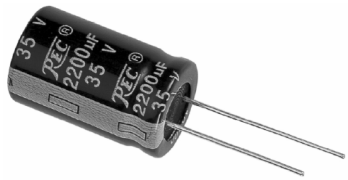
TRANSCEND ELECTROLYTIC CO., LTD.
TRANSCEND ELECTROLYTIC (SHENZHEN) CO., LTD.

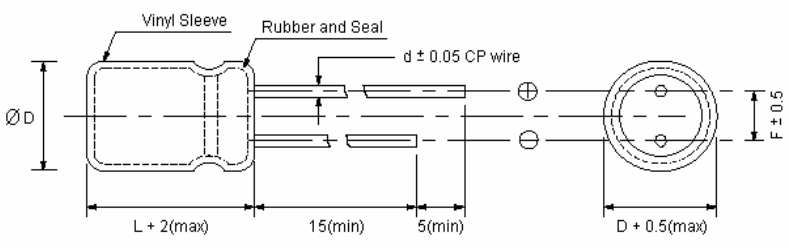
RoHS Compliant ALUMINIUM ELECTROLYTIC CAPACITOR — GR Series

■ FEATURES

◆Load life of 2000 hours at 105 ℃. ◆High temperature and high reliability.
◆Applications for communication equipments, consumer products,
General industrial products, automovice appliance etc.



■ OUTLINE



mm

D	5	6.3	8	10	13	16	18	20	22	25
F	2.0	2.5	3.5	5.0		7.5		10.0		12.5
d	0.5		0.6			0.8				1.0

■ SPECIFICATIONS

Items	Characteristics														
Capacitance Tolerance (120Hz, 25°C)	± 20% (M)														
Rated Working Voltage Range	6.3 ~ 100VDC							160 ~ 450VDC							
Operation Temperature	-40°C ~ +105°C							-25°C ~ +105°C							
Leakage Current (25°C)	(After 2 minutes applying the DC working voltage)							(After 5 minutes applying the DC working voltage)							
	I ≤ 0.01CV or 3 (*u*A)							I ≤ 0.03CV + 10 (*u*A)							
	◆I : Leakage Current (*u*A) ◆C : Rated Capacitance (*u*F) ◆V : Working Voltage (V)														
Surge Voltage (25°C)	**W.V.**	**6.3**	**10**	**16**	**25**	**35**	**50**	**63**	**100**	**160**	**200**	**250**	**350**	**400**	**450**
	S.V.	8	13	20	32	44	63	79	125	200	250	300	400	450	500
Dissipation Factor (120Hz, 25°C)	**W.V.**	**6.3**	**10**	**16**	**25**	**35**	**50**	**63**	**100**	**160**	**200**	**250**	**350**	**400**	**450**
	tan *d*	0.25	0.20	0.17	0.15	0.12	0.10	0.10	0.10	0.15	0.15	0.15	0.15	0.20	0.20
	◆For capacitance exceeding 1000 *u*F, add 0.02 per increment of 1000 *u*F														
Temperature Characteristics	**W.V.**	**6.3**	**10**	**16**	**25**	**35**	**50**	**63**	**100**	**160**	**200**	**250**	**350**	**400**	**450**
	- 25°C / + 25°C	4	4	3	3	2	2	2	2	3	3	3	6	6	6
	- 40°C / + 25°C	10	8	6	4	3	3	3	3	4	4	4	6	6	6
	◆Impedance ratio at 120Hz														
Load Test	After 2000 hours application of WV at +105°C, the capacitor shall meet the following limits.														
	Capacitance Change	≤ ± 20% of initial value													
	tan *d*	≤ 150% of initial specified value													
	Leakage Current	≤ initial specified value													
Shelf Test	After 1000 hours, no voltage applied at +105°C, the capacitor shall meet the following limits.														
	Capacitance Change	≤ ± 20% of initial value													
	tan *d*	≤ 150% of initial specified value													
	Leakage Current	≤ 200% of initial specified value													

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■ DIMENSIONS

D x L (mm)

WV / uF	6.3	10	16	25	35	50	63	100	160	200	250	350	400
0.1					⇨	5 x 11	5 x 11	5 x 11					
0.22					⇨	5 x 11	5 x 11	5 x 11					
0.33					⇨	5 x 11	5 x 11	5 x 11					
0.47					⇨	5 x 11	5 x 11	5 x 11	5 x 11	6.3 x 11	6.3 x 11	6.3 x 11	6.3 x 11
1					⇨	5 x 11	5 x 11	5 x 11	6.3 x 12	6.3 x 11	6.3 x 11	8 x 12	8 x 12
2.2					⇨	5 x 11	5 x 11	5 x 11	6.3 x 12	6.3 x 12	8 x 12	8 x 12	10 x 12
3.3					⇨	5 x 11	5 x 11	5 x 11	6.3 x 12	8 x 12	8 x 14	10 x 12	10 x 16
4.7					⇨	5 x 11	5 x 11	5 x 11	8 x 12	8 x 12	10 x 12	10 x 16	10 x 20
10		⇨	5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	6.3x12	10 x 12	10 x 15	10 x 16	10 x 20	13 x 20
22	⇨	5 x 11	5 x 11	5 x 11	5 x 11	6.3 x 12	6.3 x 12	8x12	10 x 16	10 x 20	13 x 20	13 x 25	16 x 26
33	⇨	5 x 11	5 x 11	5 x 11	5 x 11	6.3 x 12	8 x 12	8x16	10 x 20	13 x 20	13 x 25	16 x 26	16 x 31
47	⇨	5 x 11	5 x 11	6.3 x 11	6.3 x 12	6.3 x 12	8 x 12	10x16	13 x 20	13 x 25	16 x 26	16 x 31	18 x 35
100	5 x 11	5 x 11	6.3 x 11	6.3 x 11	8 x 12	8 x 14	10 x 16	13x20	16 x 26	16 x 26	16 x 35	22 x 32	
220	6.3 x 12	6.3 x 12	8 x 12	8 x 12	10 x 12	10 x 16	10 x 20	13x25	18 x 35	18 x 41			
330	8 x 12	8 x 12	8 x 12	10 x 12	10 x 16	10 x 20	13 x 20	16x26	22 x 36				
470	8 x 12	8 x 12	8 x 14	10 x 16	10 x 20	13 x 20	13 x 25	16x31					
1000	10 x 12	10 x 16	10 x 16	13 x 20	13 x 25	16 x 26	16 x 31	22x36					
2200	10 x 20	13 x 20	13 x 20	16 x 26	16 x 31	18 x 35	22 x 36						
3300	13 x 20	13 x 25	16 x 26	16 x 31	18 x 35	20 x 35							
4700	13 x 25	16 x 25	16 x 26	18 x 35	18 x 41								
6800	16 x 26	16 x 31	16 x 35										
10000	16 x 31	18 x 25											

■ PERMISSIBLE RIPPLE CURRENT

mA (rms) at 120Hz 105°C

WV / uF	6.3	10	16	25	35	50	63	100	160	200	250	350	400
0.1					⇨	5	5	5					
0.22					⇨	6	7	7					
0.33					⇨	7	8	8					
0.47					⇨	9	10	11	18	13	13	12	13
1					⇨	13	14	16	26	19	20	19	19
2.2					⇨	22	23	24	34	28	34	29	32
3.3					⇨	27	28	30	44	36	44	38	44
4.7					⇨	32	34	37	56	45	53	55	57
10		⇨	30	40	43	48	50	53	105	60	62	73	78
22	⇨	35	43	60	63	75	84	100	130	120	130	135	145
33	⇨	44	50	80	75	90	110	125	170	150	160	175	185
47	⇨	70	90	105	110	120	130	155	280	185	200	220	230
100	100	115	130	140	180	200	235	250	450	290	320	340	
220	170	180	220	230	310	360	405	430	690	500			
330	220	255	280	340	400	480	540	650	810				
470	280	310	370	450	530	630	700	780					
1000	470	560	660	800	960	1040	1150	1400					
2200	820	920	1000	1190	1380	1610	1800						
3300	1010	1170	1290	1500	1730	1850							
4700	1300	1370	1500	1820	2050								
6800	1460	1680	1740										
10000	1750	1920											