

# FGC series

## Features

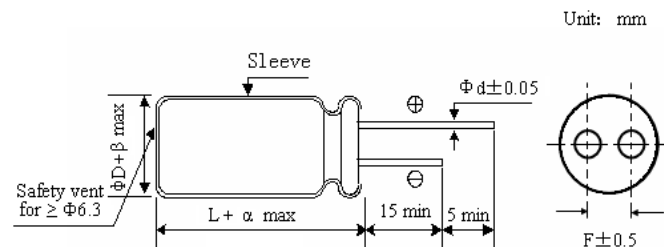
- ◆ Life time: +130°C 5,000 hours, 105°C 20,000 hours
- ◆ Withstand high temperature +130°C and extremely long life
- ◆ Suitable for output circuit and input circuit of LED driving power, electronic ballast and electronic energy saving lamp
- ◆ RoHS Compliant



## Specifications

Item	Performance Characteristics																
Operating Temperature Range	-40~+130°C (160~400V <sub>dc</sub> )	-25~+130°C (450V <sub>dc</sub> )															
Rate Voltage Range	160~450V <sub>dc</sub>																
Capacitance Tolerance	±20% (M) (20°C, 120Hz)																
Leakage current (+20°C, max.)	160~400V <sub>dc</sub>	450V <sub>dc</sub>															
	$I \leq 0.02CV + 10$ (µA)	$I \leq 0.03CV + 10$ (µA)															
I: Leakage Current(µA), C: Nominal capacitance(uF), V: Rated Voltage(V)																	
Dissipation factor (tanδ)	Rated Voltage(V <sub>dc</sub> )							(120Hz, +20°C)									
	Tanδ(max)																
Low Temperature Characteristics (120Hz)	Impedance ratio max.																
	Rate Voltage(V <sub>dc</sub> )																
	Z-25°C / Z+20°C																
Endurance	After application of the rated DC voltage at 130°C for the specified period of time or application of DC voltage with rated ripple current(the voltage peak is not more than rated voltage)at 105°C for the specified period of time, measuring the parameters when the capacitors are restored to 20°C,the capacitors shall meet the requirements as below							<table border="1"> <thead> <tr> <th>Height(mm)</th> <th>130°C Life time(h)</th> <th>105°C Life time(h)</th> </tr> </thead> <tbody> <tr> <td>L≤10</td> <td>4,000</td> <td>15,000</td> </tr> <tr> <td>L&gt;10</td> <td>5,000</td> <td>20,000</td> </tr> </tbody> </table>	Height(mm)	130°C Life time(h)	105°C Life time(h)	L≤10	4,000	15,000	L>10	5,000	20,000
	Height(mm)	130°C Life time(h)	105°C Life time(h)														
	L≤10	4,000	15,000														
L>10	5,000	20,000															
Capacitance Change : ≤±30% of the initial value																	
D.F(tanδ) : ≤300% of the initial specified value																	
Leakage Current : ≤The initial specified value																	
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage application.																
	Capacitance Change : ≤±20% of the initial value																
	D.F(tanδ) : ≤200% of the initial specified value																
Leakage Current : ≤200% of the initial specified value																	

## Diagram of Dimensions



ΦD	8	10	13	16	18
Φd	0.5	0.6	0.6	0.6	0.8
F	3.5	5.0	5.0	7.5	7.5
ΦD	ΦD+0.5max				
L	L+2max				

## Rated Ripple Current Multipliers

Frequency correction factor for ripple current

Freq(Hz)	120	1K	10K	100K
CAP(uF)				
160~450	0.50	0.80	0.90	1.00

# FGC series

## Standard ratings

WV (V <sub>dc</sub> )	Cap(μF)	Size ΦD×L(mm)	tanδ	Ripple current (mArms/105°C;100KHZ)
160V(2C)	3.3	8×12	0.15	66
	4.7	8×12	0.15	74
	5.6	8×16	0.15	78
		10×9	0.15	76
	6.8	8×16	0.15	84
	8.2	10×9	0.15	138
		10×16	0.15	174
	10	10×9	0.15	180
		10×16	0.15	212
	15	10×16	0.15	285
	22	10×20	0.15	380
	33	13×21	0.15	456
	47	13×25	0.15	560
	68	16×25	0.15	712
	82	16×25	0.15	784
	100	16×25	0.15	912
18×21		0.15	912	
150	18×31	0.15	998	
220	18×35	0.15	1425	
200V(2D)	2.8	8×12	0.15	61
	3.3	8×12	0.15	70
	4.7	8×16	0.15	120
		10×9	0.15	95
	5.6	10×13	0.15	120
		8×16	0.15	140
	6.8	10×9	0.15	114
		8×16	0.15	152
	8.2	10×9	0.15	138
		10×16	0.15	190
	10	10×9	0.15	157
		10×16	0.15	193
	15	10×9	0.15	204
		10×16	0.15	218
	22	10×20	0.15	232
		15	10×20	0.15
	22	13×21	0.15	408
	33	13×21	0.15	475
	47	13×25	0.15	617
		16×21	0.15	617
	68	16×25	0.15	712
	82	16×31	0.15	855
		18×25	0.15	855
	100	16×31	0.15	1045
		18×25	0.15	1045
	150	18×35	0.15	1283

WV (V <sub>dc</sub> )	Cap(μF)	Size ΦD×L(mm)	tanδ	Ripple current (mArms/105°C;100KHZ)
250V(2E)	2.2	8×12	0.15	61
	2.8	8×12	0.15	68
	3.3	8×12	0.15	76
	4.7	8×16	0.15	126
	5.6	10×9	0.15	114
		10×16	0.15	142
	6.8	10×6	0.15	160
	8.2	10×9	0.15	157
		10×16	0.15	193
	10	10×16	0.15	226
		10×20	0.15	237
	15	10×20	0.15	311
	22	13×21	0.15	409
	33	13×25	0.15	503
		16×21	0.15	503
	47	16×25	0.15	655
18×21		0.15	655	
68	16×30	0.15	741	
	18×25	0.15	741	
82	18×25	0.15	855	
100	18×30	0.15	912	
350V(2V)	1	8×12	0.20	47
	1.5	8×16	0.20	70
	1.8	8×16	0.20	71
		10×9	0.20	62
	2.2	10×9	0.20	71
		10×16	0.20	86
	2.8	10×16	0.20	90
	3.3	10×16	0.20	93
	4.7	10×20	0.20	133
	5.6	10×20	0.20	144
		13×21	0.20	157
	6.8	10×20	0.20	180
		13×21	0.20	190
	8.2	13×21	0.20	195
	10	13×21	0.20	237
		13×25	0.20	256
15	13×25	0.20	318	
	16×21	0.20	318	
22	16×25	0.20	427	
33	16×30	0.20	508	
	16×35	0.20	527	
47	18×30	0.20	665	
	18×35	0.20	712	
68	18×40	0.20	855	

## FGC series

## Standard ratings

WV (V <sub>dc</sub> )	Cap(μF)	Size ΦD×L(mm)	tanδ	Ripple current (mA <sub>rms</sub> /105°C;100KHZ)
400V(2G)	1	8×12	0.20	51
		8×16	0.20	57
	1.5	8×16	0.20	70
	1.8	8×16	0.20	71
		10×9	0.20	62
	2.2	10×9	0.20	72
		10×16	0.20	87
	2.8	10×16	0.20	95
	3.3	10×16	0.20	99
		10×20	0.20	114
	4.7	10×20	0.20	135
		13×21	0.20	142
	5.6	13×21	0.20	157
	6.8	13×21	0.20	214
	8.2	13×21	0.20	218
	10	13×25	0.20	266
	15	13×25	0.20	318
		16×21	0.20	318
	22	16×25	0.20	456
		16×30	0.20	475
33	18×30	0.20	603	
47	18×35	0.20	712	
68	18×40	0.20	855	
100	18×50	0.20	978	

WV (V <sub>dc</sub> )	Cap(μF)	Size ΦD×L(mm)	tanδ	Ripple current (mA <sub>rms</sub> /105°C;100KHZ)
450V(2W)	1.5	8×16	0.20	67
	1.8	8×16	0.20	70
	2.2	10×16	0.20	73
	2.8	10×16	0.20	76
	3.3	10×16	0.20	84
		10×20	0.20	87
	4.7	10×20	0.20	98
	5.6	13×21	0.20	137
	6.8	13×21	0.20	166
	8.2	13×21	0.20	174
	10	13×21	0.20	214
	15	13×25	0.20	279
	22	16×25	0.20	375
		16×30	0.20	399
	33	18×30	0.20	475
	47	18×35	0.20	584
	68	18×40	0.20	674
	100	18×50	0.20	798