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# Product specification

LSUM 051R3C 0166F EA



# Product specification

## ■ Specification

### 1. Primary specification

Part number	Capacitance (F)	Max. ESR (mΩ)_DC	Max. Current (A) Non-repeated (Calculated value)	Leakage Current (mA)
LSUM 051R3C 0166F EA	166	5	2,300	< 28.5

### 2. Power & Energy

Part number	Usable Specific Power, $P_d$ (W/kg) <sup>1</sup>	Impedance Match Specific Power, $P_{max}$ (W/kg) <sup>2</sup>	Energy Density (Wh/kg)	Max. Stored Energy (Wh)
LSUM 051R3C 0166F EA	5,200	10,900	5.1	60.7

### 3. Standard & Reliability

Rated Voltage	51.3V		
Max. Voltage <sup>3</sup>	54.0V		
Maximum series Voltage	750V		
Capacitance Tolerance	0% / +20%		
Operating temperature range	-40 ~ 65 °C		
Storage temperature range	-40 ~ 70 °C		
Max. continuous current <sup>4</sup>	$\Delta T = 15$ °C	60A	
	$\Delta T = 40$ °C	100A	
Endurance Life (65°C)	1,500 Hours		
	Capacitance change	Within 20% of initially specified value	
	ESR change	Within 100% of initially specified value	
Projected Life Time (25°C)	10 Years at rated voltage		
	Capacitance change	Within 20% of initially specified value	
	ESR change	Within 100% of initially specified value	
Projected Cycle Life (25°C) <sup>5</sup>	1,000,000 Cycles		
	Capacitance change	Within 20% of initially specified value	
	ESR change	Within 100% of initially specified value	
Shelf Life (25°C)	4 Years stored uncharged state		
Certifications	REACH, UL810A		

### 4. Monitoring

Part number	Temperature sensor	Temperature interface	Connector	Cell voltage monitoring	Balancing
LSUM 051R3C 0166F EA	PTC Thermistor	Analog	4pin connector	Over voltage alarm	Active & Passive

\*Remarks

1) Usable specific power

$$P_d = \frac{0.12 \times V^2}{ESR \times mass}$$

2) Impedance match specific power

$$P_{max} = \frac{V^2}{4 \times ESR \times mass}$$

3) Non repeated, not to exceed 1sec.

4) Initial state value.

5) Actual cycle value can be subject to various application conditions.

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## Safety & Physical Protection

Part number	Isolation voltage (DC)	Short circuit current(A)	Power Terminals	Recommended Torque - Terminal
LSUM 051R3C 0166F EA	2.5kV	10,200	M8 / M10	20 / 30Nm

Dimension in mm (not to scale)

## Geometric properties

Part number	Dimension (mm)			Max. Weight (kg)
	Length	Wide	Height	
LSUM 051R3C 0166F EA	590.4±1.0	136.0±1.0	181.0±1.0	12

