Lithium-Ion technology

AESON POWER

TL-LFP Series Lithium-ion Battery Module

VHR TL4850LFP-3U (48V50Ah)

HRESYS TL-LFP series is a 48V LiFePO4 (lithium iron phosphate) battery module. With advanced LiFePO4 cell technology and smart BMS, the product has benefits of long cycle life, small size, light weight, high safety, environmental protection and strong environmental adaptability. It is ideal for power backup and energy storage applications even under harsh environmental conditions.

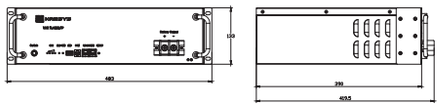
FEATURES AND BENEFITS

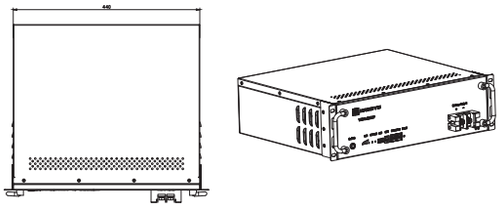
- High energy density
- Light weight, ergonomic
- Offers up to three times greater energy density than the conventional lead-acid batteries
- Long cycle life
- Proven LiFePO4 chemistry, fire safety and maximum cycle life for deep cycle and hybrid applications
- Integrated smart Battery Manage System (BMS)
- Protection of internal cells from overcharge, over-discharge, high current, etc. to ensure battery safety and reliability
- Equalisation and balancing of each cell, prolongs the battery life
- Intelligent monitoring, telemetry, remote communication and control via RS485
- Capability of parallel connection of modules allows to increase capacity
- LED indication for module status and alarms
- Maintenance free
- Fast charge capability





Dimensions in mm





GENERAL SPECIFICATIONS

Item	Description
Nominal voltage	48 V
Nominal capacity	50 Ah (0.2C to 41.0V @ 25°C)
Discharge end voltage	41.0 V
Charge voltage	54.0 V
Charge current (Max.)	50 A (1C)
Charge current (Standard)	10 A (0.2C)
Max. Discharge current	50 A (1C)
Dimensions	440 x 390 x 132 (WxDxH in mm) (3U in height)
Weight	27.0 (±2) kg
Design life	15+ years @ 25°C
Communication	RS485, CAN,RS232

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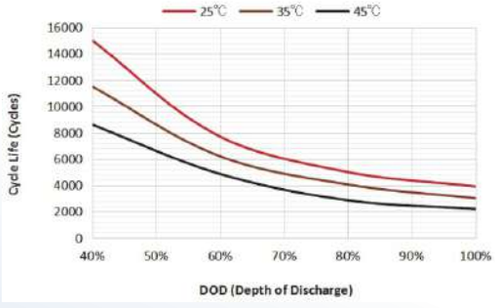
TL-LFP Series Lithium-ion Battery Module

VHR TL4850LFP-3U (48V50Ah)

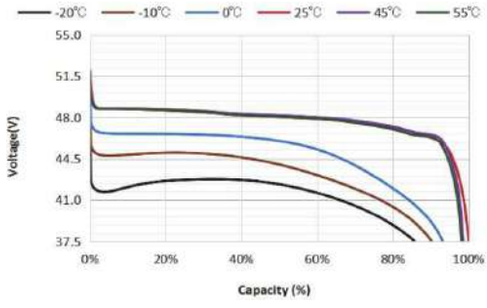
OPERATION ENVIRONMENT

Item	Description
Temperature range	Discharge: -20 to 60°C
	Charge: 0 to 60°C
	Storage: -5 to 45 °C
Temperature recommendation	Discharge: +15 to +35°C
	Charge: +15 to +35°C
	Storage: 0 to +40°C(6 months, >50%SOC)
Humidity	5% to 95%, no condensation

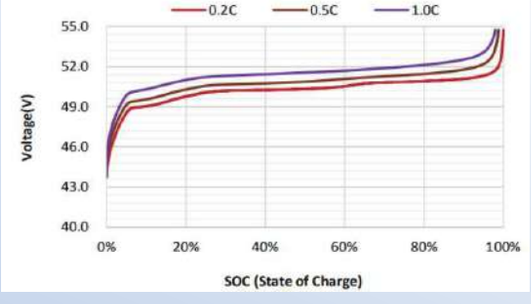
Cycle life vs. DOD at different temperature



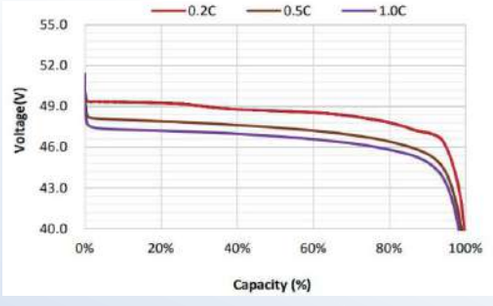
Discharge curve at different temperature



Charge curve with different current rate@25℃



Discharge curve with different current @25℃



Lithium-Ion technology

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TL-LFP Series Lithium-ion Battery Module

VHR TL48100LFP-3U (48V100Ah)

HRESYS TL-LFP series is a 48V LiFePO4 (lithium iron phosphate) battery module. With advanced LiFePO4 cell technology and smart BMS, the product has benefits of long cycle life, small size, light weight, high safety, environmental protection and strong environmental adaptability. It is ideal for power backup and energy storage applications even under harsh environmental conditions.

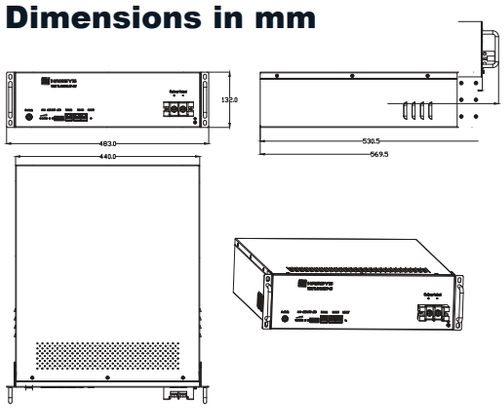
FEATURES AND BENEFITS

- High energy density
- Light weight, ergonomic
- Offers up to three times greater energy density than the conventional lead-acid batteries
- Long cycle life
- Proven LiFePO4 chemistry, fire safety and maximum cycle life for deep cycle and hybrid applications
- Integrated smart Battery Manage System (BMS)
- Protection of internal cells from overcharge, over-discharge, high current, etc. to ensure battery safety and reliability
- Equalisation and balancing of each cell, prolongs the battery life
- Intelligent monitoring, telemetry, remote communication and control via RS485
- Capability of parallel connection of modules allows to increase capacity
- LED indication for module status and alarms
- Maintenance free
- Fast charge capability





Dimensions in mm



GENERAL SPECIFICATIONS

Item	Description
Nominal voltage	48 V
Nominal capacity	100 Ah (0.2C to 41.0V @ 25°C)
Discharge end voltage	41.0 V
Charge voltage	54.0 V
Charge current (Max.)	100 A (1C)
Charge current (Standard)	20 A (0.2C)
Max. Discharge current	100 A (1C)
Dimensions	440 x 530 x 132 (WxDxH in mm) (3U in height)
Weight	46.0 (±2) kg
Design life	15+ years @ 25°C
Communication	RS485

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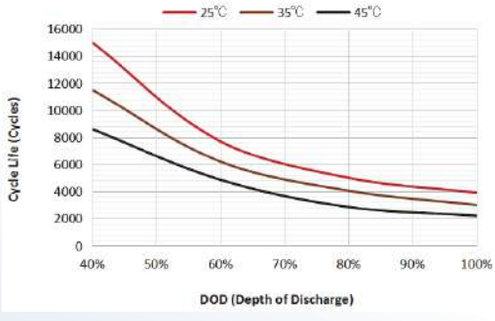
TL-LFP Series Lithium-ion Battery Module

VHR TL48100LFP-3U (48V100Ah)

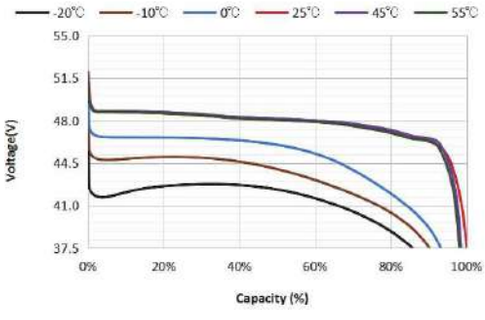
OPERATION ENVIRONMENT

Item	Description
Temperature range	Discharge: -20 to 60°C
	Charge: 0 to 60°C
	Storage: -5 to 45 °C
Temperature recommendation	Discharge: +15 to +35°C
	Charge: +15 to +35°C
	Storage: 0 to +40°C(6 months, >50%SOC)
Humidity	5% to 95%, no condensation

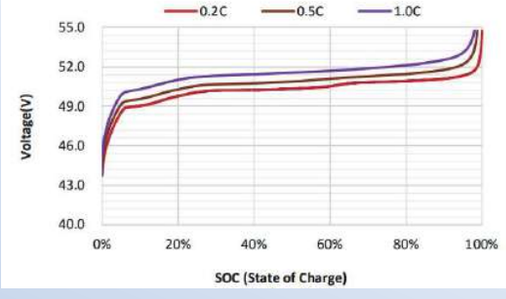
Cycle life vs. DOD at different temperature



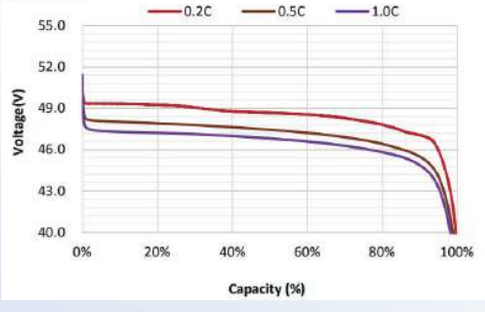
Discharge curve at different temperature



Charge curve with different current rate@25°C



Discharge curve with different current @25°C



Lithium-Ion technology

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TL-LFP Series Lithium-ion Battery Module

VHR TL48150LFP (48V150Ah)

HRESYS TL-LFP series is a 48V LiFePO4 (lithium iron phosphate) battery module. With the advanced LiFePO4 cell technology and smart BMS, the product has benefits of long cycle life, small size, light weight, high safety, environmental protection and strong environmental adaptability. It is ideal for power backup and energy storage applications even under harsh environmental conditions.

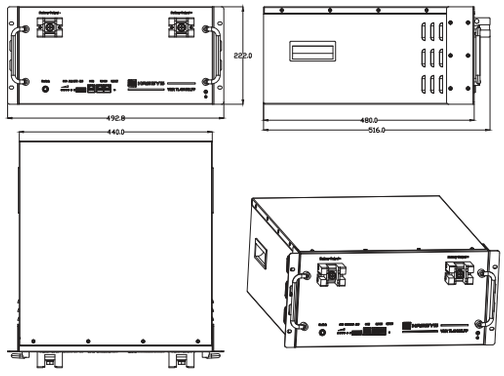
FEATURES AND BENEFITS

- High energy density
- Light weight, ergonomic
- Offers up to three times greater energy density than the conventional lead-acid batteries
- Long cycle life
- Proven LiFePO4 chemistry, fire safety and maximum cycle life for deep cycle and hybrid applications
- Integrated smart Battery Manage System (BMS)
- Protection of internal cells from overcharge, over-discharge, high current, etc. to ensure battery safety and reliability
- Equalisation and balancing of each cell, prolongs the battery life
- Intelligent monitoring, telemetry, remote communication and control via RS485
- Capability of parallel connection of modules allows to increase capacity
- LED indication for module status and alarms
- Maintenance free
- Fast charge capability





Dimensions in mm



GENERAL SPECIFICATIONS

Item	Description
Nominal voltage	48 V
Nominal capacity	150 Ah (0.2C to 41.0V @ @ 25°C)
Discharge end voltage	41.0 V
Charge voltage	54.0 V
Charge current (Max.)	150 A (1C)
Charge current (Standard)	30 A (0.2C)
Max. Discharge current	150 A (1C)
Dimensions	440 x 480 x 222 (WxDxH in mm) (5U in height)
Weight	66.0 (±2) kg
Design life	15+ years @ 25°C
Communication	RS485

Lithium-Ion technology

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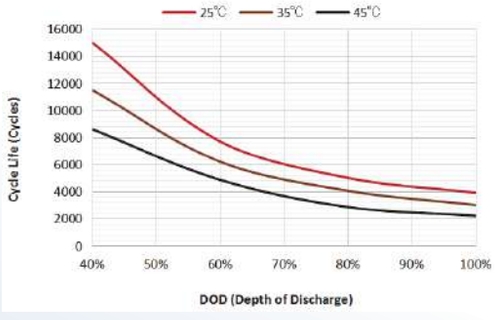
TL-LFP Series Lithium-ion Battery Module

VHR TL48150LFP (48V150Ah)

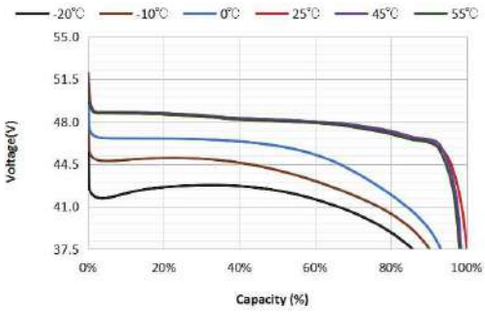
OPERATION ENVIRONMENT

Item	Description
Temperature range	Discharge: -20 to 60°C
	Charge: 0 to 60°C
	Storage: -5 to 45 °C
Temperature recommendation	Discharge: +15 to +35°C
	Charge: +15 to +35°C
	Storage: 0 to +40°C(6 months, >50%SOC)
Humidity	5% to 95%, no condensation

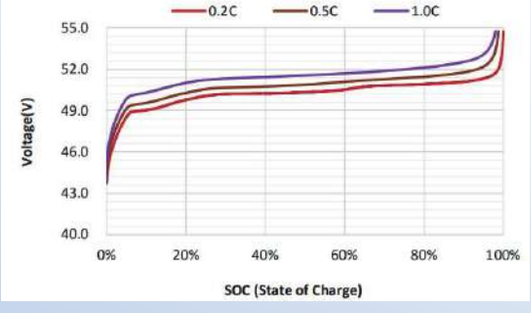
Cycle life vs. DOD at different temperature



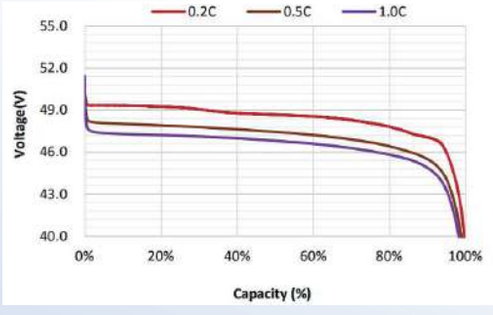
Discharge curve at different temperature



Charge curve with different current rate@25°C



Discharge curve with different current @25°C



Lithium-Ion technology

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TL-LFP Series Lithium-ion Battery Module

VHR TL48200LFP-5U (48V200Ah)

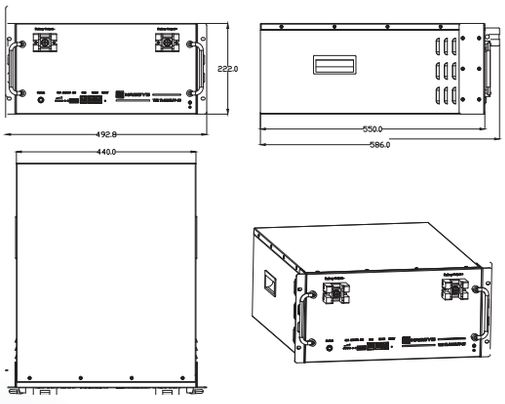
HRESYS TL-LFP series is a 48V LiFePO4 (lithium iron phosphate) battery module. With advanced LiFePO4 cell technology and smart BMS, the product has benefits of long cycle life, small size, light weight, high safety, environmental protection and strong environmental adaptability. It is ideal for power backup and energy storage applications even under harsh environmental conditions.



FEATURES AND BENEFITS

- High energy density
- Light weight, ergonomic
- Offers up to three times greater energy density than the conventional lead-acid batteries
- Long cycle life
- Proven LiFePO4 chemistry, fire safety and maximum cycle life for deep cycle and hybrid applications
- Integrated smart Battery Manage System (BMS)
- Protection of internal cells from overcharge, over-discharge, high current, etc. to ensure battery safety and reliability
- Equalisation and balancing of each cell, prolongs the battery life
- Intelligent monitoring, telemetry, remote communication and control via RS485
- Capability of parallel connection of modules allows to increase capacity
- LED indication for module status and alarms
- Maintenance free
- Fast charge capability

Dimensions in mm



GENERAL SPECIFICATIONS

Item	Description
Nominal voltage	48 V
Nominal capacity	200 Ah (0.2C to 41.0V @ 25°C)
Discharge end voltage	41.0 V
Charge voltage	54.0 V
Charge current (Max.)	150 A (0.75C)
Charge current (Standard)	40 A (0.2C)
Max. Discharge current	150 A (0.75C)
Dimensions	550 x 440 x 222 (WxDxH in mm) (5U in height)
Weight	78.0 (±2) kg
Design life	15+ years @ 25°C
Communication	RS485

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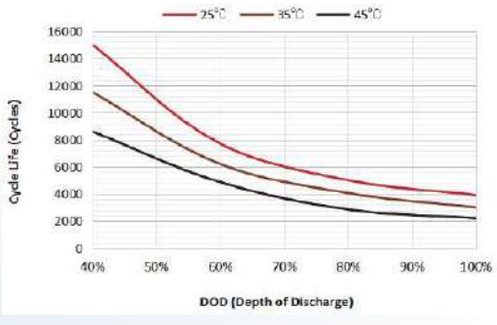
TL-LFP Series Lithium-ion Battery Module

VHR TL48200LFP-5U (48V200Ah)

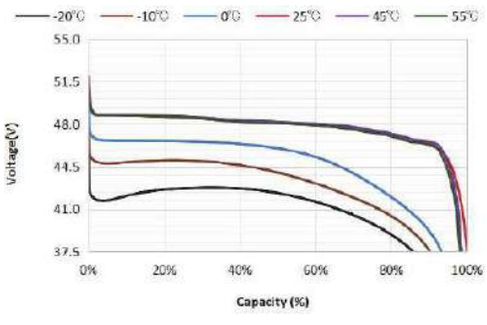
OPERATION ENVIRONMENT

Item	Description
Temperature range	Discharge: -20 to 60°C
	Charge: 0 to 60°C
	Storage: -5 to 45 °C
Temperature recommendation	Discharge: +15 to +35°C
	Charge: +15 to +35°C
	Storage: 0 to +40°C(6 months, >50%SOC)
Humidity	5% to 95%, no condensation

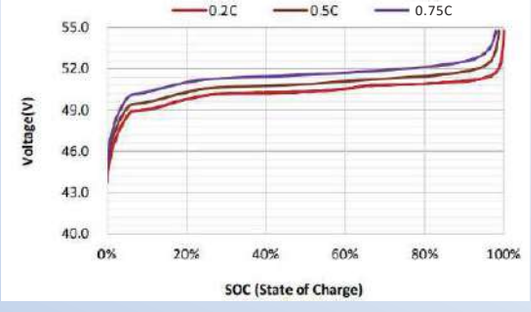
Cycle life vs. DOD at different temperature



Discharge curve at different temperature



Charge curve with different current rate@25°C



Discharge curve with different current @25°C

