

Aluminum Electrolytic Capacitors

YUSCON®

TL Series

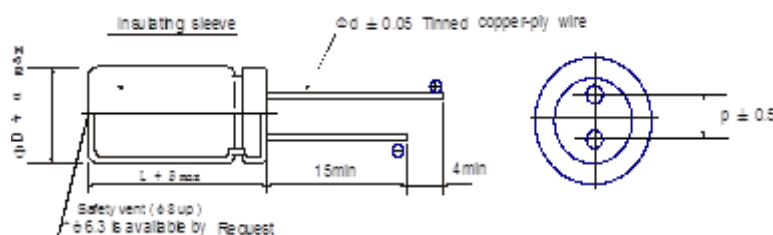
- 105°C High ripple current , Low Impedance.
- Load Life of 2000~3000 Hours at 105°C
- Rohs compliance.

◆ SPECIFICATIONS



Item	Characteristics						
Operating Temperature Range	-40 ~ +105℃						
Voltage Range	6.3 ~50 V.DC						
Nominal Cap. Range	0.47~ 15000 μF						
Capacitance Tolerance	- 20% ~ + 20% (at 20℃, 120Hz)						
Leakage Current	I = 0.01CV or 3(μA) whichever is greater.(after 2 minutes) where,I: Max Leakage Current(μA), C: Nominal Capacitance(μF), V: Rated Voltage(V) (at 20℃)						
Dissipation Factor (tanδ) (at 120Hz, +20℃)	WV	6.3	10	16	25	35	50
	tanδ	0.22	0.19	0.16	0.14	0.12	0.10
Add 0.02 per 1,000 μF for more than 1,000μF items .							
Low Temp. Impedance Stability at 120Hz	W.V.			6.3	10	16	25 ~ 50
	Z(-25℃)/Z(+20℃)			6	4	3	2
	Z(-40℃)/Z(+20℃)			10	8	6	3
Impedance(Ω)	See case size table						
High Temp. Load Test	After ΦD ≤ 8 : 2000 hours; ΦD ≥ 10 : 3000 hours,application of DC rated working voltage at + 105℃, the capacitor shall meet the following limits . Capacitance change ... ≤ ±20% of the initial measured value Tan δ ... ≤ 200% of the initial specified value DC leakage current ... ≤ the initial specified value						
High Temp. Non-Load Test	After storage for 1000 hours at 105℃ with no voltage applied ,voltage treatment of JIS-C-5102 article 4-4 is to be given and then measurement shall be made ,at which time requirements specified in the table "High temperature loading " can be met.						

◆ DRAWING



ΦD	5	6.3	8	10	13	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd	0.5	0.5	0.5	0.6	0.6	0.8	0.8
β	+1.5						
α	+0.5						

▼ MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Cap (μ F)	Freq. (HZ)	120	1K	10K	100K
0.47~180		0.40	0.75	0.9	1.00
220~560		0.50	0.85	0.94	1.00
680~1800		0.60	0.87	0.95	1.00
2200~3900		0.75	0.90	0.95	1.00
4700~15000		0.85	0.95	0.98	1.00

◆ PART NUMBERING SYSTEM

TL	□□□	□	□□□	□	□□
Series	Rated Cap.	Cap. Tolerance	Rated Voltage	Case Size D	Case Size L

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■ STANDARD RATINGS

WV(Vdc) Parameter	6.3V				WV(Vdc) Parameter	10V			
	ΦDxL	Ripple current	Impedance			ΦDxL	Ripple current	Impedance	
	(mm)	(mArms)	20℃	−10℃		(mm)	(mArms)	20℃	−10℃
	Cap (μF)	105℃,100KHZ	100KHZ	100KHZ		Cap (μF)	105℃,100KHZ	100KHZ	100KHZ
150	5X11	180	0.60	1.20	100	5X11	180	0.60	1.20
330	6.3X11	290	0.23	0.46	220	6.3X11	290	0.23	0.46
470	8X12	555	0.13	0.26	470	8X12	555	0.13	0.26
680	8X12	555	0.13	0.26	680	8X12	555	0.13	0.26
820	8X12	555	0.13	0.26	680	8X16	730	0.11	0.22
1000	8X12	555	0.13	0.26	1000	8X16	730	0.11	0.22
1500	8X16	730	0.11	0.22	1000	8X20	995	0.074	0.148
1200	8X20	995	0.074	0.148	680	10X12.5	755	0.095	0.190
1500	8X20	995	0.074	0.148	1000	10X16	1050	0.068	0.136
820	10X12.5	755	0.095	0.190	1200	10X16	1050	0.068	0.136
1000	10X16	1050	0.068	0.136	1000	10X20	1220	0.041	0.082
1200	10X16	1050	0.068	0.136	1500	10X20	1220	0.041	0.082
1500	10X16	1050	0.068	0.136	2200	10X25	1440	0.040	0.080
1500	10X20	1220	0.041	0.082	2200	10X30	1815	0.038	0.076
2200	10X20	1220	0.041	0.082	2200	13X20	1655	0.038	0.076
2700	10X25	1440	0.04	0.080	3300	13X25	1945	0.032	0.064
3300	13X20	1655	0.038	0.076	3900	13X30	2310	0.029	0.058
3900	13X25	1945	0.032	0.064	4700	13X35	2400	0.027	0.054
4700	13X30	2310	0.029	0.058	4700	16X25	2555	0.022	0.044
5600	16X20	2205	0.029	0.058	5600	16X25	2555	0.022	0.044
6800	16X25	2555	0.022	0.044	6800	16X31.5	3010	0.018	0.036
8200	18X31.5	3010	0.018	0.036	8200	16X35.5	3150	0.016	0.032
10000	18X31.5	3010	0.018	0.036	10000	18X35.5	3680	0.015	0.030
12000	18X31.5	3635	0.016	0.032	15000	18X40	3800	0.014	0.028
15000	18X36	3680	0.015	0.030					

WV(Vdc) Parameter	16V				WV(Vdc) Parameter	25V			
	ΦDxL	Ripple current	Impedance			ΦDxL	Ripple current	Impedance	
	(mm)	(mArms)	20℃	-10℃		(mm)	(mArms)	20℃	-10℃
	Cap (μF)	105℃,100KHZ	100KHZ	100KHZ		Cap (μF)	105℃,100KHZ	100KHZ	100KHZ
56	5X11	180	0.60	1.2	47	5X11	180	0.60	1.20
120	6.3X11	290	0.23	0.46	100	6.3X11	290	0.23	0.46
330	8X12	555	0.13	0.26	220	8X12	555	0.13	0.26
470	8X12	555	0.13	0.26	330	8X16	730	0.11	0.22
470	8X16	730	0.11	0.22	470	8X20	995	0.074	0.148
680	8X20	995	0.074	0.148	330	8X20	995	0.074	0.148
220	10X12.5	755	0.095	0.190	470	10X12.5	755	0.095	0.190
330	10X12.5	755	0.095	0.190	330	10X12.5	755	0.095	0.190
470	10X12.5	755	0.095	0.190	330	10X16	1050	0.068	0.136
470	8X20	995	0.074	0.148	470	10X16	1050	0.068	0.136
680	10X16	1050	0.068	0.136	680	10X20	1220	0.041	0.082
1000	10X16	1050	0.068	0.136	820	10X20	1220	0.041	0.082
1500	10X20	1220	0.041	0.082	1000	10X30	1815	0.038	0.076
2200	12.5X25	1945	0.032	0.064	1000	13X20	1655	0.038	0.076
2700	12.5X30	2310	0.029	0.058	1500	13X25	1945	0.032	0.064
3300	16X25	2555	0.022	0.044	2200	16X25	2555	0.022	0.044
3900	16X25	2555	0.022	0.044	2700	16X25	2555	0.022	0.044
4700	16X31.5	3010	0.018	0.036	3300	16X31.5	3010	0.018	0.036
5600	16X35.5	3150	0.016	0.032	3900	16X35.5	3150	0.016	0.032
6800	16X35.5	3680	0.015	0.030	4700	16X35.5	3680	0.015	0.030
8200	16X35.5	3680	0.015	0.030	6800	16X35.5	3800	0.014	0.028
10000	18X40	3800	0.014	0.028					

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WV(Vdc) Parameter	35V				WV(Vdc) Parameter	50V		
	ΦDxL	Ripple current	Impedance			ΦDxL	Ripple current	Impec
	(mm)	(mA _{rms})	20℃	−10℃		(mm)	(mA _{rms})	20℃
	Cap (μF)	105℃,100KHZ	100KHZ	100KHZ		Cap (μF)	105℃,100KHZ	100KHZ
33	5X11	180	0.60	1.2	0.47	5X11	25	5.00
56	6.3X11	290	0.23	0.46	1	5X11	40	3.50
100	8X12	555	0.13	0.26	2.2	5X11	55	3.00
220	8X16	730	0.11	0.22	3.3	5X11	65	2.60
270	8X20	995	0.074		4.7	5X11	90	2.30
220	10X16	1050	0.068	0.136	10	5X11	120	1.40
330	10X16	1050	0.068	0.136	22	5X11	170	1.20
470	10X20	1220	0.041	0.082	47	6.3X11	300	0.43
560	10X25	1440	0.040	0.080	100	8X12	485	0.24
680	10X30	1815	0.038	0.076	120	8X16	635	0.18
680	13X20	1655	0.038	0.076	150	10X12.5	615	0.16
1000	13X25	1945	0.032	0.064	220	10X16	850	0.13
1200	13X30	2310	0.029	0.058	330	10X20	1030	0.090
1500	16X25	2555	0.022	0.044	470	13X20	1500	0.060
1800	16X25	2555	0.022	0.044	560	13X25	1832	0.050
2200	16X31.5	3010	0.018	0.036	680	16X20	1835	0.048
2700	16X35.5	3150	0.016	0.032	1000	16X25	2235	0.034
3300	18X35.5	3680	0.015	0.030	1200	16X31.5	2700	0.028
4700	18X40	3800	0.014	0.028	1500	16X31.5	2790	0.025
					1800	18X31.5	3300	0.025
					2200	18X31.5	3100	0.023



ance
-10℃
100KHZ
10.0
7.00
6.00
5.20
4.60
2.80
2.40
0.86
0.48
0.36
0.32
0.26
0.18
0.12
0.10
0.096
0.068
0.056
0.050
0.050
0.046