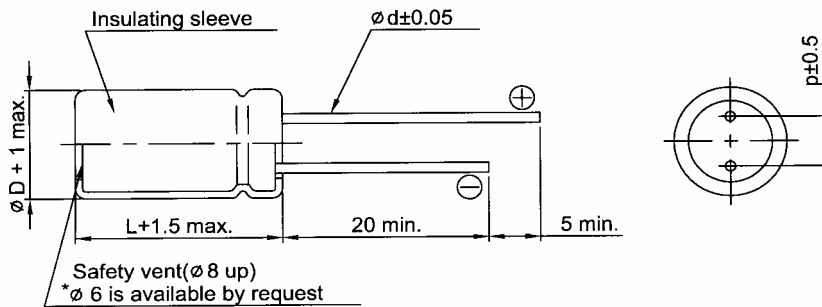


- ESG series capacitors are suitable for electronic ballast and other long life equipment.
- Load life 105°C, 5000 hours assured.

**Characteristics**

<b>Voltage Range</b>	160 ~450V						
<b>Temperature Range</b>	-25 ~ + 105°C						
<b>Capacitance Range</b>	10 to 220 uF						
<b>Leakage Current</b>	$I \leq 0.04CV$ or 10uA, whichever is greater (After 2 minutes)						
<b>Capacitance Tolerance</b>	±20% at 120Hz, 20°C ( 10% Tol. is available upon request)						
<b>Dissipation Factor</b>	WV	160	200	250	350	400	450
	$\tan \delta$	0.15	0.15	0.15	0.20	0.20	0.22
<b>Load life after application of the rated voltage for 5000 hrs at 105°C</b>	Leakage current	Less than initial specified value					
	Capacitance change	Within ±20% of initial value					
	$\tan \delta$	200% or less of initial specified value					
<b>Shelf life (at 105°C)</b>	After 1000 hrs no load test, leakage current, capacitance and $\tan \delta$ same as load life value.						

**Diagram of dimensions**



<b>D φ</b>	10	13	16	18	22
<b>p</b>	5.0	5.0	7.5	7.5	10.0
<b>d φ</b>	0.6	0.6	0.8	0.8	0.8

**Ripple Current Coefficients**

<b>Frequency (Hz)</b>	50	60	120	1K	10K	10K <
	<b>Multiplier</b>					
<b>Correction Factor</b>	0.80	0.80	1.00	1.50	1.70	1.90

<b>Temperature(°C)</b>	65	85	105
<b>Multiplier</b>	2.00	1.65	1.00

**Dimensions, Maximum Permissible Ripple Current & Impedance**

WV Item uF	160			200			250		
	DφxL(mm)	Impedance (Ω)max 20°C 100KHz	Ripple Current mA(rms)	DφxL(mm)	Impedance (Ω)max 20°C 100KHz	Ripple Current mA(rms)	DφxL(mm)	Impedance (Ω)max 20°C 100KHz	Ripple Current mA(rms)
			105°C 120Hz			105°C 120Hz			105°C 120Hz
10	10x16	2.70	115	10x20	2.00	210	10x20	1.90	200
22	10x20	1.35	195	10x20	1.25	255	13x20	1.50	350
33	13x20	1.15	250	13x20	0.65	350	13x25	1.30	400
47	13x20	0.95	300	13x20	0.54	490	13x25	0.56	500
68	13x25	0.65	390	13x25	0.38	530	16x25	0.42	600
100	16x25	0.50	560	16x25	0.22	810	18x31.5	0.38	660
220	16x31.5	0.22	730	18x31.5	0.19	970	22x41	0.25	750

WV Item uF	350			400			450		
	DφxL(mm)	Impedance (Ω)max 20°C 100KHz	Ripple Current mA(rms)	DφxL(mm)	Impedance (Ω)max 20°C 100KHz	Ripple Current mA(rms)	DφxL(mm)	Impedance (Ω)max 20°C 100KHz	Ripple Current mA(rms)
			105°C 120Hz			105°C 120Hz			105°C 120Hz
10	10x20	1.30	180	10x20 13x20	3.40 2.90	165 180	13x25	3.82	130
22	13x20	1.28	250	13x25	2.72	320	16x25	2.98	170
33	13x25	1.15	320	16x25	1.30	350	16x31.5	2.50	215
47	16x25	0.70	440	16x31.5	0.97	450			
68	16x31.5	0.62	450	18x31	0.70	420			
100	18x31	0.60	354	18x41	0.56	405			