

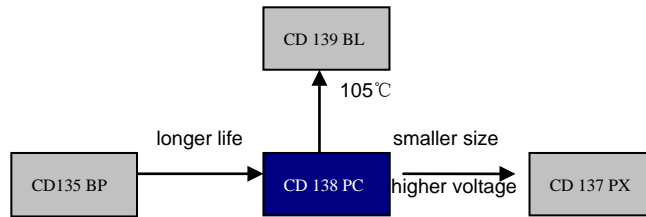
## 5000h at 85°C

### Features

- Long Life
- High Reliability
- RoHS Compliant

### Applications

- High Currents for High Professional
- Power Application and Inverters



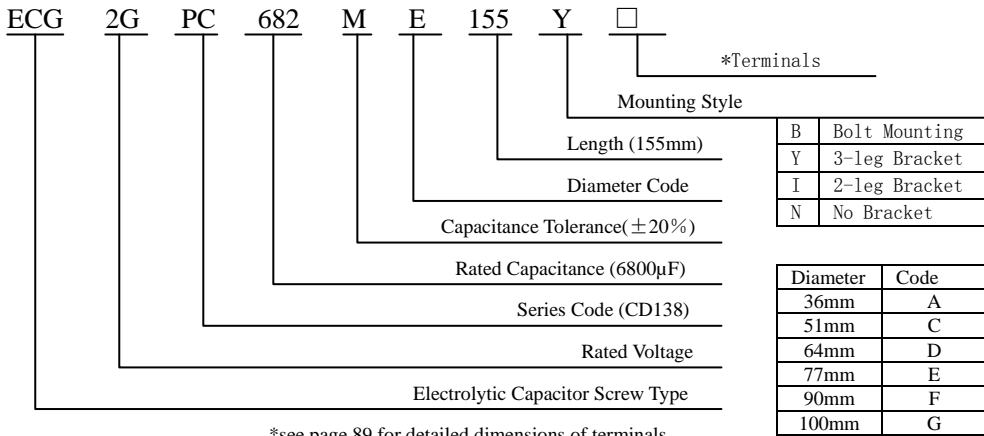
Items	Characteristics
Operating Temperature Range(°C)	-40 ~ +85
Voltage Range (V)	350~450
Capacitance Range(µF)	1000~18000
Capacitance Tolerance (20°C,120Hz)	±20%
Leakage Current (µA)	After 5 minutes at 20°C application of rated voltage, leakage current is not more than 0.01CV or 5mA, whichever is smaller . C: Nominal Capacitance(µF) V: Rated Voltage(V)
Dissipation Factor (20°C, 120Hz)	Less than 0.15
Stability at Low Temperature(120Hz)	$C(-25^{\circ}\text{C})/C(+20^{\circ}\text{C}) \geq 0.7$

Life Time	Useful Life		Load Life	Endurance Test	Shelf Life
	>10000h	>100000h	5000h	5000h	1000h
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value
Capacitance Change	Within ±30% of initial value		Within ±20% of initial value	Within ±10% of initial value	Within ±20% of initial value
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 130% of specified value	Not more than 200% of specified value
Condition: Applied Voltage Applied Current Applied Temperature	$U_R$ $I_R$ 85°C	$U_R$ $1.2 \times I_R$ 40°C	$U_R$ $I_R$ 85°C	$U_R$ $I_R = 0$ 85°C	<div style="border: 1px solid black; padding: 5px;">                     After test:  <math>U_R</math> to be applied for 60min&gt;24h before measurement                 </div>

# CD 138 PC SERIES

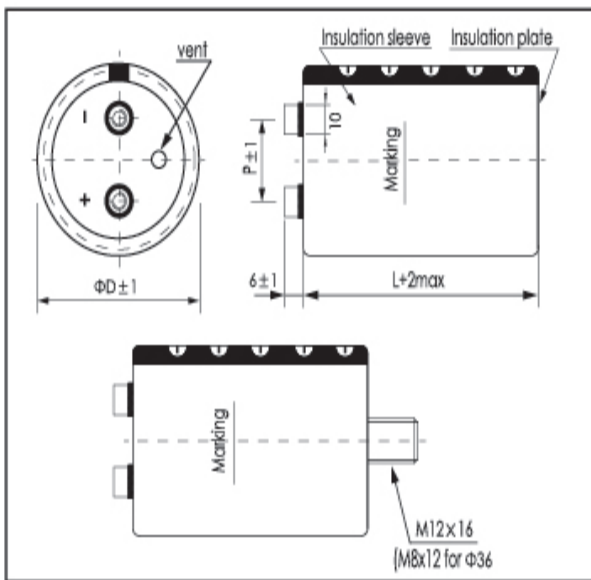


Part Number System (Ex:400v6800μF)



\*see page 89 for detailed dimensions of terminals.

## Dimensions mm



φ D/mm	51	64	77	90	101
P/mm	22.0	28.2	31.4	31.4	41.5

\*Hex head screw M5×10 and M6×12 are standard screws.

Longer screws are available on request.

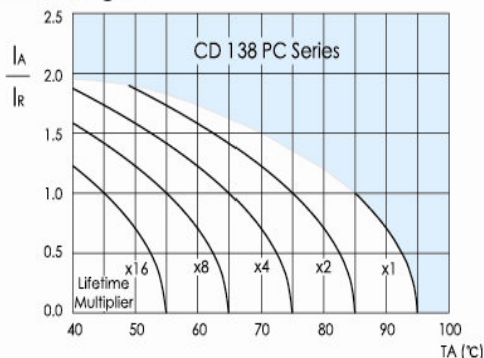
\*Max tightening torque for screw terminal M5:3Nm, M6:6Nm.

Max torque for bolt mounting M12:12.5Nm.

\*Screws, Bracket and cap nut will be delivered separately.

See "Accessories"(page 88.89) for shape and dimensions.

## Lifetime Diagram



$I_A$  = actual ripple current at 120Hz,  $I_R$  = rated ripple current at 120Hz, 85°C  
Multiplier of Useful Life as a function of ambient temperature and ripple current load

## Ripple Current Coefficient

Frequency(Hz)	50/60	120	300	1k	>10k
Coefficient	0.80	1.00	1.10	1.30	1.40

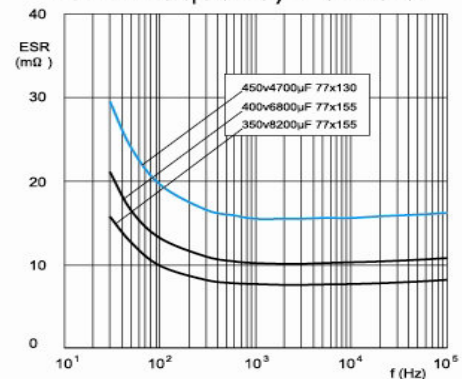
Ambient Temp (°C)	40	60	85
Coefficient	1.89	1.67	1.00

The useful life can be prolonged by operating capacitor at loads below the rated values (e.g.lower operating voltage, Rms ripple current or ambient temperature) and by appropriate cooling measures.

It is advisable not to apply a ripple current exceeding the rated ripple current without any cooling measures as this will shorten capacitor's life.

## Typical Curves

### ESR ~ Frequency f at 20°C



### Impedance Z ~ Frequency f at 20°C

