

Datasheet

48V 66F Ultra capacitor Module



GTSM-48V66FUS



FEATURES AND BENEFITS

- Compact, fully enclosed splash proof design
- Highest power performance
- Individually balanced cells
- Over 1,000,000 duty cycles
- Ultra-low internal resistance

TYPICAL APPLICATIONS

- Electric vehicle
- Fork lift, Cranes
- Telecommunications
- Railway transportation
- Engine starting

SPECIFICATIONS

ELECTRICAL

Capacitance

Nominal capacitance	66 F
Capacitance tolerance	+20% / -10%

Voltage

Rated voltage	48 V
Absolute Maximum Voltage	51 V
Maximum Series Voltage	750 V

Resistance

ESR, DC	10.4mΩ
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Current

Maximum continuous current ($\Delta T=40^{\circ}\text{C}$)	80 A
Maximum peak current, 1 sec.	950A
Maximum leakage current	2.5mA

TEMPERATURE

Operating temperature range

(Cell case temperature)	-40°C to +65°C
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Storage temperature range

(Storage uncharged)	-40°C to +70°C
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PHYSICAL

Weight	10 kg
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Power Terminals	M8/M10
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Recommended Torque - Terminal	20/30 Nm
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Vibration Specification	GB-T 11287-2000
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Shock Specification	GBT 14537-1993
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Environmental Protection	IP65
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MONITORING / CELL VOLTAGE MANAGEMENT

Internal Temperature Sensor	NTC Thermistor
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Cell Voltage Monitoring	Overvoltage Alarm
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POWER AND ENERGY

Usable power density (Pd)	2658 W/kg
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Impedance match power density (Pmax)	5538 W/kg
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Gravimetric energy density (E _{max})	2.1Wh/kg
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Energy available	21.1 Wh
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LIFE

High Temperature (at Rated Voltage & Maximum operating Temperature)	1,500 hours
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Capacitance change (% decrease from minimum initial value)	≤20%
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ESR change (% increase from minimum initial value)	≤100%
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Room Temperature (at Rated Voltage at 25°C)	10 years
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Capacitance change (% decrease from minimum initial value)	≤20%
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ESR change (% increase from minimum initial value)	≤100%
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Cycle Life (Number of cycles)	1,000,000 times
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Capacitance change (% decrease from minimum initial value)	≤20%
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ESR change (% increase from minimum initial value)	≤100%
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Shelf Life (Stored uncharged up to a maximum storage temperature)	2 years
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SAFETY

Short circuit current (I_{sc}) (Current possible with short circuit from rated voltage. Do not use as an operating current.)	4000 A
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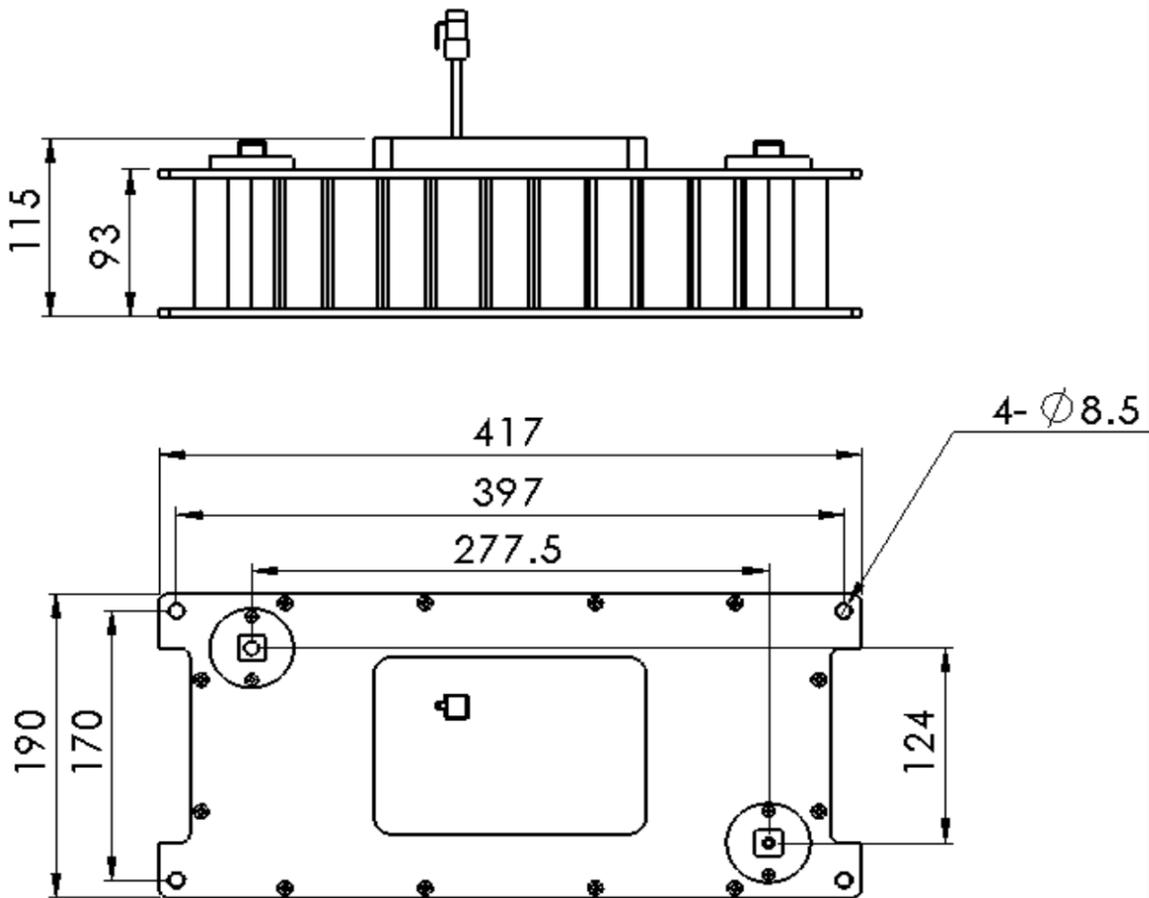
Factory High-Pot Test	1,500 V/DC
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Part Number	Dimension (mm)			Package Quantity(set)
	L (±0.5mm)	W (±0.5mm)	H (±0.5mm)	
GTSM-48V66FUS	417.0	190.0	115.0	1

Product dimensions are for reference only unless otherwise specified. Product dimensions and specifications may change without notice. Please contact GTCAP directly for any technical specifications critical to application.