

Type CDLC Snap-In, Carboncap Power Ultracapacitors

Large Cylindrical Type



These low RC time constant, organic electrolyte, large cell ultracapacitors easily handle more than a half million duty cycles and solder readily onto circuit boards using snap-in terminals. They are especially suited for back-up and pulse power applications such as grid stabilization and wind turbine pitch control. Snap mount cells are ideal for portable devices, hybrid energy storage, and emergency lighting.

Highlights

- Board Mountable
- Solderable

Specifications

Operating Temperature Range	-40 °C to +65 °C
Storage Temperature Range	-40 °C to +70 °C
Rated Voltage Range	2.7 Vdc, 2.85 Vdc rated surge
Capacitance Range	100 F to 600 F
Capacitance Tolerance	-5% / +10%
Life at Room Temperature	10 years at rated voltage and 25 °C Capacitance change ≤20% ESR change ≤100%
Life Test	1000 h @ rated voltage and +65 °C Capacitance change ≤20% decrease from min. initial value ESR change ≤100% increase from max. initial value
Cycle Test	1,000,000 cycles (rated to half rated voltage at +25 °C) Capacitance change ≤20% ESR change ≤100%
Shelf Life	1000 h without voltage at +70 °C Capacitance change ≤20% from min. initial capacitance ESR change ≤100% from max. initial ESR
RoHS Compliant	

Ratings

Part Number	CDLC101K2R7SR	CDLC351K2R7SR	CDLC401K2R7SR	CDLC601K2R7SR
Terminal Configuration	Snap In	Snap In	Snap In	Snap In
Capacitance (F) (Discharge w constant current at 25°C)	100	350	400	600
ESR, DC (mΩ), Max	4.2	3.2	3.2	3.2
Current - Max Peak (A) (1 s discharge rate to 50% of rated Voltage)	95	223	237	277
Leakage current (mA), Max after 72 h at +25 °C	0.27	1	1.2	1.5
Usable Power Density, Pd (kW/kg) (Per IEC 62391-2)	10.2	4.1	3.6	2.9
Usable Power (W)	208	273	273	273
Impedance match power, (kW/kg)	21.7	8.6	7.4	5.9
Gravimetric energy density, Emax (Wh/kg)	5.1	5.4	5.3	6.3
Energy available (Wh) (At rated voltage)	0.1	0.35	0.41	0.61
Weight (kg)	0.02	0.066	0.077	0.096
Maximum Continuous Current (Arms) (ΔT=20°C)	13	24	24	28
Short circuit current (A)	643	844	844	844

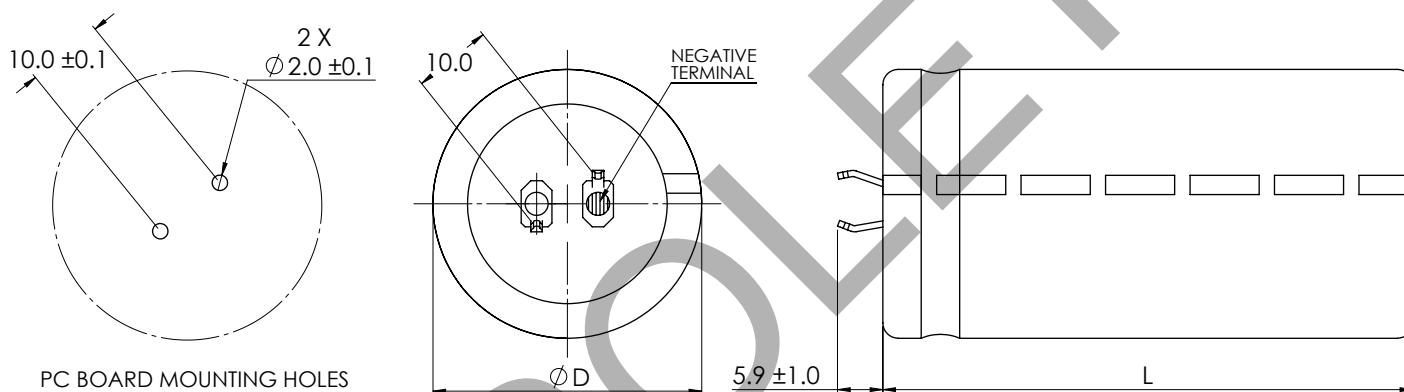
Type CDLC Snap-In, Carboncap Power Ultracapacitors

Large Cylindrical Type

Part Numbering System

CDLC	101	K	2R7	SR
Type	Capacitance (F)	Tolerance (%)	Voltage (V)	Configuration
CDLC - Carbon Double Layer Cell	101=100	K= -5 /+10%	2R7 = 2.7	SR = snap-in, 2 pins

Outline Drawing and Dimensions



Snap-In Type Part Number	Dimensions (mm)	
	D (+1/-0 mm)	L (±2 mm)
CDLC101K2R7SR	22	45
CDLC351K2R7SR	35	59
CDLC401K2R7SR	35	69
CDLC601K2R7SR	35	89

Do not reverse polarity.

Notice and Disclaimer: All product drawings, descriptions, specifications, statements, information and data (collectively, the "Information") in this datasheet or other publication are subject to change. The customer is responsible for checking, confirming and verifying the extent to which the Information contained in this datasheet or other publication is applicable to an order at the time the order is placed. All Information given herein is believed to be accurate and reliable, but it is presented without any guarantee, warranty, representation or responsibility of any kind, expressed or implied. Statements of suitability for certain applications are based on the knowledge that the Cornell Dubilier company providing such statements ("Cornell Dubilier") has of operating conditions that such Cornell Dubilier company regards as typical for such applications, but are not intended to constitute any guarantee, warranty or representation regarding any such matter – and Cornell Dubilier specifically and expressly disclaims any guarantee, warranty or representation concerning the suitability for a specific customer application, use, storage, transportation, or operating environment. The Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by Cornell Dubilier with reference to the use of any Cornell Dubilier products is given gratis (unless otherwise specified by Cornell Dubilier), and Cornell Dubilier assumes no obligation or liability for the advice given or results obtained. Although Cornell Dubilier strives to apply the most stringent quality and safety standards regarding the design and manufacturing of its products, in light of the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies or other appropriate protective measures) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage. Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated in such warnings, cautions and notes, or that other safety measures may not be required.