

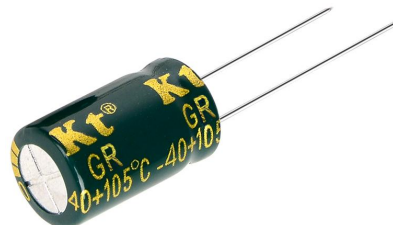
# Kingtronics®

# GKT-GR

## Aluminum Electrolytic Capacitor— Radial

### FEATURES

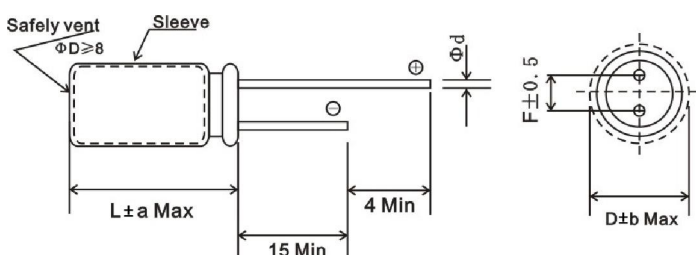
- ◆ Long life of 3000~6000 hours at 105°C.
- ◆ High frequency, low impedance, high ripple current.
- ◆ Especially designed for LED driver.



### SPECIFICATIONS

OPERATING TEMPERATURE RANGE (°C)	-40°C ~ +105°C									
Capacitance Range (μF)	6.8μF ~ 6800μF									
Rated Voltage Range (V)	6.3V ~ 100V									
CAPACITANCE TOLERANCE (+20°C, 120Hz)	±20%									
LEAKAGE CURRENT (μA)	1≤0.01CV or 3uA, whichever is greater (after 2 minutes at 25°C)									
DISSIPATION FACTOR (+20°C, 120Hz)	Wv (V)	6.3	10	16	25	35	50	63	100	
	Tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	
When nominal capacitance exceeds 1000μF, add 0.02 to the value above for each 1000μF increase.										
Temperature Characteristics (Impedance ratio at 120Hz)	U <sub>R</sub> (V)	6.3	10	16	25	35	50	63	100	
	Z-25°C/+20°C	4	3	2	2	2	2	2	2	
	Z-40°C/+20°C	8	6	4	3	3	3	3	3	
LOAD LIFE	After applying rated voltage with specified ripple current for specified time at 105°C and then resumed 24 hours: Capacitance Change: ±25% of the initial measured value Leakage current: ≤the initial specified value Dissipation factory: ≤200% of the initial specified value								Case Size	Life Time (hrs)
									ΦD ≤6.3	3000
									ΦD = 8	4000
									ΦD = 10	5000
								ΦD ≥12.5	6000	
SHELF LIFE	After storage for 1000 hours at +105°C, and then resumed 24 hours Capacitance Change: ±25% of the initial measured value Leakage current: ≤200% of the initial specified value Dissipation factory: ≤200% of the initial specified value									

### DIMENSIONS (mm)



ΦD	5	6.3	8	10	13	16
F	2.0	2.5	3.5	5.0	5.0	7.5
Φd±0.05	0.5	0.5	0.5	0.6	0.6	0.8
a Max.	+1.5 -1.0					
b Max.	0.5					

### MULTIPLIER FOR RIPPLE CURRENT

Frequency Coefficient				
Frequency (Hz)	120	1K	10K	100K
22~180μF	0.40	0.75	0.90	1.00
220~560μF	0.50	0.85	0.94	1.00
680~1800μF	0.60	0.87	0.95	1.00
2200~3900μF	0.75	0.90	0.95	1.00
4700~6800μF	0.85	0.95	0.98	1.00

Temperature Coefficient			
Temperature(°C)	+70	+85	+105
Coefficient	1.96	1.68	1.0

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## Aluminum Electrolytic Capacitor– Radial

### STANDARD RATINGS

Rated Voltage (Vdc)	Capacitance (µF)	Size ΦDxL (mm)	Rated ripple current (mArms) 105°C/100KHz	Impedance (Ω Max)	
				20°C 100KHz	-10°C 100KHz
6.3V	150	5x11	210	0.58	2.3
	330	6.3x11	340	0.22	0.87
	680	8x11.5	640	0.13	0.52
	820	10x12.5	865	0.080	0.32
	1000	8x16	840	0.087	0.35
	1200	8x20	1050	0.069	0.27
		10x16	1210	0.060	0.24
	1500	10x20	1400	0.046	0.18
	1800	13x16	1450	0.049	0.16
	2200	10x23	1650	0.042	0.17
	2700	10x28	1910	0.031	0.12
		16x16	1940	0.042	0.12
	3300	13x20	1900	0.035	0.12
	3900	13x25	2230	0.027	0.089
		18x16	2210	0.043	0.11
	4700	13x30	2650	0.024	0.078
	5600	13x35	2880	0.020	0.065
		16x20	2530	0.027	0.078
	6800	13x40	3350	0.017	0.056
		16x25	2930	0.021	0.060
18x20		2860	0.026	0.067	
8200	16x31.5	3450	0.017	0.050	
10000	16x35.5	3610	0.015	0.044	
	18x25	3140	0.019	0.049	
12000	16x40	4080	0.013	0.038	
	18x31.5	4170	0.015	0.040	
15000	18x35.5	4220	0.014	0.038	
18000	18x40	4280	0.012	0.032	
10V	100	5x11	210	0.58	2.3
	220	6.3x11	340	0.22	0.87
	470	8x11.5	640	0.13	0.52
	680	8x16	840	0.087	0.35
		10x12.5	865	0.080	0.32
	1000	8x20	1050	0.069	0.27
		10x16	1210	0.060	0.24
	1200	10x20	1400	0.046	0.18
	1500	10x23	1650	0.042	0.17
		13x16	1450	0.049	0.16
	2200	10x28	1910	0.031	0.12
		13x20	1900	0.035	0.12
		16x16	1940	0.042	0.12
	2700	18x16	2210	0.043	0.11
	3300	13x25	2230	0.027	0.089
	3900	13x30	2650	0.024	0.078
		16x20	2530	0.027	0.078
	4700	13x35	2880	0.020	0.065
	5600	13x40	3350	0.017	0.056
		16x25	2930	0.021	0.060
18x20		2860	0.026	0.067	
6800	16x31.5	3450	0.017	0.050	
	18x25	3140	0.019	0.049	
8200	16x35.5	3610	0.015	0.044	
	18x31.5	4170	0.015	0.040	
10000	16x40	4080	0.013	0.038	
	18x35.5	4220	0.014	0.038	
12000	18x40	4280	0.012	0.032	

Rated Voltage (Vdc)	Capacitance (µF)	Size ΦDxL (mm)	Rated ripple current (mArms) 105°C/100KHz	Impedance (Ω Max)	
				20°C 100KHz	-10°C 100KHz
16V	56	5x11	210	0.58	2.3
	120	6.3x11	340	0.22	0.87
	330	8x11.5	640	0.13	0.52
	470	8x16	840	0.087	0.35
		10x12.5	865	0.080	0.32
	680	8x20	1050	0.069	0.27
		10x16	1210	0.060	0.24
	1000	10x20	1400	0.046	0.18
		13x16	1450	0.049	0.16
	1200	10x23	1650	0.042	0.17
	1500	10x28	1910	0.031	0.12
		13x20	1900	0.035	0.12
	2200	16x16	1940	0.042	0.12
		13x25	2230	0.027	0.089
	2700	18x16	2210	0.043	0.11
		13x30	2650	0.024	0.078
	3300	16x20	2530	0.027	0.078
		13x35	2880	0.020	0.065
	3900	13x40	3350	0.017	0.056
		16x25	2930	0.021	0.060
18x20		2860	0.026	0.067	
4700	16x31.5	3450	0.017	0.050	
	18x25	3140	0.019	0.049	
5600	16x35.5	3610	0.015	0.044	
	18x31.5	4170	0.015	0.040	
6800	16x40	4080	0.013	0.038	
8200	18x35.5	4220	0.014	0.038	
10000	18x40	4280	0.012	0.032	
25V	47	5x11	210	0.58	2.3
	100	6.3x11	340	0.22	0.87
	220	8x11.5	640	0.13	0.52
	330	8x16	840	0.087	0.35
		10x12.5	865	0.080	0.32
	470	8x20	1050	0.069	0.27
		10x16	1210	0.060	0.24
	680	10x20	1400	0.046	0.18
		13x16	1450	0.049	0.16
	820	10x23	1650	0.042	0.17
	1000	10x28	1910	0.031	0.12
		13x20	1900	0.035	0.12
		16x16	1940	0.042	0.12
	1200	18x16	2210	0.043	0.11
	1500	13x25	2230	0.027	0.089
	1800	13x30	2650	0.024	0.078
		16x20	2530	0.027	0.078
	2200	13x35	2880	0.020	0.065
		18x20	2860	0.026	0.067
	2700	13x40	3350	0.017	0.056
16x25		2930	0.021	0.060	
3300	16x31.5	3450	0.017	0.050	
	18x25	3140	0.019	0.049	
3900	16x35.5	3610	0.015	0.044	
	18x31.5	4170	0.015	0.040	
4700	16x40	4080	0.013	0.038	
	18x35.5	4220	0.014	0.038	
5600	18x40	4280	0.012	0.032	

**Kingtronics® International Company**

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## Aluminum Electrolytic Capacitor– Radial

### STANDARD RATINGS

Rated Voltage (Vdc)	Capacitance (µF)	Size ØDxL (mm)	Rated ripple current (mA rms) 105°C/100KHz	Impedance (Ω Max)	
				20°C 100KHz	-10°C 100KHz
35V	33	5x11	210	0.58	2.3
	56	6.3x11	340	0.22	0.87
	150	8x11.5	640	0.13	0.52
	220	8x16	840	0.087	0.35
		10x12.5	865	0.080	0.32
	270	8x20	1050	0.069	0.27
	330	10x16	1210	0.060	0.24
	470	10x20	1400	0.046	0.18
		13x16	1450	0.049	0.16
	560	10x23	1650	0.042	0.17
		10x28	1910	0.031	0.12
	680	13x20	1900	0.035	0.12
		16x16	1940	0.042	0.12
		13x25	2230	0.027	0.089
	1000	18x16	2210	0.043	0.11
		13x30	2650	0.024	0.078
	1200	16x20	2530	0.027	0.078
		13x35	2880	0.020	0.065
	1800	13x40	3350	0.017	0.056
		16x25	2930	0.021	0.060
18x20		2860	0.026	0.067	
2200	16x31.5	3450	0.017	0.050	
	18x25	3140	0.019	0.049	
2700	16x35.5	3610	0.015	0.044	
	18x31.5	4170	0.015	0.040	
3300	16x40	4080	0.013	0.038	
	18x35.5	4220	0.014	0.038	
3900	18x40	4280	0.012	0.032	
50V	22	5x11	180	0.70	2.8
	56	6.3x11	295	0.30	1.2
	100	8x11.5	555	0.17	0.68
	120	8x16	730	0.12	0.48
	150	10x12.5	760	0.12	0.48
	180	8x20	910	0.091	0.36
	220	10x16	1050	0.084	0.34
	270	10x20	1220	0.060	0.24
		13x16	1260	0.061	0.20
	330	10x23	1440	0.055	0.22
	470	10x28	1690	0.043	0.17
		13x20	1660	0.045	0.15
		16x16	1690	0.055	0.17
	560	13x25	1950	0.034	0.11
		18x16	1930	0.054	0.15
	680	13x30	2310	0.030	0.10
	820	13x35	2510	0.025	0.083
		16x20	2210	0.034	0.10
	1000	13x40	2920	0.021	0.069
		16x25	2555	0.025	0.075
		18x20	2490	0.036	0.097
	1200	16x31.5	3010	0.022	0.066
		18x25	2740	0.026	0.070
	1500	16x35.5	3150	0.019	0.057
	1800	16x40	3710	0.016	0.048
		18x31.5	3635	0.021	0.057
	2200	18x35.5	3680	0.017	0.046
2700	18x40	3800	0.014	0.038	

Rated Voltage (Vdc)	Capacitance (µF)	Size ØDxL (mm)	Rated ripple current (mA rms) 105°C/100KHz	Impedance (Ω Max)	
				20°C 100KHz	-10°C 100KHz
63V	15	5x11	55	2.3	9.3
	33	6.3x11	115	1.2	5.0
	56	8x11.5	232	0.63	2.8
	82	8x16	300	0.45	2.1
		10x12.5	288	0.43	1.8
	120	8x20	362	0.33	1.6
		10x16	357	0.31	1.5
	180	10x20	466	0.21	0.94
		13x16	466	0.23	1.1
	220	10x23	531	0.20	0.84
		10x28	663	0.15	0.71
	270	13x20	690	0.16	0.64
		16x16	795	0.14	0.66
		13x25	784	0.12	0.45
	330	18x16	920	0.12	0.50
	390	13x30	905	0.10	0.42
		16x20	1040	0.091	0.38
	560	13x35	1050	0.083	0.35
		16x25	1250	0.073	0.27
	680	13x40	1180	0.071	0.30
18x20		1240	0.080	0.30	
820	16x31.5	1570	0.054	0.20	
	18x25	1490	0.057	0.21	
1000	16x35.5	1790	0.045	0.17	
	18x31.5	1630	0.047	0.17	
1200	16x40	2020	0.040	0.15	
	18x35.5	1790	0.040	0.15	
1500	18x40	2330	0.036	0.13	
100V	6.8	5x11	55	2.3	9.3
	15	6.3x11	115	1.2	5.0
	27	8x11.5	232	0.63	2.8
	39	8x16	300	0.45	2.1
	47	10x12.5	288	0.43	1.8
	56	8x20	362	0.33	1.6
	68	10x16	357	0.31	1.5
	82	10x20	466	0.21	0.94
		13x16	466	0.23	1.1
	100	10x23	531	0.20	0.84
	120	10x28	663	0.15	0.71
		13x20	690	0.16	0.64
	150	16x16	795	0.14	0.66
		13x25	784	0.12	0.45
	180	18x16	920	0.12	0.50
		13x30	905	0.10	0.42
	220	16x20	1040	0.091	0.38
		13x35	1050	0.083	0.35
	270	16x25	1250	0.073	0.27
		13x40	1180	0.071	0.30
330	18x20	1240	0.080	0.30	
	16x31.5	1570	0.054	0.20	
390	18x25	1490	0.057	0.21	
	16x35.5	1790	0.045	0.17	
470	18x31.5	1630	0.047	0.17	
	16x40	2020	0.040	0.15	
560	18x35.5	1790	0.040	0.15	
680	18x35.5	1790	0.040	0.15	
820	18x40	2330	0.036	0.13	

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Aluminum Electrolytic Capacitor— Radial

**HOW TO ORDER**

<b>GKT</b>	<b>GR</b>	<b>0J</b>	<b>0R1</b>	<b>M</b>	<b>00500110</b>	<b>020</b>	<b>000</b>	<b>B</b>	<b>R</b>
Series	Sub Series	Rated Voltage	Capacitance	Capacitance Tolerance	Dimension	Pitch/Pins	Lead Length	Packing	Pb
		1.	2.	3.	4.	5.	6.	7.	8.

**NOTE:****1. Rated Voltage**

Code	0J	1A	1C	1D	1E	1V	1G	1H	1J	1K				
Voltage	6.3V	10V	16V	20V	25V	35V	40V	50V	63V	80V				
Code	2A	2B	2C	2K	2D	2E	2F	2U	2V	2G	2X	2W	2H	2Y
Voltage	100V	120V	160V	180V	200V	250V	315V	330V	350V	400V	420V	450V	500V	550V

**2. Capacitance**

Code	0R1	R22	R33	R47	010	2R2	3R3	4R7	100	220	330	470	101
Capacitance (µF)	0.1	0.22	0.33	0.47	1	2.2	3.3	4.7	10	22	33	47	100
Code	221	271	331	391	471	561	681	102	222	332	472	103	223
Capacitance (µF)	220	270	330	390	470	560	680	1000	2200	3300	4700	10000	22000

**3. Capacitance Tolerance**

Code	K	L	M	P	Q	R	T	U	V	H	F
Tolerance	±10%	±15%	±20%	+100-0%	+30-10%	+20-0%	+50-10%	+75-10%	+20-10%	+20-5%	+30-0

**4. Dimension**

Code	00500110	00630120	01300200	01600300	03500450
Dimension (mm)	5x11	6.3x12	13x20	16x30	35x45

**5. Pitch/Pins**

Code	020	025	035	050	075	100	127	4pins
Pitch (mm)/ Pins	2.0	2.5	3.5	5.0	7.5	10.0	12.7	4PS

**6. Lead Length**

Code	000	040	045	050
Lead Length	Standard	4.0	4.5	5.0

**7. Packing**

Code	A	B
Packing	Ammo	Bulk

**8. Pb**

Code	L	R
Pb	Leaded	RoHS

Note: Specifications are subject to change without notice.

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