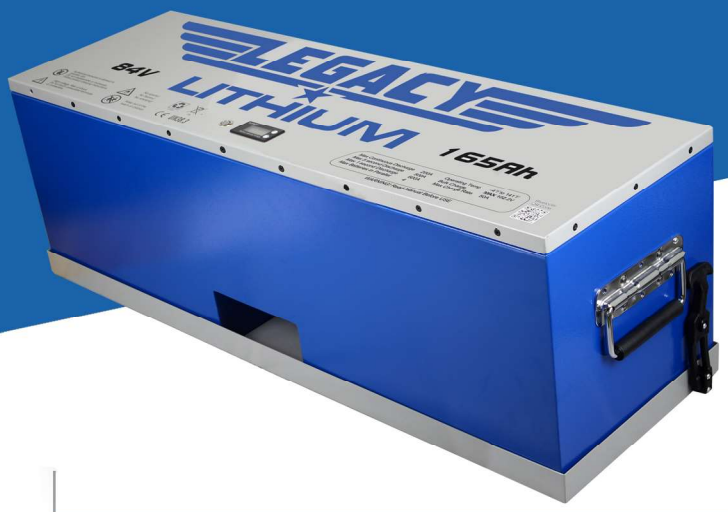
LEGACY LITHIUM

LITHIUM SERIES



LITHIUM-84165 84V 165AH

Rechargable Lithium Battery - LIFEPO4
LEGACY LITHIUM - 84V Bluetooth® Enabled Series

BATTERY FEATURES

- Super safe lithium iron phosphate (LiFePO4) chemistry reducing the risk of explosion or combustion due to high impact, over-charging, or short circuit situation
- Bluetooth® communication capability for battery status
- Battery Management System (BMS) controls the parameters of the battery to provide optimum safety by protecting against over-charging and over-discharging
- BMS enhanced design balances the battery cells, optimizing battery performance
- Delivers twice the power of lead-acid batteries, even at high discharge rates, while maintaining high energy capacity
- Faster charging and lower self-discharge
- Up to 10 times more cycles than lead-acid batteries
- Compact and only 40% of the weight of comparable lead acid batteries
- Rugged impact resistant Stainless Box

APPROVALS

- UL 1642 cell certificate
- UN 38.3 Certified
- MSDS

UN38.3 PASSED Transport Safety Certified

MSDS

LEGACY LITHIUM 84V LIFEPO4 BATTERY SERIES

Legacy lithium 84v LIFEPO4 Battery series, adopt the high discharge rate cell, including 10kw discharge BMS system solution, with an intelligent battery management system that monitors current and voltages during charge and discharge. This protects the battery from over-charge and over-discharge.

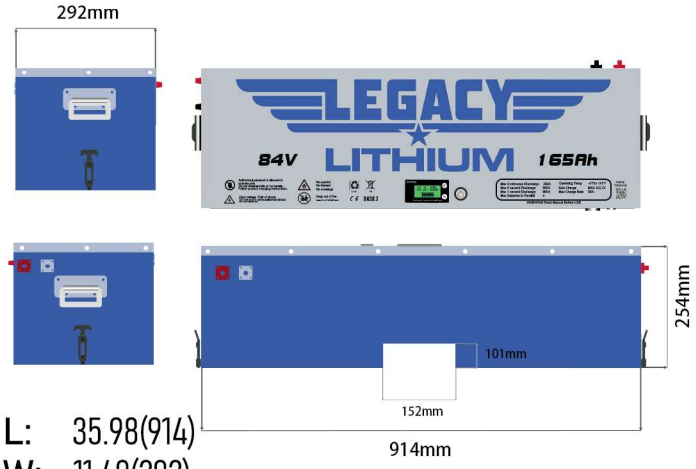
The BMS embeds smart balancing algorithms that control all cell voltages in the battery, making sure they are constantly at the same voltage level, optimizing battery capacity.

BLUETOOTH® ENABLED Monitor the State of Charge (SoC), State of Health (SoH), current, capacity, temperature, number of cycles, and voltage levels of the battery and individual cells from Andriod / IOS App

APPLICATIONS

- Solar
- Mobility
- Transport
- UGV
- Golf Carts
- UTV'S

DIMENSIONS: inch (mm)



L: 35.98(914)
W: 11.49(292)
H: 10(254)

PERFORMANCE SPECIFICATIONS

Nominal Voltage	89.6 V
Rated Capacity	165AH at a Constant Current of 0.5C to 40V
Stored Energy (Wh)	14784 Wh
Cycle Life (at 100% DOD)	3000 Cycles
Approximate Weight	229.3 lbs (104 kg)
Internal Resistance	⩽20.0 mΩ
Max Charge Current	100 A
Max Continuous/Discharge Current	200A / 600A (5S)
Charge Cut-off Voltage	102.2 V
Recommended Discharge Cut-Off Voltage	70 V
Series & Parallel Connection	**Up to 4 batteries can be connected in parallel**
Operating Temperature Range Charge Discharge Recommended	 32°F (0°C) to 140°F (60°C) 14°F (-10°C) to 140°F (60°C) 59°F (15°C) to 95°F (35°C)
Self-Discharge Rate	⩽3%/month
Long Term Storage	Long Term Storage Charge every 6 months or as soon as OCV is 12.8V (approximately 20% SOC)
Power Sonic Chargers	Contact us for information on a suitable charger
Life Expectancy (years)	5 years at one cycle per day
Short Circuit Protection	Automatically recover after removal of short
Dimensional Tolerances	max torque 15 ft/lbs
Terminal Type	M8
Cooling Way	Natural air cooling
Heat Function	Cell Heater Technology
Waterproofing Standard	IP66

LITHIUM-84165 84V 165AH

Rechargable Lithium Battery - LIFEPO4
LEGACY LITHIUM - 84V Bluetooth® Enabled Series

LITHIUM SERIES

Details		Min	Typ	Max	Error	Unit
Battery Gas		3.20V lithium battery				
Battery Link		28S1P				
Loop capability		No				
Input Charging Voltage			102.2		±1%	V
Input Charging Current			≤50			A
Output Discharging Voltage			89.6			V
Continuous Output Discharging Current			≤200			A
Ambient Condition	Operating Temperature	-20/-4	25	60/140		℃/℉
	Humidity (No Water-Drop)	0%		90%		RH
Storage Condition	Temperature	-20/-4		85/185		℃/℉
	Humidity (No Water-Drop)	0%		90%		RH

Protection Parameters (for Individual Cell)

Over-Charge Voltage Protection (OVP)	3.65		±25mV	V	
Over-flashing	1000		±300	mS	
Over-Charge Voltage Protection Release (OVPR)	3.6		±50mV	V	
Over-Discharge Voltage Protection (UVP)	2.4		±80mV	V	
Over-lapping	20		±6	mS	
Over-Discharge Voltage Protection Release (UVPR)	2.50—2.60		-----	V	
Over-Current Discharge Protection (OCDP)	800		±10	A	
Over-Current Protection Delay Time (OCPDT)	30		±5	mS	
Over-Discharge Protection Release	Recovering after cutting off the load				
Over-Current Discharge Protection Release	Recovering after cutting off the load				
Short circuit current protection	Enable				
Short circuit current protection delay time	200	600	±100	uS	
Short circuit protection Release	Recovering after cutting off the load				
Discharging Temperature	75/167	External	±5	℃/℉	
Discharging Temperature Protection Release	70/158		±10	℃/℉	
Discharge protection temperature recovery method	Automatic recovery				
charging Temperature	----		----		
charging Temperature Protection Release	----		----		
Cell balance					
Bleed StartPoint	71/159.8		±10mA	℃/℉	
Bleed Current					
Balance Mode	Charging Auto Active Balance				
Idle mode	≤5uA			uA	
Main loop electrify resistance	MAX: 7mΩ			mΩ	
PCBA Size	220 (±0.5) ×30 (±0.5) ×130 (±0.5)			mm	
Data Storage	Cycle quantity data storage record by Bluetooth				

BENEFITS OF LITHIUM

Lithium offers several performance advantages over Lithium Sealed Lead Acid (SLA) equivalents. This series of lithium iron phosphate batteries adopts a high rate prismatic cell solution, the capacity is independent of the discharge rate and provides ultra-high constant power throughout the discharge process. The degradation of this lithium battery at high temperature is significantly reduced compared to SLA.
At room temperature, the cycle life of lithium is ten times longer than that of SLA.
Finally, lithium battery charging follows a similar charging curve as SLA, constant current and constant voltage (CC/CV). However, lithium can be charged faster without maintenance floating charges. It is recommended to use a professional LIFEPO4 charger, which is more conducive to maximize the cycle life of lifepo4 battery.

BMS TECHNICAL SPECIFICATIONS

Cell model	LFP/MT165A
Cell type	Prismatic cell
Nominal Capacity (0.5C)	165A
Standard C/Discharge Current	0.5C/1C 80A/165A
Max Cntinuous Discharge Current	2C / 300A
Over-charge	
Over-charge protection voltage for each cell	3.65V
Over-charge release voltage for each cell	3.6 V
Over-charge release method	Protection releases when all cell voltages drop below the over-charge release voltage
Over-discharge	
Over-discharge protection voltage for each cell	2.4v
Over-discharge release voltage for each cell	2.8v
Over-discharge release method	Protection releases upon charging
Over current	
Discharge over current protection	600-800 A
Over-current delay time	50-200 mS
Over current release condition	Protection releases upon removing load and charging
Battery temperature	
Over-temperature protection	65±5°C
Release temperature	50±5°C
Short circuit protection	
Function condition	External short circuit
Short circuit delay time	200 ms
Release condition	Protection releases upon removing short circuit and charging

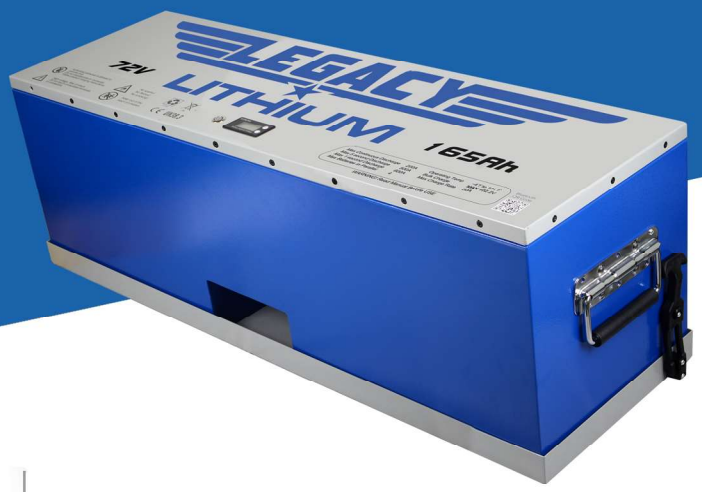
FURTHER INFORMATION

Please refer to our website **http://Legacylithium.com** or email us at **http://Legacylithium.com** for a complete range of useful downloads, such as product catalogs, material safety data sheets (MSDS), ISO certification, etc.

http://Legacylithium.com

LEGACY LITHIUM

LITHIUM SERIES



LITHIUM-72165 72V 165AH

Rechargable Lithium Battery - LIFEPO4
LEGACY LITHIUM - 72V Bluetooth® Enabled Series

BATTERY FEATURES

- Super safe lithium iron phosphate (LiFePO4) chemistry reducing the risk of explosion or combustion due to high impact, over-charging, or short circuit situation
- Bluetooth® communication capability for battery status
- Battery Management System (BMS) controls the parameters of the battery to provide optimum safety by protecting against over-charging and over-discharging
- BMS enhanced design balances the battery cells, optimizing battery performance
- Delivers twice the power of lead-acid batteries, even at high discharge rates, while maintaining high energy capacity
- Faster charging and lower self-discharge
- Up to 10 times more cycles than lead-acid batteries
- Compact and only 40% of the weight of comparable lead acid batteries
- Rugged impact resistant Stainless Box

APPROVALS

- UL 1642 cell certificate
- UN 38.3 Certified
- MSDS

UN38.3 PASSED Transport Safety Certified

MSDS

LEGACY LITHIUM 48V LIFEPO4 BATTERY SERIES

Legacy lithium 72v LIFEPO4 Battery series, adopt the high discharge rate cell, including 10kw discharge BMS system solution, with an intelligent battery management system that monitors current and voltages during charge and discharge. This protects the battery from over-charge and over-discharge.

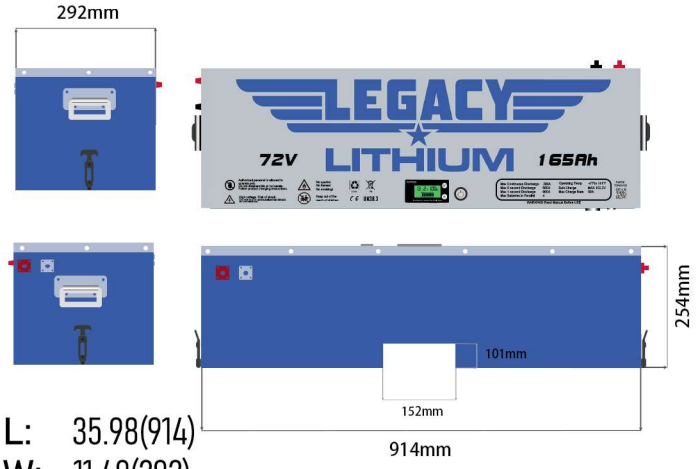
The BMS embeds smart balancing algorithms that control all cell voltages in the battery, making sure they are constantly at the same voltage level, optimizing battery capacity.

BLUETOOTH® ENABLED Monitor the State of Charge (SoC), State of Health (SoH), current, capacity, temperature, number of cycles, and voltage levels of the battery and individual cells from Andriod / IOS App

APPLICATIONS

- Solar
- Mobility
- Transport
- UGV
- Golf Carts
- UTV'S

DIMENSIONS: inch (mm)



L: 35.98(914)
W: 11.49(292)
H: 10(254)

PERFORMANCE SPECIFICATIONS

Nominal Voltage	76.8 V
Rated Capacity	165AH at a Constant Current of 0.5C to 60V
Stored Energy (Wh)	12672 Wh
Cycle Life (at 100% DOD)	3000 Cycles
Approximate Weight	200.6 lbs (91 kg)
Internal Resistance	⩽20.0 mΩ
Max Charge Current	100 A
Max Continuous/Discharge Current	200A / 600A (5S)
Charge Cut-off Voltage	87.6 V
Recommended Discharge Cut-Off Voltage	60 V
Series & Parallel Connection	**Up to 4 batteries can be connected in parallel**
Operating Temperature Range Charge Discharge Recommended	 32°F (0°C) to 140°F (60°C) 14°F (-10°C) to 140°F (60°C) 59°F (15°C) to 95°F (35°C)
Self-Discharge Rate	⩽3%/month
Long Term Storage	Long Term Storage Charge every 6 months or as soon as OCV is 12.8V (approximately 20% SOC)
Power Sonic Chargers	Contact us for information on a suitable charger
Life Expectancy (years)	5 years at one cycle per day
Short Circuit Protection	Automatically recover after removal of short
Dimensional Tolerances	max torque 15 ft/lbs
Terminal Type	M8
Cooling Way	Natural air cooling
Heat Function	Cell Heater Technology
Waterproofing Standard	IP66

LITHIUM-72165 72V 165AH

Rechargable Lithium Battery - LIFEPO4
LEGACY LITHIUM - 72V Bluetooth® Enabled Series

LITHIUM SERIES

Details		Min	Typ	Max	Error	Unit
Battery Gas		3.20V lithium battery				
Battery Link		24S1P				
Loop capability		No				
Input Charging Voltage			87.6		±1%	V
Input Charging Current			≤50			A
Output Discharging Voltage			76.8v			V
Continuous Output Discharging Current			≤200			A
Ambient Condition	Operating Temperature	-20/-4	25	60/140		℃/℉
	Humidity (No Water-Drop)	0%		90%		RH
Storage Condition	Temperature	-20/-4		85/185		℃/℉
	Humidity (No Water-Drop)	0%		90%		RH

Protection Parameters (for Individual Cell)

Over-Charge Voltage Protection (OVP)	3.65		±25mV	V	
Over-flashing	1000		±300	mS	
Over-Charge Voltage Protection Release (OVPR)	3.6		±50mV	V	
Over-Discharge Voltage Protection (UVP)	2.4		±80mV	V	
Over-lapping	20		±6	mS	
Over-Discharge Voltage Protection Release (UVPR)	2.50—2.60		-----	V	
Over-Current Discharge Protection (OCDP)	800		±10	A	
Over-Current Protection Delay Time (OCPDT)	30		±5	mS	
Over-Discharge Protection Release	Recovering after cutting off the load				
Over-Current Discharge Protection Release	Recovering after cutting off the load				
Short circuit current protection	Enable				
Short circuit current protection delay time	200	600	±100	uS	
Short circuit protection Release	Recovering after cutting off the load				
Discharging Temperature	75/167	External	±5	℃/℉	
Discharging Temperature Protection Release	70/158		±10	℃/℉	
Discharge protection temperature recovery method	Automatic recovery				
charging Temperature	----		----		
charging Temperature Protection Release	----		----		
Cell balance					
Bleed StartPoint	71/159.8		±10mA	℃/℉	
Bleed Current					
Balance Mode	Charging Auto Active Balance				
Idle mode	≤5uA			uA	
Main loop electrify resistance	MAX: 7mΩ			mΩ	
PCBA Size	155 (±0.5) ×16 (±0.5) ×80 (±0.5)			mm	
Data Storage	Cycle quantity data storage record by Bluetooth				

BENEFITS OF LITHIUM

Lithium offers several performance advantages over Lithium Sealed Lead Acid (SLA) equivalents. This series of lithium iron phosphate batteries adopts a high rate prismatic cell solution, the capacity is independent of the discharge rate and provides ultra-high constant power throughout the discharge process. The degradation of this lithium battery at high temperature is significantly reduced compared to SLA.
At room temperature, the cycle life of lithium is ten times longer than that of SLA.
Finally, lithium battery charging follows a similar charging curve as SLA, constant current and constant voltage (CC/CV). However, lithium can be charged faster without maintenance floating charges. It is recommended to use a professional LIFEPO4 charger, which is more conducive to maximize the cycle life of lifepo4 battery.

BMS TECHNICAL SPECIFICATIONS

Cell model	LFP/MT165A
Cell type	Prismatic cell
Nominal Capacity (0.5C)	165A
Standard C/Discharge Current	0.5C/1C 80A/165A
Max Cntinuous Discharge Current	2C / 300A
Over-charge	
Over-charge protection voltage for each cell	3.65V
Over-charge release voltage for each cell	3.6 V
Over-charge release method	Protection releases when all cell voltages drop below the over-charge release voltage
Over-discharge	
Over-discharge protection voltage for each cell	2.4v
Over-discharge release voltage for each cell	2.8v
Over-discharge release method	Protection releases upon charging
Over current	
Discharge over current protection	600-800 A
Over-current delay time	50-200 mS
Over current release condition	Protection releases upon removing load and charging
Battery temperature	
Over-temperature protection	65±5°C
Release temperature	50±5°C
Short circuit protection	
Function condition	External short circuit
Short circuit delay time	200 ms
Release condition	Protection releases upon removing short circuit and charging

FURTHER INFORMATION

Please refer to our website **http://Legacylithium.com** or email us at **http://Legacylithium.com** for a complete range of useful downloads, such as product catalogs, material safety data sheets (MSDS), ISO certification, etc.

LEGACY LITHIUM

LITHIUM SERIES

LITHIUM-48165 48V 165AH

Rechargable Lithium Battery - LIFEPO4
LEGACY LITHIUM - 48V Bluetooth® Enabled Series

BATTERY FEATURES

- Super safe lithium iron phosphate (LiFePO4) chemistry reducing the risk of explosion or combustion due to high impact, over-charging, or short circuit situation
- Bluetooth® communication capability for battery status
- Battery Management System (BMS) controls the parameters of the battery to provide optimum safety by protecting against over-charging and over-discharging
- BMS enhanced design balances the battery cells, optimizing battery performance
- Delivers twice the power of lead-acid batteries, even at high discharge rates, while maintaining high energy capacity
- Faster charging and lower self-discharge
- Up to 10 times more cycles than lead-acid batteries
- Compact and only 40% of the weight of comparable lead acid batteries
- Rugged impact resistant Stainless Box

APPROVALS

- UL 1642 cell certificate
- UN 38.3 Certified
- MSDS

UN38.3 PASSED Transport Safety Certified

MSDS

LEGACY LITHIUM 48V LIFEPO4 BATTERY SERIES

Legacy lithium 48v LIFEPO4 Battery series, adopt the high discharge rate cell, including 10kw discharge BMS system solution, with an intelligent battery management system that monitors current and voltages during charge and discharge. This protects the battery from over-charge and over-discharge.

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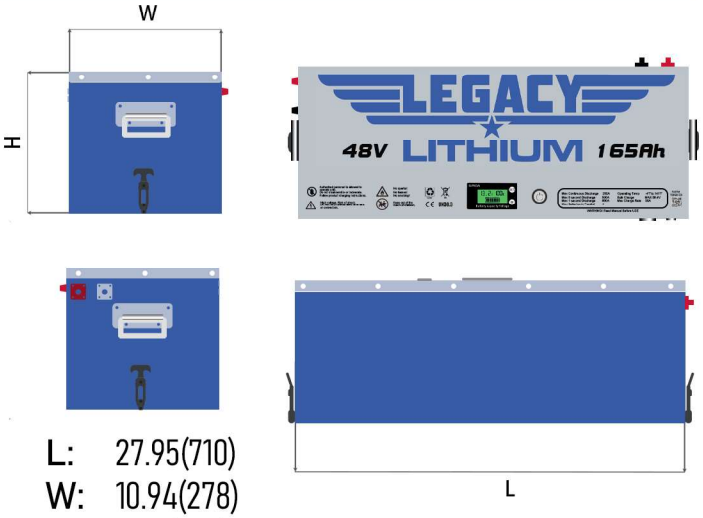
BLUETOOTH® ENABLED Monitor the State of Charge (SoC), State of Health (SoH), current, capacity, temperature, number of cycles, and voltage levels of the battery and individual cells from Andriod / IOS App

APPLICATIONS

- Solar
- Mobility
- Transport
- UGV
- Golf Carts
- UTV'S

DIMENSIONS: inch (mm)



L: 27.95(710)
W: 10.94(278)
H: 9.48(241)

PERFORMANCE SPECIFICATIONS

Nominal Voltage	51.2V
Rated Capacity	165AH at a Constant Current of 0.5C to 40V
Stored Energy (Wh)	8448 Wh
Cycle Life (at 100% DOD)	3000 Cycles
Approximate Weight	143.3 lbs (65 kg)
Internal Resistance	⩽20.0 mΩ
Max Charge Current	100 A
Max Continuous/Discharge Current	200A / 600A (5S)
Charge Cut-off Voltage	58.4 V
Recommended Discharge Cut-Off Voltage	40 V
Series & Parallel Connection	**Up to 4 batteries can be connected in parallel**
Operating Temperature Range Charge Discharge Recommended	 32°F (0°C) to 140°F (60°C) 14°F (-10°C) to 140°F (60°C) 59°F (15°C) to 95°F (35°C)
Self-Discharge Rate	⩽3%/month
Long Term Storage	Long Term Storage Charge every 6 months or as soon as OCV is 12.8V (approximately 20% SOC)
Power Sonic Chargers	Contact us for information on a suitable charger
Life Expectancy (years)	5 years at one cycle per day
Short Circuit Protection	Automatically recover after removal of short
Dimensional Tolerances	max torque 15 ft/lbs
Terminal Type	M8
Cooling Way	Natural air cooling
Heat Function	Cell Heater Technology
Waterproofing Standard	IP66

LITHIUM-48165 48V 165AH

Rechargable Lithium Battery - LIFEPO4
LEGACY LITHIUM - 48V Bluetooth® Enabled Series

LITHIUM SERIES

Details		Min	Typ	Max	Error	Unit
Battery Gas		3.20V lithium battery				
Battery Link		16S1P				
Loop capability		No				
Input Charging Voltage			58.4		±1%	V
Input Charging Current			≤50			A
Output Discharging Voltage			51.2v			V
Continuous Output Discharging Current			≤200			A
Ambient Condition	Operating Temperature	-20	25	60		℃
	Humidity (No Water-Drop)	0%		90%		RH
Storage Condition	Temperature	-20		85		℃
	Humidity (No Water-Drop)	0%		90%		RH

Protection Parameters (for Individual Cell)

Over-Charge Voltage Protection (OVP)	3.65		±25mV	V	
Over-flashing	1000		±300	mS	
Over-Charge Voltage Protection Release (OVPR)	3.6		±50mV	V	
Over-Discharge Voltage Protection (UVP)	2.4		±80mV	V	
Over-lapping	20		±6	mS	
Over-Discharge Voltage Protection Release (UVPR)	2.50—2.60		-----	V	
Over-Current Discharge Protection (OCDP)	800		±10	A	
Over-Current Protection Delay Time (OCPDT)	30		±5	mS	
Over-Discharge Protection Release	Recovering after cutting off the load				
Over-Current Discharge Protection Release	Recovering after cutting off the load				
Short circuit current protection	Enable				
Short circuit current protection delay time	200	600	±100	uS	
Short circuit protection Release	Recovering after cutting off the load				
Discharging Temperature	75	external	±5	℃	
Discharging Temperature Protection Release	70		±10	℃	
Discharge protection temperature recovery method	Automatic recovery				
charging Temperature	----		----		
charging Temperature Protection Release	----		----		
Cell balance					
Bleed StartPoint	71		±10mA	℃	
Bleed Current					
Balance Mode	Charging Auto Active Balance				
Idle mode	≤5uA			uA	
Main loop electrify resistance	MAX: 7mΩ			mΩ	
PCBA Size	190 (±0.5) ×120 (±0.5) ×35 (±0.5)			mm	
Data Storage	Cycle quantity data storage record by Bluetooth				

BENEFITS OF LITHIUM

Lithium offers several performance advantages over Lithium Sealed Lead Acid (SLA) equivalents. This series of lithium iron phosphate batteries adopts a high rate prismatic cell solution, the capacity is independent of the discharge rate and provides ultra-high constant power throughout the discharge process. The degradation of this lithium battery at high temperature is significantly reduced compared to SLA.
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BMS TECHNICAL SPECIFICATIONS

Cell model	LFP/MT165A
Cell type	Prismatic cell
Nominal Capacity (0.5C)	165A
Standard C/Discharge Current	0.5C/1C 80A/165A
Max Cntinuous Discharge Current	2C / 300A
Over-charge	
Over-charge protection voltage for each cell	3.65V
Over-charge release voltage for each cell	3.6 V
Over-charge release method	Protection releases when all cell voltages drop below the over-charge release voltage
Over-discharge	
Over-discharge protection voltage for each cell	2.4v
Over-discharge release voltage for each cell	2.8v
Over-discharge release method	Protection releases upon charging
Over current	
Discharge over current protection	600-800 A
Over-current delay time	50-200 mS
Over current release condition	Protection releases upon removing load and charging
Battery temperature	
Over-temperature protection	65±5°C
Release temperature	50±5°C
Short circuit protection	
Function condition	External short circuit
Short circuit delay time	200 ms
Release condition	Protection releases upon removing short circuit and charging

FURTHER INFORMATION

Please refer to our website **http://Legacylithium.com** or email us at **http://Legacylithium.com** for a complete range of useful downloads, such as product catalogs, material safety data sheets (MSDS), ISO certification, etc.

LEGACY LITHIUM

LITHIUM SERIES

LITHIUM-48125 48V 125AH

Rechargable Lithium Battery - LIFEPO4
LEGACY LITHIUM - 48V Bluetooth® Enabled Series

BATTERY FEATURES

- Super safe lithium iron phosphate (LiFePO4) chemistry reducing the risk of explosion or combustion due to high impact, over-charging, or short circuit situation
- Bluetooth® communication capability for battery status
- Battery Management System (BMS) controls the parameters of the battery to provide optimum safety by protecting against over-charging and over-discharging
- BMS enhanced design balances the battery cells, optimizing battery performance
- Delivers twice the power of lead-acid batteries, even at high discharge rates, while maintaining high energy capacity
- Faster charging and lower self-discharge
- Up to 10 times more cycles than lead-acid batteries
- Compact and only 40% of the weight of comparable lead acid batteries
- Rugged impact resistant Stainless Box

APPROVALS

- UL 1642 cell certificate
- UN 38.3 Certified
- MSDS

UN38.3 PASSED Transport Safety Certified

MSDS

LEGACY LITHIUM 48V LIFEPO4 BATTERY SERIES

Legacy lithium 48v LIFEPO4 Battery series, adopt the high discharge rate cell, including 10kw discharge BMS system solution, with an intelligent battery management system that monitors current and voltages during charge and discharge. This protects the battery from over-charge and over-discharge.

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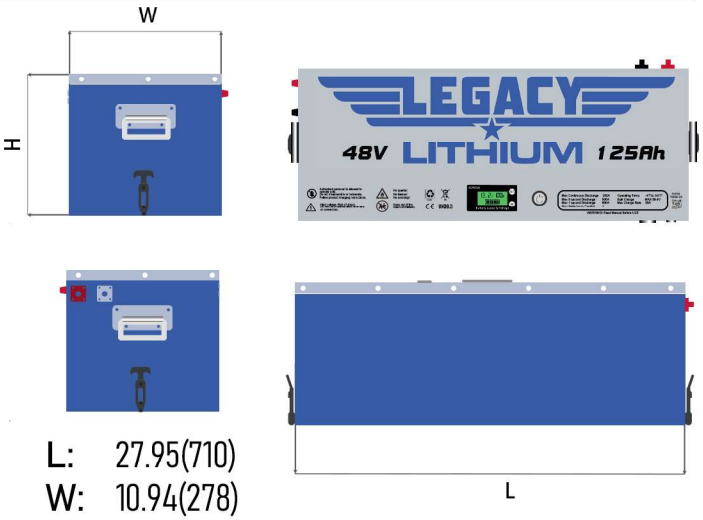
BLUETOOTH® ENABLED Monitor the State of Charge (SoC), State of Health (SoH), current, capacity, temperature, number of cycles, and voltage levels of the battery and individual cells from Andriod / IOS App

APPLICATIONS

- Solar
- Mobility
- Transport
- UGV
- Golf Carts
- UTV'S

DIMENSIONS: inch (mm)



L: 27.95(710)
W: 10.94(278)
H: 9.48(241)

PERFORMANCE SPECIFICATIONS

Nominal Voltage	51.2V
Rated Capacity	125AH at a Constant Current of 0.5C to 40V
Stored Energy (Wh)	6400 Wh
Cycle Life (at 100% DOD)	3000 Cycles
Approximate Weight	132.3 lbs (60 kg)
Internal Resistance	⩽20.0 mΩ
Max Charge Current	100 A
Max Continuous/Discharge Current	200A / 600A (5S)
Charge Cut-off Voltage	58.4 V
Recommended Discharge Cut-Off Voltage	40 V
Series & Parallel Connection	**Up to 4 batteries can be connected in parallel**
Operating Temperature Range Charge Discharge Recommended	 32°F (0°C) to 140°F (60°C) 14°F (-10°C) to 140°F (60°C) 59°F (15°C) to 95°F (35°C)
Self-Discharge Rate	⩽3%/month
Long Term Storage	Long Term Storage Charge every 6 months or as soon as OCV is 12.8V (approximately 20% SOC)
Power Sonic Chargers	Contact us for information on a suitable charger
Life Expectancy (years)	5 years at one cycle per day
Short Circuit Protection	Automatically recover after removal of short
Dimensional Tolerances	max torque 15 ft/lbs
Terminal Type	M8
Cooling Way	Natural air cooling
Heat Function	Cell Heater Technology
Waterproofing Standard	IP66

LEGACY LITHIUM

LITHIUM-48125 48V 125AH

Rechargable Lithium Battery - LIFEPO4
LEGACY LITHIUM - 48V Bluetooth® Enabled Series

LITHIUM SERIES

Details		Min	Typ	Max	Error	Unit
Battery Gas		3.20V lithium battery				
Battery Link		16S1P				
Loop capability		No				
Input Charging Voltage			58.4		±1%	V
Input Charging Current			≤50			A
Output Discharging Voltage			51.2v			V
Continuous Output Discharging Current			≤200			A
Ambient Condition	Operating Temperature	-20	25	60		℃
	Humidity (No Water-Drop)	0%		90%		RH
Storage Condition	Temperature	-20		85		℃
	Humidity (No Water-Drop)	0%		90%		RH
Protection Parameters (for Individual Cell)						
Over-Charge Voltage Protection (OVP)		3.65		±25mV	V	
Over-flashing		1000		±300	mS	
Over-Charge Voltage Protection Release (OVPR)		3.6		±50mV	V	
Over-Discharge Voltage Protection (UVP)		2.4		±80mV	V	
Over-lapping		20		±6	mS	
Over-Discharge Voltage Protection Release (UVPR)		2.50—2.60		-----	V	
Over-Current Discharge Protection (OCDP)		800		±10	A	
Over-Current Protection Delay Time (OCPDT)		30		±5	mS	
Over-Discharge Protection Release		Recovering after cutting off the load				
Over-Current Discharge Protection Release		Recovering after cutting off the load				
Short circuit current protection		Enable				
Short circuit current protection delay time		200	600	±100	uS	
Short circuit protection Release		Recovering after cutting off the load				
Discharging Temperature		75	external	±5	℃	
Discharging Temperature Protection Release		70		±10	℃	
Discharge protection temperature recovery method		Automatic recovery				
charging Temperature		----		----		
charging Temperature Protection Release		----		----		
Cell balance						
Bleed StartPoint		71		±10mA	℃	
Bleed Current						
Balance Mode		Charging Auto Active Balance				
Idle mode		≤5uA			uA	
Main loop electrify resistance		MAX: 7mΩ			mΩ	
PCBA Size		190 (±0.5) ×120 (±0.5) ×35 (±0.5)			mm	
Data Storage		Cycle quantity data storage record by Bluetooth				

BENEFITS OF LITHIUM

Lithium offers several performance advantages over Lithium Sealed Lead Acid (SLA) equivalents. This series of lithium iron phosphate batteries adopts a high rate prismatic cell solution, the capacity is independent of the discharge rate and provides ultra-high constant power throughout the discharge process. The degradation of this lithium battery at high temperature is significantly reduced compared to SLA.
At room temperature, the cycle life of lithium is ten times longer than that of SLA.
Finally, lithium battery charging follows a similar charging curve as SLA, constant current and constant voltage (CC/CV). However, lithium can be charged faster without maintenance floating charges. It is recommended to use a professional LIFEPO4 charger, which is more conducive to maximize the cycle life of lifepo4 battery.

BMS TECHNICAL SPECIFICATIONS

Cell model	LFP/MT125A
Cell type	Prismatic cell
Nominal Capacity (0.5C)	125A
Standard C/Discharge Current	0.5C/1C 60A/125A
Max Cntinuous Discharge Current	3C / 350A
Over-charge	
Over-charge protection voltage for each cell	3.65V
Over-charge release voltage for each cell	3.6 V
Over-charge release method	Protection releases when all cell voltages drop below the over-charge release voltage
Over-discharge	
Over-discharge protection voltage for each cell	2.4v
Over-discharge release voltage for each cell	2.8v
Over-discharge release method	Protection releases upon charging
Over current	
Discharge over current protection	600-800 A
Over-current delay time	50-200 mS
Over current release condition	Protection releases upon removing load and charging
Battery temperature	
Over-temperature protection	65±5°C
Release temperature	50±5°C
Short circuit protection	
Function condition	External short circuit
Short circuit delay time	200 ms
Release condition	Protection releases upon removing short circuit and charging

FURTHER INFORMATION

Please refer to our website **http://Legacylithium.com** or email us at **http://Legacylithium.com** for a complete range of useful downloads, such as product catalogs, material safety data sheets (MSDS), ISO certification, etc.

http://Legacylithium.com

LEGACY LITHIUM

LITHIUM SERIES

LITHIUM-4886 48V 86AH

Rechargable Lithium Battery - LIFEPO4
LEGACY LITHIUM - 48V Bluetooth® Enabled Series

BATTERY FEATURES

- Super safe lithium iron phosphate (LiFePO4) chemistry reducing the risk of explosion or combustion due to high impact, over-charging, or short circuit situation
- Bluetooth® communication capability for battery status
- Battery Management System (BMS) controls the parameters of the battery to provide optimum safety by protecting against over-charging and over-discharging
- BMS enhanced design balances the battery cells, optimizing battery performance
- Delivers twice the power of lead-acid batteries, even at high discharge rates, while maintaining high energy capacity
- Faster charging and lower self-discharge
- Up to 10 times more cycles than lead-acid batteries
- Compact and only 40% of the weight of comparable lead acid batteries
- Rugged impact resistant Stainless Box

APPROVALS

- UL 1642 cell certificate
- UN 38.3 Certified
- MSDS

UN38.3 PASSED Transport Safety Certified

MSDS

LEGACY LITHIUM 48V LIFEPO4 BATTERY SERIES

Legacy lithium 48v LIFEPO4 Battery series, adopt the high discharge rate cell, including 10kw discharge BMS system solution, with an intelligent battery management system that monitors current and voltages during charge and discharge. This protects the battery from over-charge and over-discharge.

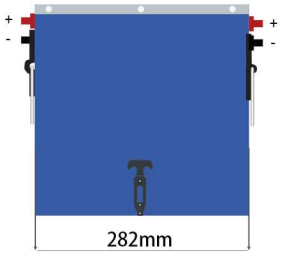
The BMS embeds smart balancing algorithms that control all cell voltages in the battery, making sure they are constantly at the same voltage level, optimizing battery capacity.

BLUETOOTH® ENABLED Monitor the State of Charge (SoC), State of Health (SoH), current, capacity, temperature, number of cycles, and voltage levels of the battery and individual cells from Andriod / IOS App

APPLICATIONS

- Solar
- Mobility
- Transport
- UGV
- Golf Carts
- UTV'S

DIMENSIONS: inch (mm)



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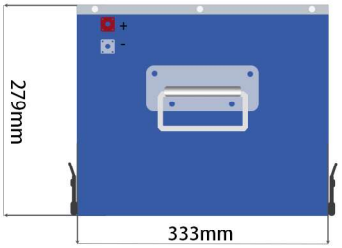
H: 10.98(279)



PERFORMANCE SPECIFICATIONS

Nominal Voltage	51.2V
Rated Capacity	86AH at a Constant Current of 0.5C to 40V
Stored Energy (Wh)	4403 Wh
Cycle Life (at 100% DOD)	3000 Cycles
Approximate Weight	94.8 lbs (43kg)
Internal Resistance	⩽20.0 mΩ
Max Charge Current	50 A
Max Continuous/Discharge Current	200A / 300A (5S)
Charge Cut-off Voltage	58.4 V
Recommended Discharge Cut-Off Voltage	40 V
Series & Parallel Connection	**Up to 4 batteries can be connected in parallel**
Operating Temperature Range Charge Discharge Recommended	 32°F (0°C) to 140°F (60°C) 14°F (-10°C) to 140°F (60°C) 59°F (15°C) to 95°F (35°C)
Self-Discharge Rate	⩽3%/month
Long Term Storage	Long Term Storage Charge every 6 months or as soon as OCV is 12.8V (approximately 20% SOC)
Power Sonic Chargers	Contact us for information on a suitable charger
Life Expectancy (years)	5 years at one cycle per day
Short Circuit Protection	Automatically recover after removal of short
Dimensional Tolerances	max torque 15 ft/lbs
Terminal Type	M8
Cooling Way	Natural air cooling
Heat Function	Cell Heater Technology
Waterproofing Standard	IP66

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Input Charging Current			≤50			A
Output Discharging Voltage			51.2v			V
Continuous Output Discharging Current			≤200			A
Ambient Condition	Operating Temperature	-20/-4	25	60/140		℃/℉
	Humidity (No Water-Drop)	0%		90%		RH
Storage Condition	Temperature	-20/-4		85/185		℃/℉
	Humidity (No Water-Drop)	0%		90%		RH

Protection Parameters (for Individual Cell)

Over-Charge Voltage Protection (OVP)	3.65		±25mV	V	
Over-flashing	1000		±300	mS	
Over-Charge Voltage Protection Release (OVPR)	3.6		±50mV	V	
Over-Discharge Voltage Protection (UVP)	2.4		±80mV	V	
Over-lapping	20		±6	mS	
Over-Discharge Voltage Protection Release (UVPR)	2.50—2.60		-----	V	
Over-Current Discharge Protection (OCDP)	800		±10	A	
Over-Current Protection Delay Time (OCPDT)	30		±5	mS	
Over-Discharge Protection Release	Recovering after cutting off the load				
Over-Current Discharge Protection Release	Recovering after cutting off the load				
Short circuit current protection	Enable				
Short circuit current protection delay time	200	600	±100	uS	
Short circuit protection Release	Recovering after cutting off the load				
Discharging Temperature	75/167	External	±5	℃/℉	
Discharging Temperature Protection Release	70/158		±10	℃/℉	
Discharge protection temperature recovery method	Automatic recovery				
charging Temperature	----		----		
charging Temperature Protection Release	----		----		
Cell balance					
Bleed StartPoint	71/159.8		±10mA	℃/℉	
Bleed Current					
Balance Mode	Charging Auto Active Balance				
Idle mode	≤5uA			uA	
Main loop electrify resistance	MAX: 7mΩ			mΩ	
PCBA Size	190 (±0.5) ×120 (±0.5) ×35 (±0.5)			mm	
Data Storage	Cycle quantity data storage record by Bluetooth				

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BMS TECHNICAL SPECIFICATIONS

Cell model	LFP/MT86A
Cell type	Prismatic cell
Nominal Capacity (0.5C)	86A
Standard C/Discharge Current	0.5C/1C 40A/86A
Max Cntinuous Discharge Current	3C / 250A
Over-charge	
Over-charge protection voltage for each cell	3.65V
Over-charge release voltage for each cell	3.6 V
Over-charge release method	Protection releases when all cell voltages drop below the over-charge release voltage
Over-discharge	
Over-discharge protection voltage for each cell	2.4v
Over-discharge release voltage for each cell	2.8v
Over-discharge release method	Protection releases upon charging
Over current	
Discharge over current protection	600-800 A
Over-current delay time	50-200 mS
Over current release condition	Protection releases upon removing load and charging
Battery temperature	
Over-temperature protection	65±5°C
Release temperature	50±5°C
Short circuit protection	
Function condition	External short circuit
Short circuit delay time	200 ms
Release condition	Protection releases upon removing short circuit and charging

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