

TLC(LXG) Series

• 105°C 5,000Hrs assured.

- Non-solvent proof.
- Long Life.
- For SMPS, Inverter.
- RoHS compliant.
- Halogen-free capacitors are also available.
- AEC-Q200 compliant : Please contact us for more details, test data, information.



SPECIFICATIONS

Item	Characteristics																									
Rated Voltage Range	10 ~ 100 V _{dc}	200 ~ 500 V _{dc}																								
Operating Temperature Range	-40 ~ +105°C	-25 ~ +105°C																								
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)																									
Leakage Current	I = 0.02CV or 3mA, whichever is smaller. Where, I: Leakage current (µA) C: Nominal capacitance (µF) V: Rated voltage (V _{dc}) (at 20°C, 5 minutes)																									
※ Dissipation Factor(Tanδ)	<table border="1"> <thead> <tr> <th>Rated Voltage(V_{dc})</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63~400</th> <th>420~500</th> </tr> </thead> <tbody> <tr> <td>Tanδ(Max.)</td> <td>0.60</td> <td>0.45</td> <td>0.30</td> <td>0.25</td> <td>0.20</td> <td>0.15</td> <td>0.20</td> </tr> </tbody> </table> <p>(at 20°C, 120Hz)</p>		Rated Voltage(V _{dc})	10	16	25	35	50	63~400	420~500	Tanδ(Max.)	0.60	0.45	0.30	0.25	0.20	0.15	0.20								
Rated Voltage(V _{dc})	10	16	25	35	50	63~400	420~500																			
Tanδ(Max.)	0.60	0.45	0.30	0.25	0.20	0.15	0.20																			
Temperature Characteristics (Max.Impedance ratio)	<table border="1"> <thead> <tr> <th>Rated Voltage(V_{dc})</th> <th>10~16</th> <th>25</th> <th>35</th> <th>50~63</th> <th>80~100</th> <th>200~400</th> <th>420~500</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> <p>(at 120Hz)</p>		Rated Voltage(V _{dc})	10~16	25	35	50~63	80~100	200~400	420~500	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 _{dc})	10~16	25	35	50~63	80~100	200~400	420~500																			
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	<p>The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 5,000 hours at 105°C.</p> <p>Capacitance change ≤ ±25% of the initial value Tanδ ≤ 250% of the initial specified value Leakage current ≤ The initial specified value</p>																									
Shelf Life	<p>The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them at 105°C for 1,000 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.</p> <p>Capacitance change ≤ ±20% of the initial value Tanδ ≤ 150% of the initial specified value Leakage current ≤ The initial specified value</p>																									
Others	Satisfied characteristics KS C IEC 60384-4																									

※ For capacitors with CV products > 100,000 higher Tanδ value may apply.
 When the capacitance exceeds 1,000µF, 0.01 shall be added every 1,000µF increase.

RATED RIPPLE CURRENT

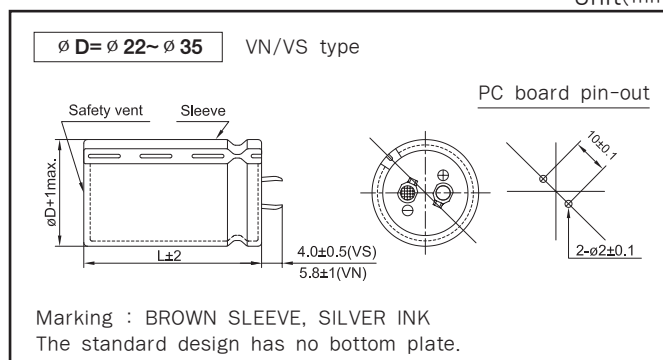
When capacitors are operated in any other conditions at 120Hz the maximum ripple current must be multiplied by the figure shown in the table.

Frequency multiplying factor

V _{dc}	Freq.(Hz)	60	120	300	1k	10k~
10~50V _{dc}		0.95	1.00	1.03	1.05	1.08
63~100V _{dc}		0.92	1.00	1.07	1.13	1.19
200~250V _{dc}		0.81	1.00	1.17	1.32	1.45
350~500V _{dc}		0.77	1.00	1.16	1.30	1.41

DIMENSIONS OF TLC(LXG) Series

Unit(mm)



RATINGS OF TLC(LXG) Series

V _{DC} μF / ∅ D	10				16				25			
	22	25.4	30	35	22	25.4	30	35	22	25.4	30	35
3,900									22 × 25 1.31			
4,700									22 × 30 1.51	25.4 × 25 1.51		
5,600					22 × 25 1.44				22 × 35 1.70	25.4 × 30 1.69		
6,800	22 × 25 1.30				22 × 30 1.66	25.4 × 25 1.66			22 × 40 1.92	25.4 × 30 1.87	30 × 25 1.90	
8,200	22 × 30 1.49				22 × 35 1.87	25.4 × 30 1.87			22 × 45 2.05	25.4 × 35 2.14	30 × 30 2.15	35 × 25 2.19
10,000	22 × 30 1.65	25.4 × 25 1.64			22 × 40 2.12	25.4 × 30 2.07	30 × 25 2.11		22 × 50 2.45	25.4 × 40 2.43	30 × 30 2.31	35 × 25 2.35
12,000	22 × 35 1.85	25.4 × 30 1.85	30 × 25 1.89		22 × 45 2.32	25.4 × 35 2.37	30 × 30 2.37	35 × 25 2.42		25.4 × 50 2.78	30 × 35 2.70	35 × 30 2.76
15,000	22 × 40 2.12	25.4 × 35 2.16	30 × 25 2.06		22 × 50 2.74	25.4 × 40 2.71	30 × 30 2.58	35 × 25 2.63			30 × 40 3.13	35 × 35 3.16
18,000	22 × 50 2.45	25.4 × 40 2.43	30 × 30 2.37	35 × 25 2.42		25.4 × 50 3.11	30 × 35 3.02	35 × 30 3.09			30 × 50 3.64	35 × 40 3.61
22,000		25.4 × 45 2.62	30 × 35 2.73	35 × 30 2.79			30 × 40 3.46	35 × 35 3.49				35 × 45 4.00
27,000		25.4 × 50 3.11	30 × 40 3.13	35 × 30 3.00			30 × 50 4.07	35 × 40 4.04				35 × 50 4.70
33,000			30 × 45 3.34	35 × 35 3.49				35 × 45 4.29				
39,000			30 × 50 3.99	35 × 40 3.96				35 × 50 5.16				
47,000				35 × 50 4.62								

V _{DC} μF / ∅ D	35				50				63			
	22	25.4	30	35	22	25.4	30	35	22	25.4	30	35
1,000									22 × 25 1.00			
1,200									22 × 30 1.15	25.4 × 25 1.15		
1,500					22 × 25 1.02				22 × 35 1.32	25.4 × 25 1.28		
1,800					22 × 30 1.17	25.4 × 25 1.17			22 × 40 1.49	25.4 × 30 1.45	30 × 25 1.48	
2,200	22 × 25 1.10				22 × 35 1.33	25.4 × 30 1.32			22 × 45 1.63	25.4 × 35 1.67	30 × 30 1.68	35 × 25 1.71
2,700	22 × 25 1.21				22 × 40 1.51	25.4 × 30 1.47	30 × 25 1.50		22 × 50 1.92	25.4 × 40 1.90	30 × 35 1.93	35 × 25 1.83
3,300	22 × 30 1.42	25.4 × 25 1.41			22 × 45 1.68	25.4 × 35 1.70	30 × 30 1.70	35 × 25 1.74		25.4 × 50 2.20	30 × 35 2.07	35 × 30 2.18
3,900	22 × 35 1.58	25.4 × 30 1.58			22 × 50 1.91	25.4 × 40 1.89	30 × 30 1.84	35 × 25 1.89			30 × 40 2.41	35 × 35 2.43
4,700	22 × 40 1.78	25.4 × 30 1.70	30 × 25 1.77			25.4 × 45 2.05	30 × 35 2.11	35 × 30 2.16			30 × 50 2.80	35 × 40 2.78
5,600	22 × 45 1.96	25.4 × 35 1.98	30 × 30 1.98	35 × 25 2.03		25.4 × 50 2.38	30 × 40 2.39	35 × 35 2.41				35 × 45 3.04
6,800	22 × 50 2.26	25.4 × 40 2.24	30 × 30 2.14	35 × 25 2.20			30 × 50 2.79	35 × 40 2.78				35 × 50 3.55
8,200		25.4 × 50 2.57	30 × 35 2.50	35 × 30 2.55				35 × 45 3.06				
10,000			30 × 40 2.86	35 × 35 2.88				35 × 50 3.57				
12,000			30 × 50 3.32	35 × 40 3.30								
18,000				35 × 50 4.29	← Case Size ∅ D × L (mm) ← Rated Ripple Current (Arms/105°C, 120Hz)							

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μF	Vdc ∅ D	80				100				200			
		22	25.4	30	35	22	25.4	30	35	22	25.4	30	35
180										22 × 25 0.79			
270										22 × 30 1.01	25.4 × 25 1.01		
330										22 × 35 1.15	25.4 × 30 1.15	30 × 25 1.18	
390					22 × 25 0.78					22 × 40 1.28	25.4 × 30 1.25	30 × 25 1.28	
470					22 × 25 0.85					22 × 50 1.46	25.4 × 35 1.44	30 × 30 1.44	35 × 25 1.53
560					22 × 30 0.99	25.4 × 25 0.98					25.4 × 40 1.60	30 × 35 1.63	35 × 25 1.66
680	22 × 25 0.97				22 × 35 1.12	25.4 × 25 1.08					25.4 × 50 1.85	30 × 40 1.86	35 × 30 1.84
820	22 × 30 1.12				22 × 40 1.26	25.4 × 30 1.23	30 × 25 1.25					30 × 45 2.04	35 × 35 2.06
1,000	22 × 35 1.27	25.4 × 25 1.23			22 × 45 1.39	25.4 × 35 1.41	30 × 30 1.42	35 × 25 1.45				30 × 50 2.39	35 × 40 2.38
1,200	22 × 40 1.42	25.4 × 30 1.39	30 × 25 1.41		22 × 50 1.60	25.4 × 40 1.59	30 × 35 1.61	35 × 25 1.58					35 × 50 2.76
1,500	22 × 45 1.60	25.4 × 35 1.62	30 × 25 1.57			25.4 × 50 1.86	30 × 40 1.87	35 × 30 1.85					
1,800	22 × 50 1.84	25.4 × 40 1.82	30 × 30 1.78	35 × 25 1.82			30 × 45 2.07	35 × 35 2.07					
2,200		25.4 × 50 2.11	30 × 35 2.05	35 × 30 2.09			30 × 50 2.40	35 × 40 2.39					
2,700			30 × 40 2.35	35 × 35 2.37				35 × 50 2.81					
3,300			30 × 50 2.75	35 × 40 2.73									
4,700				35 × 50 3.46									

μF	Vdc ∅ D	250				350				400			
		22	25.4	30	35	22	25.4	30	35	22	25.4	30	35
56										22 × 25 0.47			
68					22 × 25 0.49					22 × 30 0.57	25.4 × 25 0.53		
82					22 × 30 0.61					22 × 35 0.65	25.4 × 25 0.58		
100					22 × 35 0.65	25.4 × 25 0.64				22 × 35 0.71	25.4 × 30 0.71	30 × 25 0.71	
120					22 × 40 0.70	25.4 × 30 0.69	30 × 25 0.70			22 × 40 0.81	25.4 × 35 0.81	30 × 25 0.80	35 × 25 0.82
150	22 × 25 0.71				22 × 45 0.79	25.4 × 35 0.75	30 × 25 0.78	35 × 25 0.86		22 × 50 0.92	25.4 × 40 0.90	30 × 30 0.92	35 × 25 0.93
180	22 × 30 0.83	25.4 × 25 0.83			22 × 50 0.91	25.4 × 40 0.90	30 × 30 0.89	35 × 25 0.94			25.4 × 45 1.03	30 × 35 1.03	35 × 30 1.05
220	22 × 35 0.94	25.4 × 25 0.91				25.4 × 50 1.16	30 × 35 1.03	35 × 30 1.04			25.4 × 50 1.16	30 × 40 1.18	35 × 35 1.26
270	22 × 40 1.06	25.4 × 30 1.04	30 × 25 1.06				30 × 40 1.18	35 × 35 1.30				30 × 50 1.35	35 × 40 1.33
330	22 × 45 1.15	25.4 × 35 1.20	30 × 30 1.20	35 × 25 1.28			30 × 50 1.49	35 × 40 1.49					35 × 45 1.50
390	22 × 50 1.35	25.4 × 40 1.34	30 × 30 1.30	35 × 25 1.38				35 × 45 1.54					35 × 50 1.70
470		25.4 × 50 1.53	30 × 35 1.49	35 × 30 1.53				35 × 50 1.73					
560			30 × 40 1.69	35 × 35 1.70									
680			30 × 50 1.98	35 × 40 1.96									
1,000				35 × 50 2.53	← Case Size ∅D×L (mm) ← Rated Ripple Current (Arms/105°C, 120Hz)								

RATINGS OF TLC(LXG) Series

V _{DC} μF ∅ D	420				450				500				
	22	25.4	30	35	22	25.4	30	35	22	25.4	30	35	
47					22 × 25 0.47					22 × 35 0.37			
56					22 × 30 0.53					22 × 35 0.44	25.4 × 30 0.41	30 × 30 0.45	
68	22 × 30 0.58				22 × 35 0.59	25.4 × 30 0.59				22 × 40 0.52	25.4 × 35 0.54	30 × 30 0.51	
82	22 × 30 0.65	25.4 × 30 0.66			22 × 35 0.66	25.4 × 30 0.66				22 × 45 0.62	25.4 × 35 0.62	30 × 35 0.58	
100	22 × 35 0.73	25.4 × 30 0.73			22 × 40 0.75	25.4 × 35 0.73	30 × 30 0.74				25.4 × 40 0.63	30 × 35 0.64	
120	22 × 40 0.83	25.4 × 35 0.83	30 × 30 0.83		22 × 45 0.84	25.4 × 35 0.83	30 × 30 0.83	35 × 30 0.84		25.4 × 45 0.71	30 × 40 0.71	35 × 30 0.72	
150	22 × 45 0.95	25.4 × 40 0.95	30 × 30 0.95		22 × 50 0.95	25.4 × 40 0.95	30 × 35 0.95	35 × 30 0.96			30 × 45 0.76	35 × 30 0.80	
180	22 × 50 1.07	25.4 × 40 1.07	30 × 35 1.07	35 × 30 1.08		25.4 × 45 1.07	30 × 35 1.07	35 × 30 1.08			30 × 50 0.89	35 × 40 0.90	
220		25.4 × 50 1.21	30 × 40 1.21	35 × 30 1.22		25.4 × 50 1.21	30 × 40 1.21	35 × 35 1.22			30 × 60 1.05	35 × 45 1.01	
270			30 × 45 1.38	35 × 35 1.41			30 × 45 1.38	35 × 40 1.41				35 × 50 1.44	
330			30 × 50 1.60	35 × 40 1.60			30 × 50 1.60	35 × 45 1.61				35 × 60 1.55	
390				35 × 45 1.80				35 × 50 1.80					
470				35 × 50 1.92									

← Case Size ∅ D × L (mm)
← Rated Ripple Current (Arms/105°C, 120Hz)