	0.50	0.65	0.90	1.00
	Cap ≥ 1000	0.60	0.70	0.95	1.00