

# Three-series direct-discharge lithium battery pack







#### **Overview**

#### What is a 3S lithium ion battery?

A 3S Li-ion battery is made up of three lithium-ion cells connected in series. These batteries are praised for their high energy density and long cycle life, meaning they can be recharged many times without significant loss of capacity.

What is a battery pack?

They may be configured in series, parallel or a mixture of both to deliver the desired voltage, capacity, or power density. Packs are identified by cell size, number of cells, battery structure, chemistry, chargeability, capacity, and voltage rating. Lithium-Ion Battery Products - Battery Packs are in stock at Digikey.

How does a 3S lithium battery work?

A 3S lithium battery consists of 3 cells connected in series, each with a nominal voltage of 3.7V. Here's how the charging works: 3S lithium batteries have a nominal voltage of 11.1V (3.7V  $\times$  3 cells). The fully charged voltage of a 3S lithium battery is 12.6V (4.2V per cell  $\times$  3 cells).

What voltage should a 3S lithium battery be charged to?

The fully charged voltage of a 3S lithium battery is 12.6V (4.2V per cell  $\times$  3 cells). Charging to this voltage is considered the maximum safe level for most lithium-ion chemistries, including Li-ion, LiFePO4, and LiPo. To avoid damaging the battery, it should not be discharged below 9.0V (3.0V per cell  $\times$  3 cells).

What is a 3s 18650 battery pack?

A 3S 18650 battery pack combines three of these cells in series, resulting in a powerful and reliable battery. These packs are used in a variety of applications, from high-performance flashlights to electric bikes. The 18650 cells are known for their durability and high energy density, making them a



solid choice for demanding tasks.

#### What is a 3s LiPo battery?

LiPo stands for lithium polymer, and these batteries are quite popular in the world of high-performance applications. A 3S LiPo battery consists of three lithium polymer cells connected in series. These batteries are known for their high discharge rates, which means they can deliver a lot of power very quickly.



#### Three-series direct-discharge lithium battery pack



#### 3+ Series Cell Chargers

Three or more series cells are typically used for battery packs in applications with much higher discharge power requirements such as notebook computers, large wireless speakers, robot ...

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#### Lithium-Ion Battery Packs , Electronic Components Distributor

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## Battery Pack Designer's Guide: From Beginner to Pro [With ...

Applications range from high-power discharge systems for electric vehicle starting operations to custom lithium-ion battery pack configurations designed for specific dimensional and ...

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## 26650 3.2V 3300mAh LFP Cells (4 pcs) for DIY ...

Engineered with a 2C maximum continuous discharge rate, these cells are suited for demanding applications requiring high current output and long life. Each ...



by cell size, number of cells, battery structure, ...

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## LiFePO4 Cell 3.2V 110Ah EVE 105K Battery Lithium Iron ...

Buy HiXiMi LiFePO4 Cell 3.2V 110Ah EVE 105K Battery Lithium Iron Phosphate, Charge/Discharge Rate 1C, Support Multiple Series or Parallel DIY Battery Packs with ...

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A 3S LiPo battery consists of three lithium polymer cells connected in series. These batteries are known for their high discharge rates, which means they can deliver a lot of power ...

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## Experimental data simulating lithium battery charging and ...

In this paper, the GSP655060Fe soft pack lithiumion battery with a capacity of 1600 mAh is utilized, employing lithium iron phosphate as the positive electrode and graphite as the ...



#### HX-3S-01 BMS 3S ( 3 CELL ) 12V 10A LI-ION ...

Lithium-Ion charge / discharge protection circuit comes with over-charge, over-discharge, over-current and short circuit protection, for a variety of various ...

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# Numerical simulation for the discharge behaviors of batteries in series

Battery packs of multi-batteries supply high voltage when batteries are connected in series and high capacity when connected in parallel, which provides a new substitution of ...

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# Takini

## Optimization of lithium-ion battery pack thermal performance: A ...

This study fills that void by thoroughly examining how battery tabs, busbars, electrical configurations (series-parallel), and discharge rates collectively influence both ...

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#### EVE LiFePO4 Cell 3.2V 330Ah Battery Lithium Iron Phosphate, ...

EVE LiFePO4 Cell 3.2V 330Ah Battery Lithium Iron Phosphate, Charge/Discharge Rate 1C, Support Multiple Series or Parallel DIY Battery Packs with busbars and M6 ...



## A comparison of battery-charger topologies for portable ...

The battery pack may include cells connected in series to achieve a higher voltage, and/or cells connected in parallel to achieve a higher capacity. The pack configuration directly imposes



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#### Design of Voltage Equalization Circuit and Control Method for Lithium

The active equalization of lithium-ion batteries involves transferring energy from high-voltage cells to low-voltage cells, ensuring consistent voltage levels across the battery ...





#### EVE LiFePO4 Cell 3.2V 230Ah Battery Lithium Iron Phosphate, ...

EVE LiFePO4 Cell 3.2V 230Ah Battery Lithium Iron Phosphate, Charge/Discharge Rate 1C, Support Multiple Series or Parallel DIY Battery Packs with busbars and M6 ...

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### HX-3S-01 BMS 3S ( 3 CELL ) 12V 10A LI-ION LITHIUM BATTERY ...

Lithium-Ion charge / discharge protection circuit comes with over-charge, over-discharge, overcurrent and short circuit protection, for a variety of various shapes 3.7V lithium Ion batteries.

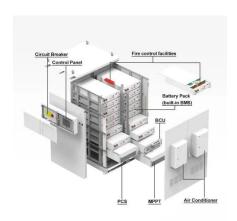


#### 3+ Series Cell Chargers

17 rows. Three or more series cells are typically used for battery packs in applications with ...

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## Influence of the connection topology on the performance of lithium ...

In order to meet the energy and power requirements of large-scale battery applications, lithium-ion cells have to be electrically connected by various serial-parallel ...

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Explore our specialized collection of 21700 batteries, designed for those who seek unparalleled performance and durability. Ideal for a wide range of high-demand applications, these batteries ...







## EVE LiFePO4 Cell 3.2V 230Ah Battery Lithium Iron Phosphate, ...

GRADE A CELL: You can DIY your own battery pack with these battery cells. All cells are brand new A-grade, these cells have the same internal resistance, voltage and ...



## , Chargex Lithium Battery Manufacturer for Aerospace & OEM

...

Chargex manufactures high-performance lithium ion batteries for solar energy, RVs, marine vessels, electric vehicles, and industrial applications. Long-lasting, lightweight, and reliable ...



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#### **Lithium-ion Battery Packs**

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## Some questions on 3s 18650 battery packs, Electronics Forum ...

The protection part is in series with the external connections, to allow the battery to be isolated from the external wiring in case of over-charging or over-discharge.

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# Voltage range:691.2-947.2V -6000 cyles(100%DOD) Rated britiery capethy, 216KWH Customisable)

## Some questions on 3s 18650 battery packs

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## Battery pack calculator: Capacity, Crating, ampere, charge and

The capacity of a battery or accumulator is the amount of energy stored according to specific temperature, charge and discharge current value and time of charge or discharge.

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## 26650 3.2V 3300mAh LFP Cells (4 pcs) for DIY Battery Packs, Bioenno Power

Engineered with a 2C maximum continuous discharge rate, these cells are suited for demanding applications requiring high current output and long life. Each pack includes 4 individual cells. ...

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## <u>Li-Ion Cells: Charging and Discharging</u> <u>Explained</u>

It's crucial to know how to charge and discharge li-ion cells. This article will provide you with a guide on the principles, currents, voltages, and

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#### <u>Battery Pack Calculator</u>, <u>Good</u> Calculators

Here's a useful battery pack calculator for calculating the parameters of battery packs, including lithium-ion batteries. Use it to know the voltage, capacity, energy, and maximum discharge ...



## A Comprehensive Overview of 3S Batteries

A 3S LiPo battery consists of three lithium polymer cells connected in series. These batteries are known for their high discharge rates, which ...

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#### **Lithium-ion Battery Packs**

Explore our portfolio of highly engineered battery packs to see if we have a standard, proprietary solution that meets your system requirements. Contact ...

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