Type CDLC Axial 3000 F, Ultracapacitors

Large Cylindrical Type 3000 F

This leading edge large cell ultracapacitor, with low RC time constants, offers flexible mounting with two M6 thread holes on each end in weldable terminals. They are especially suited for back-up and pulse power applications such as grid stabilization and wind turbine pitch control. When assembled into modules, the low connection resistance design excels in transportation applications like automotive subsystems, rail system power and utility vehicles.

Highlights

- Maximum Power Performance at 3000 Farads
- Very Low ESR
-Low Thermal Resistance (4 ºC/W)

Specifications

Operating Temperature Range **Storage Temperature Range**	–40 °C to +65 °C –40 °C to +70 °C
Rated Voltage Range	2.7 Vdc, 2.85 Vdc rated surge
Capacitance Range	3000 F
Capacitance Tolerance	0% / +10%
Life at Room Temperature	10 years at rated voltage and 25 ºC Capacitance change ≤20% ESR change ≤100%
Life Test	1000 h @ rated voltage and +65 ºC Capacitance change ≤20% decrease from initial specified value ESR change ≤100% increase from initial specified value
Cycle Test	>1,000,000 cycles (rated to half rated voltage at +25 ºC) Capacitance change ≤20% ESR change ≤100%
Shelf Life	1000 h without voltage at +70 ºC Capacitance change ≤20% from min. initial capacitance ESR change ≤100% from max. initial ESR
RoHS Compliant	

Ratings

Part Number	**CDLC302P2R7LR**
Terminal Configuration	Axial M6 Threaded Tap
Capacitance (F) (Discharge w constant current at 25 °C)	3000
ESR, DC (mΩ), Max	0.26
Current - Max Peak (A) (1 s discharge rate to 50% of rated Voltage)	2300
Leakage current (mA), Max after 72 h at +25 °C	5
Usable Power Density, Pd (W/kg) (Per IEC 62391-2)	6600
Usable Power (W)	3365
Impedance match power, (W/kg)	16200
Gravimetric energy density, Emax (Wh/kg)	6.0
Energy available (Wh) (At rated voltage)	3.04
Weight (kg)	0.51
Maximum Continuous Current (Arms) (for +20 °C temperature rise)	145
Short circuit current (A)	10,000

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Part Numbering System

CDLC	302	P	2R7	LR
Type	**Capacitance (F)**	**Tolerance (%)**	**Voltage (V)**	**Configuration**
CDLC - Carbon Double Layer Cell	**302 =** 3000	**P = 0 /+10%**	**2R7** = 2.7	**LR** = axial M6 thread tap

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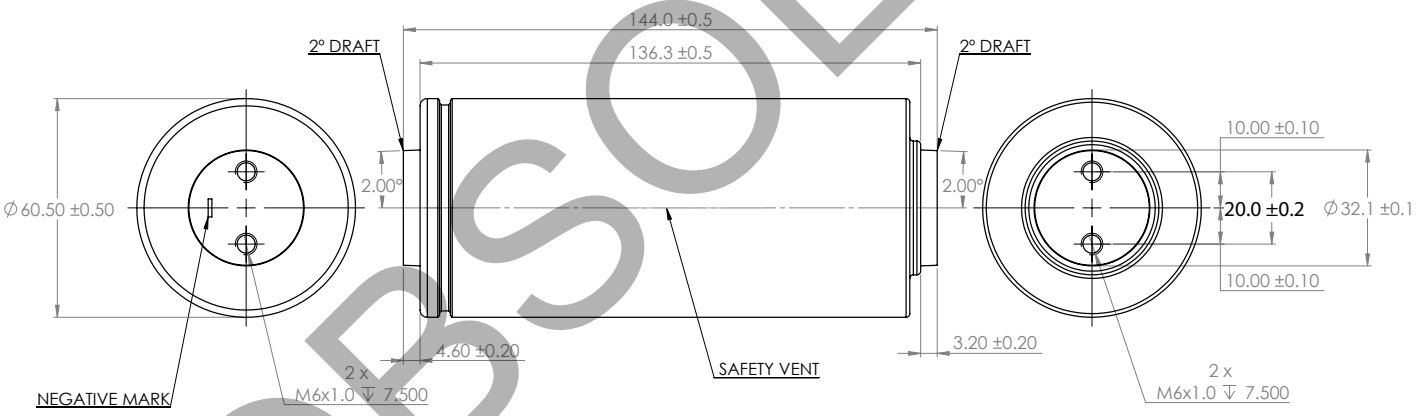
Outline Drawing and Dimensions



Max. Torque: 5 Nm (44 Inch/Lbs)

Do not reverse polarity.

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