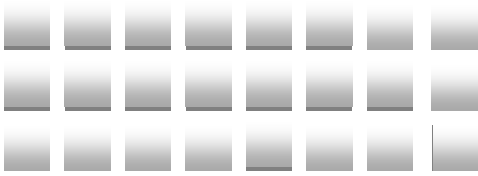
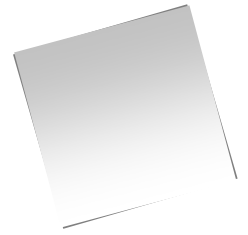


Always with our Customer

Electric Double Layer Capacitor

LS Ultracapacitor

Next-generation Energy Storage of Low Resistance and Great Reliability



Data Sheet



About LS Cable Ltd.

LS Cable is the flagship company of LS group which was divided from LG group in 2003 to concentrate our specialized industry. LS group is focusing on industrial system, electric power, energy and electronic components.

LS Cable is No. 1 cable maker in Korea and creating new business particularly in component and materials industry like Ultracapacitor. LS Cable makes its best to accomplish the vision, 'Your No.1 Creative Partner' and be one of the world leaders with high technology and best level of service.

About LS Ultracapacitor

LS Ultracapacitor is one of promising energy storage device like fuel cell and advanced rechargeable batteries. LS Ultracapacitor can complement advanced rechargeable batteries and conventional capacitor in terms of power and energy density. Furthermore, wide operating temperature (-40 °C ~ 60 °C) and high reliability of LS Ultracapacitor enable to use in various applications.

Notes

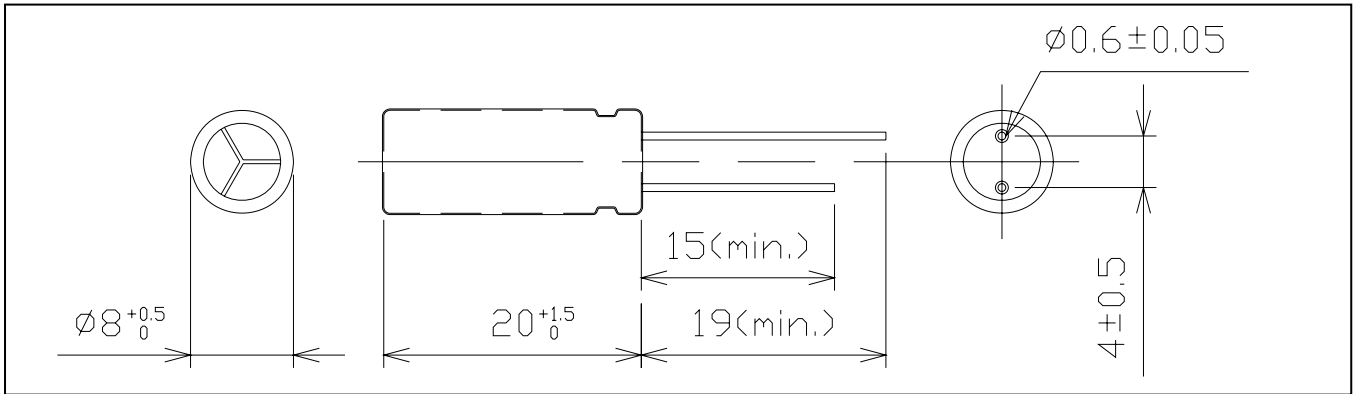
- Do not reverse polarity.
- Do not overcharge.
- Do not open.
- Do not put into fire.
- Do not deform terminals.
- Use capacitors according to operating temperature.

Electric Double Layer Capacitor
LS Ultracapacitor

3F / 2.7V



Dimension



Specifications

Item		LS Ultracapacitor		Standard
Rated Capacitance		F	3	
Capacitance Tolerance		%	-10 / +20	
Rated Voltage, V_R		V	2.7	
Leakage Current		mA	Max 1.0	12hrs, 25°C
Internal Resistance (ESR)	AC	mΩ	Below 60	1kHz
	DC	mΩ	Below 100	
Specific Energy Density	Gravimetric	Wh/kg	2.03	
	Volumetric	Wh/L	3.01	
Operating Temperature		°C	-40 ~ 60	
Storage Temperature		°C	-40 ~ 70	
Cycle Life (25°C, V_R)		cycles	500,000	$\Delta C < 30\%$ decrease, ESR < 400% increase
Life Time (25°C, V_R)		year	10	$\Delta C < 30\%$ decrease, ESR < 400% increase
Dimension		mm	$\Phi 8 \times L 20$	
Weight		g	1.5	
Volume		ml	1.01	

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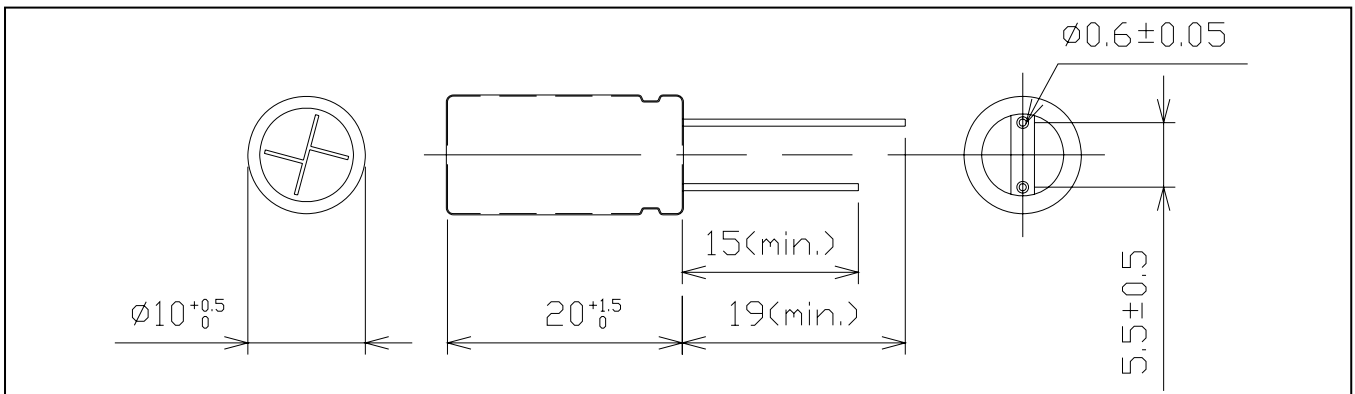
Website: www.lscable.com

Electric Double Layer Capacitor LS Ultracapacitor

5F / 2.7V



Dimension



Specifications

Item	LS Ultracapacitor		Standard	
Rated Capacitance	F	5		
Capacitance Tolerance	%	-10 / +20		
Rated Voltage, V_R	V	2.7		
Leakage Current	mA	Max 1.2	12hrs, 25°C	
Internal Resistance (ESR)	AC	m Ω	Below 50	1kHz
	DC	m Ω	Below 75	
Specific Energy Density	Gravimetric	Wh/kg	2.53	
	Volumetric	Wh/L	3.16	
Operating Temperature	°C	-40 ~ 60		
Storage Temperature	°C	-40 ~ 70		
Cycle Life (25°C, V_R)	cycles	500,000	$\Delta C < 30\%$ decrease, ESR < 400% increase	
Life Time (25°C, V_R)	year	10	$\Delta C < 30\%$ decrease, ESR < 400% increase	
Dimension	mm	$\Phi 10 \times L 20$		
Weight	g	2.5		
Volume	ml	1.6		

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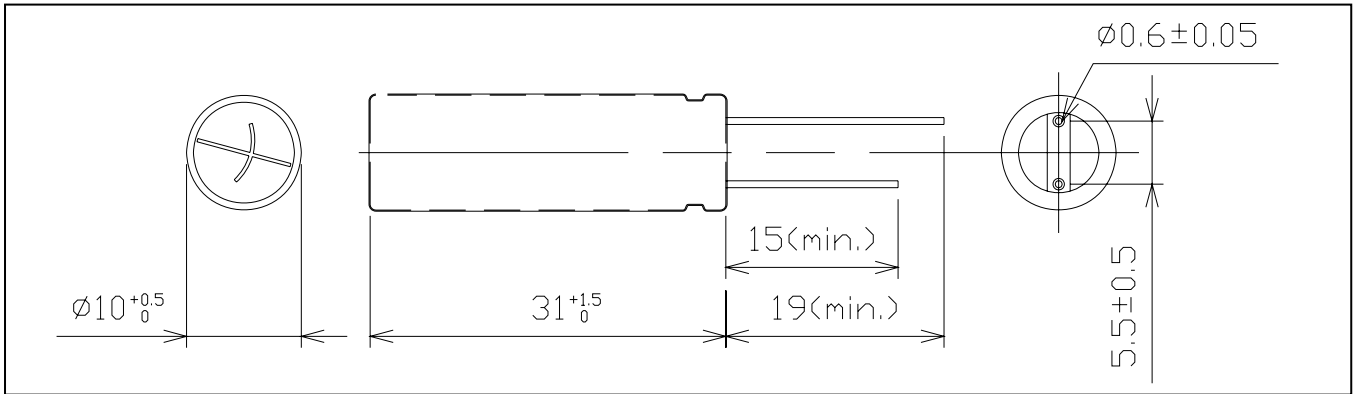
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Electric Double Layer Capacitor LS Ultracapacitor

10F / 2.7V



Dimension



Specifications

Item	LS Ultracapacitor		Standard	
Rated Capacitance	F	10		
Capacitance Tolerance	%	-10 / +20		
Rated Voltage, V_R	V	2.7		
Leakage Current	mA	Max 1.4	12hrs, 25°C	
Internal Resistance (ESR)	AC	m Ω	Below 30	1kHz
	DC	m Ω	Below 50	
Specific Energy Density	Gravimetric	Wh/kg	2.89	
	Volumetric	Wh/L	4.31	
Operating Temperature	°C	-40 ~ 60		
Storage Temperature	°C	-40 ~ 70		
Cycle Life (25°C, V_R)	cycles	500,000	$\Delta C < 30\%$ decrease, ESR < 400% increase	
Life Time (25°C, V_R)	year	10	$\Delta C < 30\%$ decrease, ESR < 400% increase	
Dimension	mm	$\phi 10 \times L 31$		
Weight	g	3.5		
Volume	ml	2.35		

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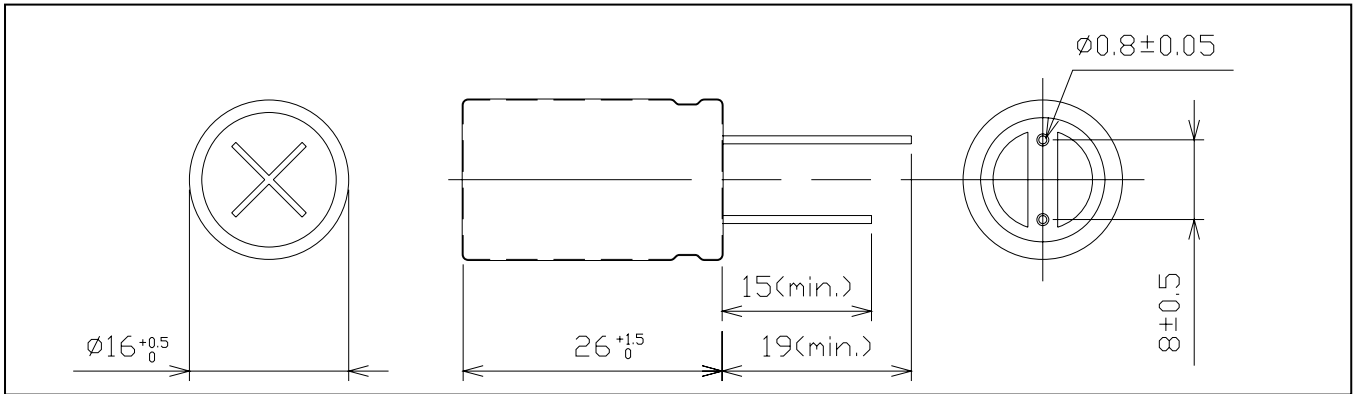
Website: www.lscable.com

Electric Double Layer Capacitor
LS Ultracapacitor

25F / 2.7V



Dimension



Specifications

Item		LS Ultracapacitor		Standard
Rated Capacitance		F	25	
Capacitance Tolerance		%	-10 / +20	
Rated Voltage, V _R		V	2.7	
Leakage Current		mA	Max 1.5	12hrs, 25°C
Internal Resistance (ESR)	AC	mΩ	Below 20	1kHz
	DC	mΩ	Below 30	
Specific Energy Density	Gravimetric	Wh/kg	3.89	
	Volumetric	Wh/L	4.87	
Operating Temperature		°C	-40 ~ 60	
Storage Temperature		°C	-40 ~ 70	
Cycle Life (25°C, V _R)		cycles	500,000	ΔC<30% decrease, ESR< 400% increase
Life Time (25°C, V _R)		year	10	ΔC<30% decrease, ESR< 400% increase
Dimension		mm	Φ 16 x L 26	
Weight		g	6.5	
Volume		ml	5.2	

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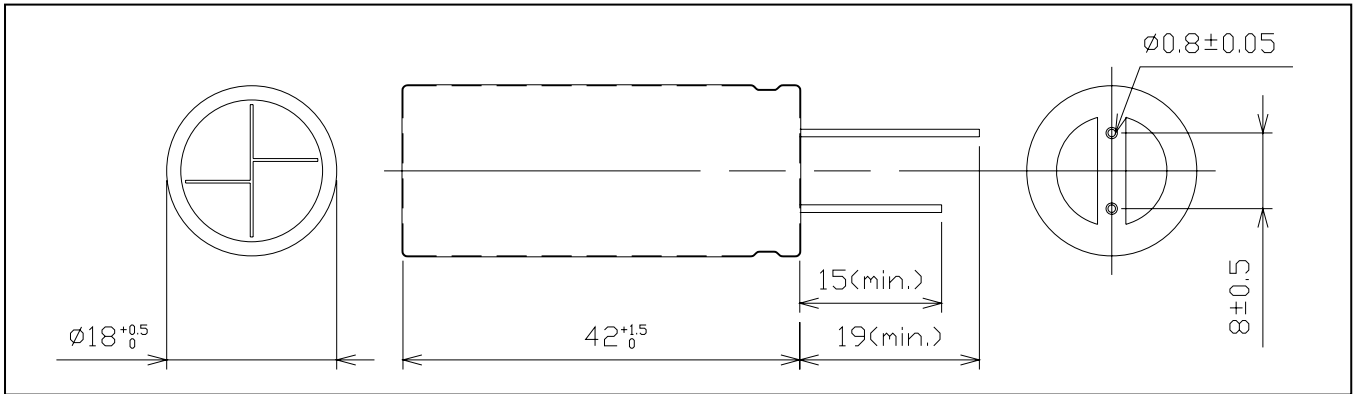
Website: www.lscable.com

Electric Double Layer Capacitor
LS Ultracapacitor

50F / 2.7V



Dimension



Specifications

Item		LS Ultracapacitor		Standard
Rated Capacitance		F	50	
Capacitance Tolerance		%	-10 / +20	
Rated Voltage, V_R		V	2.7	
Leakage Current		mA	Max 1.6	12hrs, 25°C
Internal Resistance (ESR)	AC	mΩ	Below 15	1kHz
	DC	mΩ	Below 25	
Specific Energy Density	Gravimetric	Wh/kg	3.61	
	Volumetric	Wh/L	4.96	
Operating Temperature		°C	-40 ~ 60	
Storage Temperature		°C	-40 ~ 70	
Cycle Life (25°C, V_R)		cycles	500,000	$\Delta C < 30\%$ decrease, ESR < 400% increase
Life Time (25°C, V_R)		year	10	$\Delta C < 30\%$ decrease, ESR < 400% increase
Dimension		mm	$\phi 18 \times 42$	
Weight		g	14	
Volume		ml	10.2	

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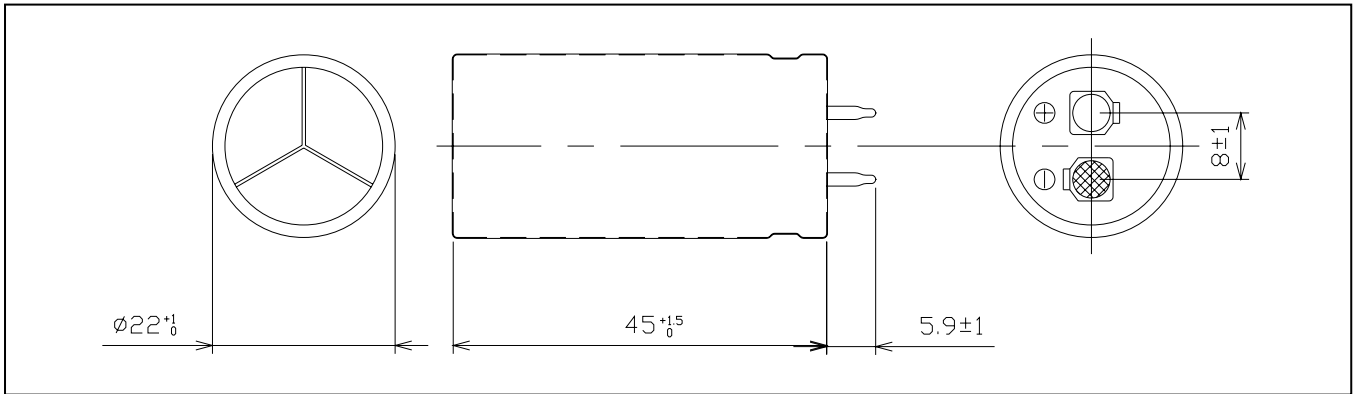
Website: www.lscable.com

**Electric Double Layer Capacitor
LS Ultracapacitor**

100F / 2.7V



Dimension



Specifications

Item		LS Ultracapacitor		Standard
Rated Capacitance		F	100	
Capacitance Tolerance		%	-10 / +20	
Rated Voltage, V_R		V	2.7	
Leakage Current		mA	Max 1.7	12hrs, 25 °C
Internal Resistance (ESR)	AC	m Ω	Below 10	1kHz
	DC	m Ω	Below 13	
Specific Energy Density	Gravimetric	Wh/kg	4.50	
	Volumetric	Wh/L	5.92	
Operating Temperature		°C	-40 ~ 60	
Storage Temperature		°C	-40 ~ 70	
Cycle Life (25 °C, V_R)		cycles	500,000	$\Delta C < 30\%$ decrease, ESR < 400% increase
Life Time (25 °C, V_R)		year	10	$\Delta C < 30\%$ decrease, ESR < 400% increase
Dimension		mm	$\Phi 22 \times 45$	
Weight		g	22.5	
Volume		ml	17.1	

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