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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# Type CDLC Carboncap High-Power Axial-Terminal Ultracapacitors

## Large Cylindrical Type



These leading edge, low RC time constant, organic electrolyte, large cell ultracapacitors easily handle more than a million duty cycles and assemble readily into modules with screw terminals. They are especially suited for back-up and pulse power applications such as grid stabilization and wind turbine pitch control. They also excel in transportation applications like automotive subsystems, rail system power and utility vehicles.

### Highlights

- Maximum Power Performance. Up to 3000 Farads
- Very Low ESR Characteristics
- Available with Threaded Terminations

### 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	500,000 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
<b>RoHS Compliant</b>	

### Ratings

Part Number	CDLC122P2R7K04	CDLC152P2R7K04	CDLC202P2R7K04	CDLC302P2R7K04
Terminal Configuration	Threaded	Threaded	Threaded	Threaded
<b>Capacitance (F)</b> (Discharge w constant current at 25°C)	1200	1500	2000	3000
<b>ESR, DC (mΩ), Max</b>	0.58	0.47	0.35	0.29
<b>Current - Max Peak (A)</b> (1 s discharge rate to 50% of rated Voltage)	1000	1200	1600	2200
<b>Leakage current (mA), Max</b> after 72 h at +25 °C	2.7	3.0	4.2	5.2
<b>Usable Power Density, Pd (W/kg)</b> (Per IEC 62391-2)	5800	6600	6900	5900
<b>Usable Power (W)</b>	1508	1848	2484	3009
<b>Impedance match power, (W/kg)</b>	12,000	14,000	14,000	12,000
<b>Gravimetric energy density, Emax (Wh/kg)</b>	4.69	5.43	5.64	5.96
<b>Energy available (Wh)</b> (At rated voltage)	1.22	1.52	2.03	3.04
<b>Weight (kg)</b>	0.26	0.28	0.36	0.51
<b>Maximum Continuous Current (Arms)</b> (ΔT=15°C)	70	84	110	130
<b>Short circuit current (A)</b>	4700	5700	7700	9300

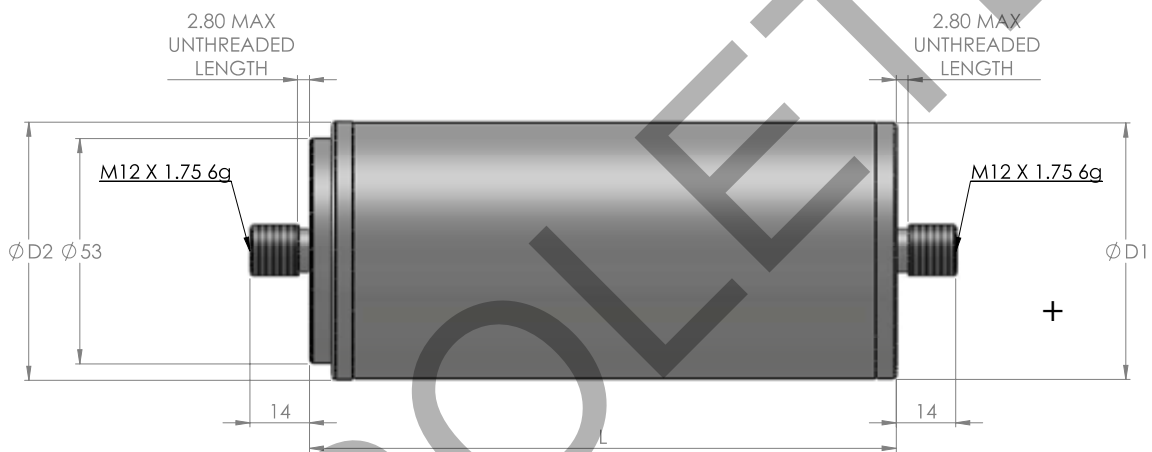
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### Part Numbering System

<b>CDLC</b>   Type	<b>302</b>   Capacitance (F)	<b>P</b>   Tolerance (%)	<b>2R7</b>   Voltage (V)	<b>K04</b>   Configuration
CDLC - Carbon Double Layer Cell	302 = 3000	P = -0% / +20%	2R7 = 2.7	K04 = Threaded studs

### Outline Drawing and Dimensions



Stud Mount Type Part Description	Dimensions (mm)		
	L (±0.3mm)	D1 (±0.2mm)	D2 (±0.7mm)
<b>CDLC122P2R7K04</b>	74	60.4	60.7
<b>CDLC152P2R7K04</b>	85	60.4	60.7
<b>CDLC202P2R7K04</b>	102	60.4	60.7
<b>CDLC302P2R7K04</b>	138	60.4	60.7

Do not reverse polarity.  
Certified to UL810a, File # MH48530.

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OBSOLETE