

20000h at 85°C

- Features
 - Longest useful life
 - High Reliability
 - RoHS Compliant
- Applications
 - Highest Professional Power
 - Application

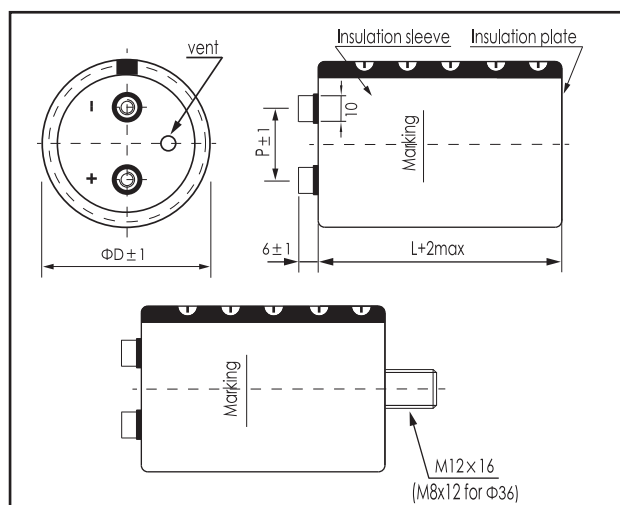


Items	Characteristics
Operating Temperature Range (°C)	-40 ~ +85
Voltage Range (V)	350 ~ 450
Capacitance Range (μF)	1000 ~ 15000
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current (μA)	After 5 minutes at 20°C application of rated voltage, leakage current is not more than 0.01CV or 5mA, whichever is smaller. C: Nominal Capacitance (μF) V: Rated Voltage (V)
Dissipation Factor (20°C, 120Hz)	Less than 0.15
Stability at Low Temperature (120Hz)	$C_{-25^{\circ}\text{C}} / C_{+20^{\circ}\text{C}} \geq 0.7$

	Useful Life		Load Life	Endurance Test	Shelf Life
Lifetime	>25000h	>250000h	20000h	20000h	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	$U_R = 0$ $I_R = 0$ 85°C After test: U_R to be applied for 60min >24h before measurement

Dimensions

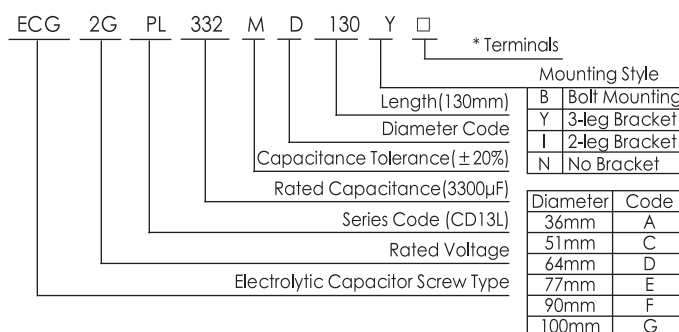
mm



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

*Hex head screw M5 x 10 and M6 x 12 are standard screws. Longer screws are available on request.
 *Max tightening torque for screw terminal M5: 3Nm, M6: 4Nm. Max torque for bolt mounting M12: 12.5Nm.
 *Screws, Bracket and cap nut will be delivered separately. See "Accessories" for shape and dimensions.

Part Number System (Ex: 400v3300μF)



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

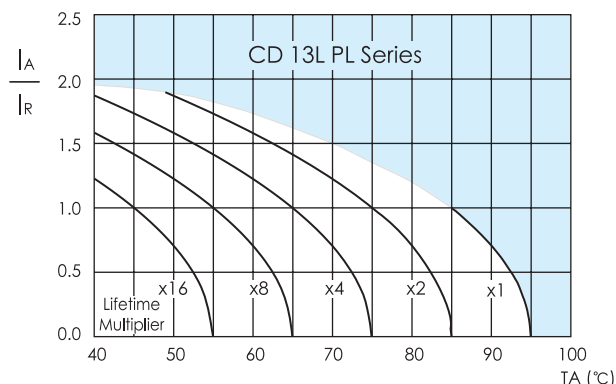
The useful life can be prolonged by operating capacitor at loads below the rated values (e.g. lower operating voltage, Rms ripple current or ambient temperature) and by appropriate cooling measures.
 It is advisable not to apply a ripple current exceeding the rated ripple current without any cooling measures as this will shorten capacitor's life.

Ratings for CD 13L PL Series

U _s (Surge Voltage) Code	Rated Capa- cance	Max.ESR 20℃, 120Hz	Typ ESR 20℃, 120Hz	Rated Ripple Current 85℃, 120Hz	Size ΦD x L	P/N
(V)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)	-
350 (400) 2V	1000	259	69	3.9	51×75	ECG2VPL102MC075□□
	1200	215	65	4.2	51×75	ECG2VPL122MC075□□
	1500	172	55	5.2	51×96	ECG2VPL152MC096□□
	1800	143	43	5.7	51×96	ECG2VPL182MC096□□
	2200	117	30	7.1	51×130	ECG2VPL222MC130□□
	2700	96	27	7.7	64×96	ECG2VPL272MD096□□
	3300	78	23	9.1	64×115	ECG2VPL332MD115□□
	3900	66	19	10.4	64×130	ECG2VPL392MD130□□
	4700	55	15	12.2	64×155	ECG2VPL472MD155□□
		55	16	11.5	77×115	ECG2VPL472ME115□□
	5600	46	13	14.6	64×195	ECG2VPL562MD195□□
		46	14	13.1	77×130	ECG2VPL562ME130□□
	6800	38	13	15.5	77×155	ECG2VPL682ME155□□
	8200	31	11	18.1	90×157	ECG2VPL822MF157□□
	10000	26	10	19.9	90×157	ECG2VPL103MF157□□
	12000	22	8	23.8	90×196	ECG2VPL123MF196□□
15000	17	6	28.8	90×236	ECG2VPL153MF236□□	
400 (450) 2G	1000	215	70	3.9	51×75	ECG2GPL102MC075□□
	1200	179	64	4.6	51×96	ECG2GPL122MC096□□
	1500	143	54	5.6	51×115	ECG2GPL152MC115□□
	1800	119	43	6.4	51×130	ECG2GPL182MC130□□
	2200	98	41	6.9	64×96	ECG2GPL222MD096□□
	2700	80	38	8.2	64×115	ECG2GPL272MD115□□
	3300	65	29	9.5	64×130	ECG2GPL332MD130□□
	3900	55	26	11.1	64×155	ECG2GPL392MD155□□
		55	28	10.4	77×115	ECG2GPL392ME115□□
	4700	46	20	13.4	64×195	ECG2GPL472MD195□□
		46	22	12.0	77×130	ECG2GPL472ME130□□
	5600	39	19	14.6	64×195	ECG2GPL562MD195□□
		39	19	14.0	77×155	ECG2GPL562ME155□□
	6800	32	17	16.5	90×157	ECG2GPL682MF157□□
	8200	26	15	18.1	90×157	ECG2GPL822MF157□□
	10000	22	12	21.7	90×196	ECG2GPL103MF196□□
12000	18	8	25.8	90×236	ECG2GPL123MF236□□	
450 (500) 2W	1000	215	70	4.2	51×96	ECG2WPL102MC096□□
	1200	179	66	5.0	51×115	ECG2WPL122MC115□□
	1500	143	54	5.9	51×130	ECG2WPL152MC130□□
	1800	119	44	6.3	64×96	ECG2WPL182MD096□□
	2200	98	42	7.4	64×115	ECG2WPL222MD115□□
	2700	80	40	8.6	64×130	ECG2WPL272MD130□□
	2700	80	42	8.7	77×115	ECG2WPL272ME115□□
	3300	65	31	10.2	64×155	ECG2WPL332MD155□□
		65	35	10.1	77×130	ECG2WPL332ME130□□
	3900	55	28	12.3	64×195	ECG2WPL392MD195□□
	4700	46	25	12.9	77×155	ECG2WPL472ME155□□
	5600	38	22	15.4	77×195	ECG2WPL562ME195□□
		38	24	14.9	90×157	ECG2WPL562MF157□□
	6800	32	21	18.0	90×196	ECG2WPL682MF196□□
	8200	27	18	19.8	90×196	ECG2WPL822MF196□□
	10000	22	16	23.6	90×236	ECG2WPL103MF236□□

Mounting code(" B" for bolt mounting, "Y/I/N" for bracket mounting)
Terminal options(A,B,C see "Dimensions" for details.)

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

Customer products are available on request.