

**BLINK SOLAR**

# **Power battery pack structure and appearance design**



## Overview

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Why is battery pack box structure important?

Abstract. The power battery is the only source of power for battery electric vehicles, and the safety of the battery pack box structure provides an important guarantee for the safe driving of battery electric vehicles. The battery pack box structure shall be of good shock resistance, impact resistance, and durability.

How to design a battery pack?

The dimensions of battery packs also require a design to space evaluation. The occupied volume of the pack should be suitable for the related car chassis. As previously mentioned in Section 1, CTP and CTC are two different strategies for packaging design. These approaches differ from the modular one.

Where is the battery pack box arranged?

The battery pack box of the target vehicle is arranged under the chassis, below the floor of the passenger compartment, disassembled from the electric vehicle. The appearance structure of the box is shown in Fig. 3. After removing the upper cover, the battery pack module is presented, and the structure is shown in Fig. 4.

What is a power battery pack?

The power battery pack provides energy for the whole vehicle, and the battery module is protected by the outer casing. The battery pack is generally fixed at the bottom of the car, below the passenger compartment, by means of bolt connections. The safety of the power battery pack is one of the important indicators to measure the safety of BEVs.

## Power battery pack structure and appearance design

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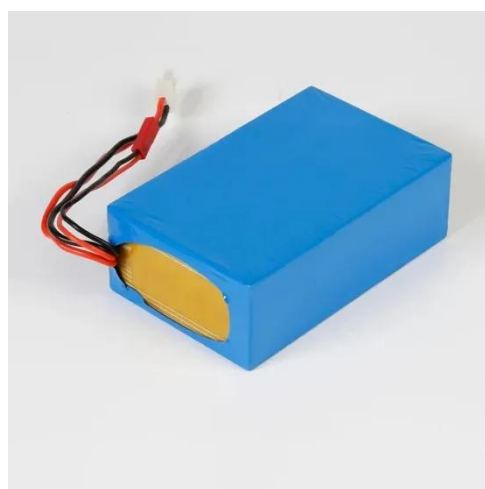
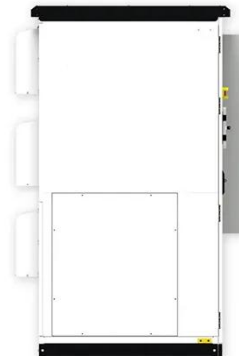
### Lightweight Design of Power Battery Pack Structure of Pure ...

In order to improve the range of pure electric vehicle and the structural safety of power battery pack, taking the power battery pack of a type of pure electric vehicle as the research object, ...

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### EV Battery Pack Design: Structure, Safety & Optimization

The integrated structure design and battery pack power, from the monomer to the system, are the main influencing factors. Therefore, by choosing suitable high-energy ratio ...



### Power battery structure and principle

Figure 1 Position of power battery in the whole vehicle: layout in power battery structure and principle For the whole vehicle to be ...

## Optimization Analysis of Power Battery Pack Box ...

Abstract. The power battery is the only source of power for battery electric vehicles, and the safety of the battery pack box structure provides an important guarantee for the safe ...



## Structural design and optimization of power battery pack

Firstly, structural improvement design and light alloy material replacement for high-strength steel battery pack of a pure electric vehicle were carried out, which improved the safety ...

## Design approaches for Li-ion battery packs: A review

The target concerns electric and hybrid vehicles and energy storage systems in general. The paper makes an original classification of past works defining seven levels of ...



## EV Battery Pack Design: Structure, Safety

The integrated structure design and battery pack power, from the monomer

to the system, are the main influencing factors. Therefore, ...



## Power battery structure and principle

Figure 1 Position of power battery in the whole vehicle: layout in power battery structure and principle For the whole vehicle to be designed, the vehicle manufacturer ...



## on Structure of New Energy Power Battery Package

In previous studies, many battery pack box structures had large volume and complex structures. By establishing models in virtual prototypes and simulating and analyzing ...



## Structural Design and Packing Technology Optimization of Power Battery

The structure of a power battery system

comprises cells, modules, and battery packs. The cell is the most fundamental unit, and its structural design and material selection ...

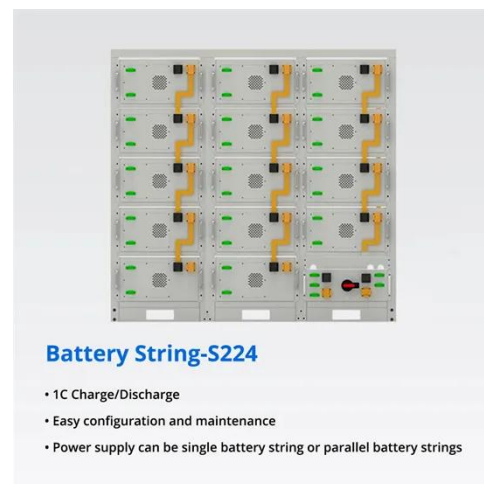


### Power battery pack structure design

The power battery pack is mainly composed of a shell, battery module components, electrical components, battery management system (BMS), battery system distribution box ...

### (PDF) Mechanical Design of Battery Pack

Abstract This project offers a detailed overview of the process involved in designing a mechanical structure for an electric vehicle's 18 kWh battery pack.



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