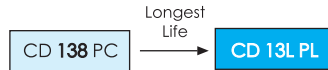


CD 13L PL SERIES



20000h at 85°C

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

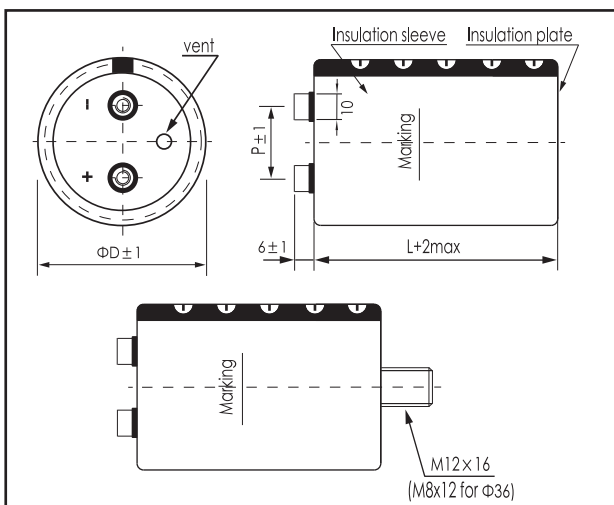


Items	Characteristics
Operating Temperature Range (°C)	-40 ~ +85
Voltage Range (V)	350 ~ 450
Capacitance Range (µF)	1000 ~ 15000
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current (µA)	After 5 minutes at 20°C application of rated voltage, leakage current is not more than 0.01CV or 5mA, whichever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

	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

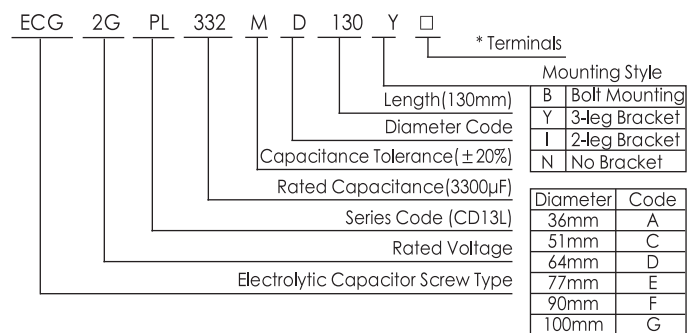
Dimensions

mm



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

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

*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.

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.



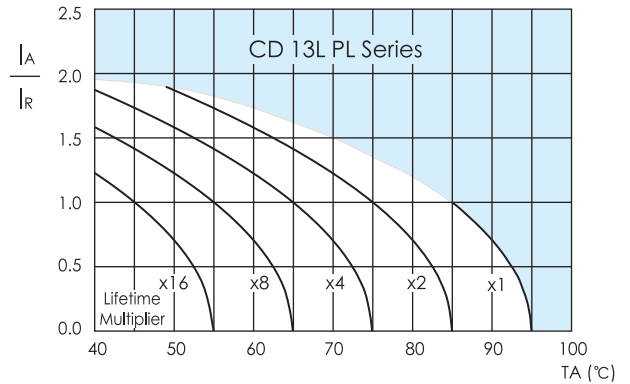
Ratings for CD 13L PL Series

U_r (Surge Voltage) Code	Rated Capacitance	Max.ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 85°C, 120Hz	Size $\Phi D \times L$	P/N
(V)	(μF)	(m Ω)	(m Ω)	(Arms)	(mm)	-
350 (400) 2V	1000	259	69	3.9	51 × 75	ECCG2VBL102MC075□□
	1200	215	65	4.2	51 × 75	ECCG2VBL122MC075□□
	1500	172	55	5.2	51 × 96	ECCG2VBL152MC096□□
	1800	143	43	5.7	51 × 96	ECCG2VBL182MC096□□
	2200	117	30	7.1	51 × 130	ECCG2VBL222MC130□□
	2700	96	27	7.7	64 × 96	ECCG2VBL272MD096□□
	3300	78	23	9.1	64 × 115	ECCG2VBL332MD115□□
	3900	66	19	10.4	64 × 130	ECCG2VBL392MD130□□
	4700	55	15	12.2	64 × 155	ECCG2VBL472MD155□□
		55	16	11.5	77 × 115	ECCG2VBL472ME115□□
	5600	46	13	14.6	64 × 195	ECCG2VBL562MD195□□
		46	14	13.1	77 × 130	ECCG2VBL562ME130□□
	6800	38	13	15.5	77 × 155	ECCG2VBL682ME155□□
	8200	31	11	18.1	90 × 157	ECCG2VBL822MF157□□
	10000	26	10	19.9	90 × 157	ECCG2VBL103MF157□□
	12000	22	8	23.8	90 × 196	ECCG2VBL123MF196□□
15000	17	6	28.8	90 × 236	ECCG2VBL153MF236□□	
400 (450) 2G	1000	215	70	3.9	51 × 75	ECCG2GBL102MC075□□
	1200	179	64	4.6	51 × 96	ECCG2GBL122MC096□□
	1500	143	54	5.6	51 × 115	ECCG2GBL152MC115□□
	1800	119	43	6.4	51 × 130	ECCG2GBL182MC130□□
	2200	98	41	6.9	64 × 96	ECCG2GBL222MD096□□
	2700	80	38	8.2	64 × 115	ECCG2GBL272MD115□□
	3300	65	29	9.5	64 × 130	ECCG2GBL332MD130□□
	3900	55	26	11.1	64 × 155	ECCG2GBL392MD155□□
		55	28	10.4	77 × 115	ECCG2GBL392ME115□□
	4700	46	20	13.4	64 × 195	ECCG2GBL472MD195□□
		46	22	12.0	77 × 130	ECCG2GBL472ME130□□
	5600	39	19	14.6	64 × 195	ECCG2GBL562MD195□□
		39	19	14.0	77 × 155	ECCG2GBL562ME155□□
	6800	32	17	16.5	90 × 157	ECCG2GBL682MF157□□
	8200	26	15	18.1	90 × 157	ECCG2GBL822MF157□□
	10000	22	12	21.7	90 × 196	ECCG2GBL103MF196□□
12000	18	8	25.8	90 × 236	ECCG2GBL123MF236□□	
450 (500) 2W	1000	215	70	4.2	51 × 96	ECCG2WBL102MC096□□
	1200	179	66	5.0	51 × 115	ECCG2WBL122MC115□□
	1500	143	54	5.9	51 × 130	ECCG2WBL152MC130□□
	1800	119	44	6.3	64 × 96	ECCG2WBL182MD096□□
	2200	98	42	7.4	64 × 115	ECCG2WBL222MD115□□
	2700	80	40	8.6	64 × 130	ECCG2WBL272MD130□□
	2700	80	42	8.7	77 × 115	ECCG2WBL272ME115□□
	3300	65	31	10.2	64 × 155	ECCG2WBL332MD155□□
		65	35	10.1	77 × 130	ECCG2WBL332ME130□□
	3900	55	28	12.3	64 × 195	ECCG2WBL392MD195□□
	4700	46	25	12.9	77 × 155	ECCG2WBL472ME155□□
	5600	38	22	15.4	77 × 195	ECCG2WBL562ME195□□
		38	24	14.9	90 × 157	ECCG2WBL562MF157□□
	6800	32	21	18.0	90 × 196	ECCG2WBL682MF196□□
	8200	27	18	19.8	90 × 196	ECCG2WBL822MF196□□
	10000	22	16	23.6	90 × 236	ECCG2WBL103MF236□□

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

Customer products are available on request.

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

