



Document Number	V0_20151006
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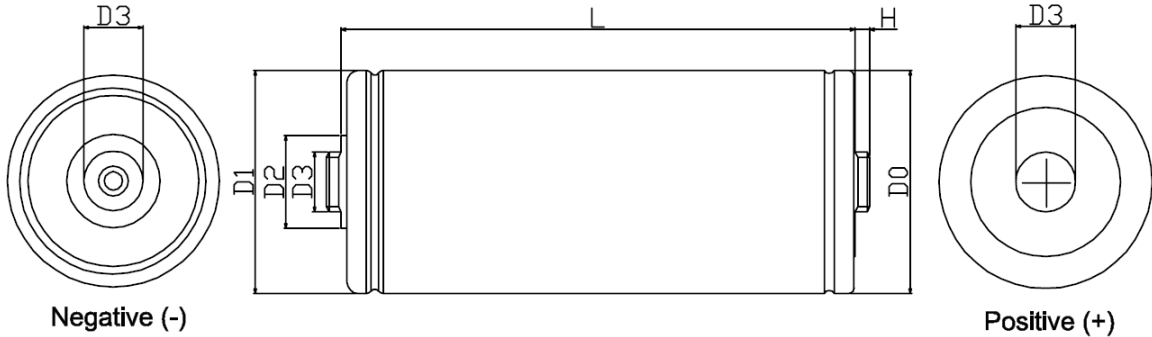
Product Specification

LSUC 02R85C 3400F EA ST01
LSUC 02R85C 3400F EA WT01
LSUC 02R85C 3400F EA LT01
LSUC 02R85C 3400F EA LT02



Product Specification

Physical Properties



Specification

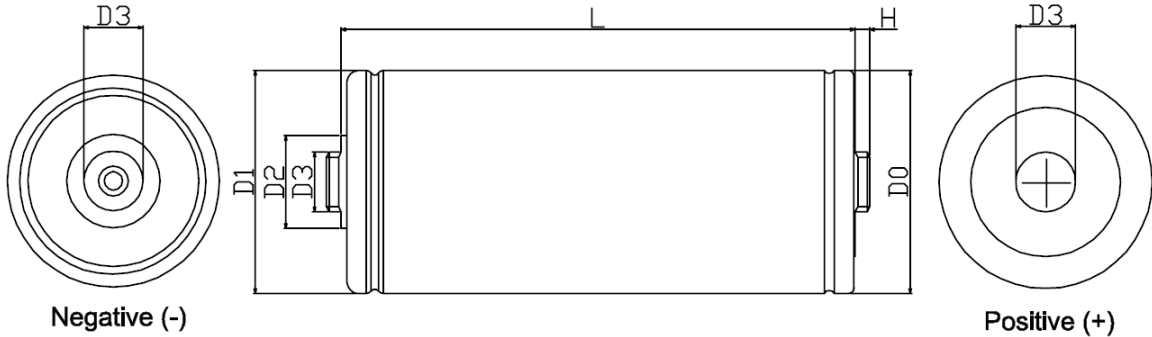
Rated Voltage	2.85 V	
Surge Voltage	3 V	
Capacitance Tolerance	0% / +20%	
Resistance Tolerance	< Spec. Value	
Operating temperature range	-40 ~ 65 °C	
Storage temperature range	-40 ~ 70 °C	
Endurance Life (65°C)	1500 Hours	
	Capacitance change	Within 20% of initially specified value
	Internal resistance change	Within 100% of initially specified value
Life Time (25°C)	10 Years at rated voltage and +25°C	
	Capacitance change	Within 20% of initially specified value
	Internal resistance change	Within 100% of initially specified value
Cycle Life (25°C)	1,000,000 Cycles between rated voltage to half rated voltage at +25°C	
	Capacitance change	Within 20% of initially specified value
	Internal resistance change	Within 100% of initially specified value
Shelf Life (25°C)	4 Years stored uncharged state at +25°C	
Certifications	ROHS, REACH	
Shock & Vibration	IEC 61373, IEC 60068	

Standard Ratings

Part number	Capacitance (F)	DC ESR (mΩ)	Max. Current (A)	Leakage Current (mA)	Max. Stored Energy (Wh)	Weight (g)
LSUC 02R85C 3400F EA ST01	3400	0.23	2,719	< 8	3.84	515
	Dimension (mm)					
	D0 (+ 0.6)	D1 (± 0.7)	D2 (±0.1)	D3	H (±0.1)	L (±0.5)
	Ø 60	Ø 60.7	Ø 25	M16, P1.0	4	138

Product Specification

Physical Properties



Specification

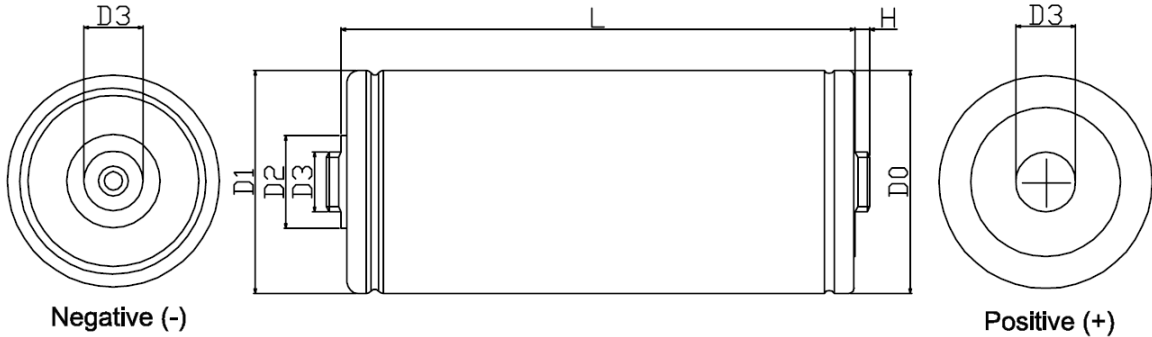
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Surge Voltage	3 V	
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Operating temperature range	-40 ~ 65 °C	
Storage temperature range	-40 ~ 70 °C	
Endurance Life (65 °C)	1500 Hours	
	Capacitance change	Within 20% of initially specified value
	Internal resistance change	Within 100% of initially specified value
Life Time (25 °C)	10 Years at rated voltage and +25 °C	
	Capacitance change	Within 20% of initially specified value
	Internal resistance change	Within 100% of initially specified value
Cycle Life (25 °C)	1,000,000 Cycles between rated voltage to half rated voltage at +25 °C	
	Capacitance change	Within 20% of initially specified value
	Internal resistance change	Within 100% of initially specified value
Shelf Life (25 °C)	4 Years stored uncharged state at +25 °C	
Certifications	ROHS, REACH	
Shock & Vibration	IEC 61373, IEC 60068	

Standard Ratings

Part number	Capacitance (F)	DC ESR (mΩ)	Max. Current (A)	Leakage Current (mA)	Max. Stored Energy (Wh)	Weight (g)
LSUC 02R85C 3400F EA WT01	3400	0.23	2,719	< 8	3.84	515
	Dimension (mm)					
	D0 (+ 0.6)	D1 (± 0.7)	D2 (±0.1)	D3 (±0.05)	H (±0.125)	L (±0.5)
	Ø 60	Ø 60.7	Ø 25	Ø 14	3.18	138

Product Specification

Physical Properties



Specification

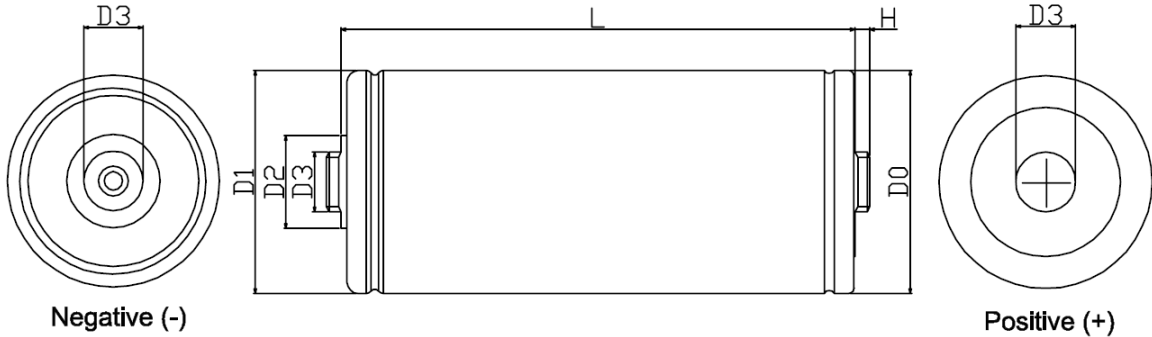
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Surge Voltage	3 V	
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	Internal resistance change	Within 100% of initially specified value
Cycle Life (25 °C)	1,000,000 Cycles between rated voltage to half rated voltage at +25 °C	
	Capacitance change	Within 20% of initially specified value
	Internal resistance change	Within 100% of initially specified value
Shelf Life (25 °C)	4 Years stored uncharged state at +25 °C	
Certifications	ROHS, REACH	
Shock & Vibration	IEC 61373, IEC 60068	

Standard Ratings

Part number	Capacitance (F)	DC ESR (mΩ)	Max. Current (A)	Leakage Current (mA)	Max. Stored Energy (Wh)	Weight (g)
LSUC 02R85C 3400F EA LT01	3400	0.23	2,719	< 8	3.84	525
	Dimension (mm)					
	D0 (+ 0.6)	D1 (± 0.7)	D2 (±0.1)	D3	H (±0.1)	L (±0.5)
	∅ 60	∅ 60.7	∅ 25	M16, P2.0	14	138

Product Specification

Physical Properties



Specification

Rated Voltage	2.85 V	
Surge Voltage	3 V	
Capacitance Tolerance	0% / +20%	
Resistance Tolerance	< Spec. Value	
Operating temperature range	-40 ~ 65 °C	
Storage temperature range	-40 ~ 70 °C	
Endurance Life (65 °C)	1500 Hours	
	Capacitance change	Within 20% of initially specified value
	Internal resistance change	Within 100% of initially specified value
Life Time (25 °C)	10 Years at rated voltage and +25 °C	
	Capacitance change	Within 20% of initially specified value
	Internal resistance change	Within 100% of initially specified value
Cycle Life (25 °C)	1,000,000 Cycles between rated voltage to half rated voltage at +25 °C	
	Capacitance change	Within 20% of initially specified value
	Internal resistance change	Within 100% of initially specified value
Shelf Life (25 °C)	4 Years stored uncharged state at +25 °C	
Certifications	ROHS, REACH	
Shock & Vibration	IEC 61373, IEC 60068	

Standard Ratings

Part number	Capacitance (F)	DC ESR (mΩ)	Max. Current (A)	Leakage Current (mA)	Max. Stored Energy (Wh)	Weight (g)
LSUC 02R85C 3400F EA LT02	3400	0.23	2,719	< 8	3.84	525
	Dimension (mm)					
	D0 (+0.6)	D1 (±0.7)	D2 (±0.1)	D3	H (±0.1)	L (±0.5)
	∅ 60	∅ 60.7	∅ 25	M12, P1.75	14	138

Technical Information (1)

How to calculate specification value

1. The Measurement Methods

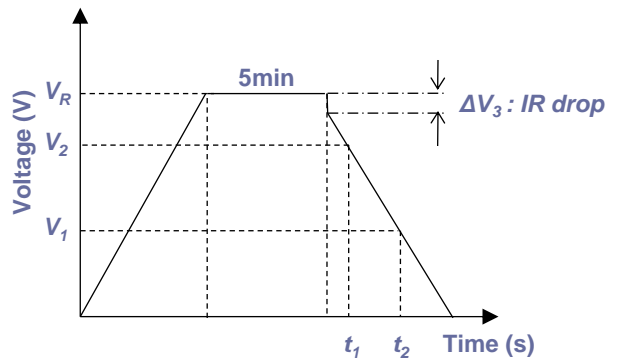
1-1 Capacitance

Apply rated voltage and charge for 5min after the constant current / constant voltage power supply has achieved the rated voltage. After a charge for 5min has finished, discharge with 10mA/F to 0.1V.

Measure the time t_1 to t_2 where the voltage between capacitor terminals at the time of discharge reduces from V_1 to V_2 as shown figure and calculate the capacitance value by the following formula:

- 1) Constant current charge with 10mA/F to V_R
- 2) Constant voltage charge at V_R for 5min
- 3) Constant current discharge with 10mA/F to 0.1V

$$C = \frac{I \times (t_2 - t_1)}{V_2 - V_1}$$

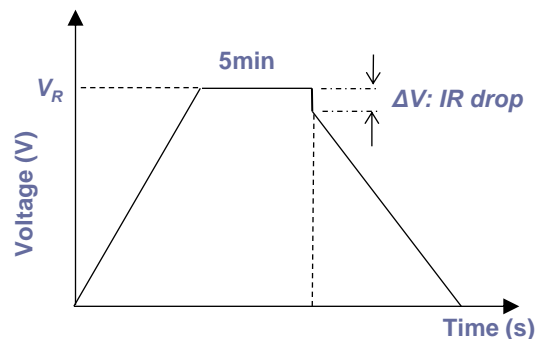


1-2 DC ESR (Equivalent Series Resistance)

DC ESR of a capacitor shall be calculated by the following formula;

$$R_{DC} = \frac{\Delta V}{I_{DC}}$$

Where R_{DC} is the DC internal resistance (Ω);
 V is the effective value of AC voltage (V);
 ΔV is the drop voltage for 10ms (V);
 I_{DC} is the discharge current (A); 100A;



Technical Information (2)

1-3 Leakage Current

The leakage current shall be measured using the direct voltage appropriate to the test temperature(25 °C) for 72hrs.

1-4 Maximum current

Current for 1sec discharge from the rated voltage to the half of it in constant current discharge,

$$I_{Max} = \frac{V_R - 0.5 \cdot V_R}{\Delta t / C + R_{DC}}$$

Where I_{Max} is the Maximum current (A);
 Δt is the discharge time (sec), 1 sec in this case ;
 C is the capacitance (F);
 R_{DC} is the DC resistance (Ω);
 V_R is the rated voltage (V).

1-5 Maximum stored energy (E_{MAX})

$$E_{MAX} (Wh) = \frac{\frac{1}{2} CV_R^2}{3600}$$

2. The Standard Atmospheric Condition for Measurement

All test and measurements shall be made under standard atmospheric conditions for testing. Before the measurements are made, the capacitor shall be stored at the measuring temperature for a time sufficient to allow the entire capacitor to reach this temperature. The period as prescribed for recovery at the end of a test is a normally sufficient for this purpose.

Temperature : 15~35 °C
 Relative humidity : 25~75%
 Air Pressure : 86~106 kPa