

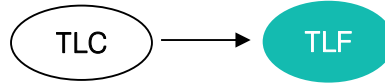
LARGE SIZED ALUMINUM ELECTROLYTIC CAPACITORS



TLF Series

● 105 °C 5,000Hrs assured.

- Non-solvent proof
- Downsized
- For OBC, SMPS, Inverter.
- RoHS compliant.
- Halogen-free capacitors are also available.



High Ripple, Downsized



SPECCIFICATIONS

Iteam	Characteristics						
Rated Voltage Range	450 ~ 500 V _{DC}						
Operating Temperature Range	-40 ~ +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, 5minutes)						
*Dissipation Factor (tan δ)	<table border="1"> <tr> <td>Rated Voltage(V_{DC})</td> <td>450~500</td> </tr> <tr> <td>Tanδ(Max.)</td> <td>0.20</td> </tr> </table> (at 20 °C, 120Hz)	Rated Voltage(V _{DC})	450~500	Tanδ(Max.)	0.20		
Rated Voltage(V _{DC})	450~500						
Tanδ(Max.)	0.20						
Temperature Characteristics (Max. Impedance ratio)	<table border="1"> <tr> <td>Rated Voltage(V_{DC})</td> <td>450~500</td> </tr> <tr> <td>Z(-25 °C)/Z(20 °C)</td> <td>8</td> </tr> <tr> <td>Z(-40 °C)/Z(20 °C)</td> <td>16</td> </tr> </table> (at 120Hz)	Rated Voltage(V _{DC})	450~500	Z(-25 °C)/Z(20 °C)	8	Z(-40 °C)/Z(20 °C)	16
Rated Voltage(V _{DC})	450~500						
Z(-25 °C)/Z(20 °C)	8						
Z(-40 °C)/Z(20 °C)	16						
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 tan δ ≤ 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 the exposing them at 105 °C for 1,000hours 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 tan δ ≤ 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

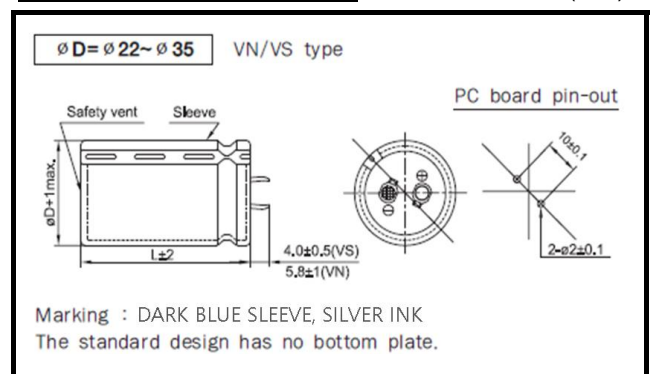
When capacitors are operated in any other condition at 120Hz, the maximum ripple current must be multiplied by the figure shown in the table.

Frequency multiplying factor

V _{DC} \ Freq.(Hz)	60	120	300	1K	10K~
450~500	0.77	1.00	1.16	1.30	1.41

DIMENSIONS OF TLF Series

Unit (mm)



RATINGS OF TLF Series

μF	V_{DC} ΦD	450				500			
		22	25.4	30	35	22	25.4	30	35
82						22×35 (0.56)			
100						22×40 (0.65)	25.4×30 (0.63)		
120						22×45 (0.75)	25.4×35 (0.73)		
150		22×35 (0.68)				22×50 (0.87)	25.4×40 (0.85)	30×30 (0.84)	
180		22×40 (0.78)	25.4×30 (0.76)				25.4×45 (0.97)	30×35 (0.97)	
220		22×45 (0.90)	25.4×35 (0.88)				25.4×50 (1.12)	30×40 (1.12)	35×30 (1.09)
270		22×50 (1.04)	25.4×40 (1.03)	30×30 (1.01)				30×45 (1.29)	35×35 (1.27)
330			25.4×45 (1.18)	30×35 (1.17)				30×50 (1.48)	35×40 (1.47)
390			25.4×50 (1.33)	30×40 (1.33)	35×30 (1.30)				35×45 (1.66)
470				30×45 (1.52)	35×35 (1.50)				35×50 (1.89)
560				30×50 (1.72)	35×40 (1.71)				
680					35×45 (1.96)				
820					35×50 (2.24)	← Case Size $\Phi\text{D}\times\text{L}(\text{mm})$ ← Rated Ripple Current(Arms/105°C, 120Hz)			

RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

V_{DC} Freq.(Hz)	60	120	300	1k	10k~
450~500	0.77	1.00	1.16	1.30	1.41