

Lithium-ion Battery Overview

How do the batteries work in Acer products?

What is a Lithium-ion battery?

Lithium-ion batteries typically consists of the Lithium oxide based cathode electrode, carbon based anode electrode, the separator and the lithium salt in an organic solvent based electrolyte. Lithium ions move from the negative electrode to the positive electrode during battery discharge. This process is reversed when the battery is charging.

Are lithium-ion batteries dangerous?

The lithium-ion batteries used in our products have "smart" features to make them safer. They contain a battery management unit (BMU) to monitor the battery to maintain safe operating conditions. Please note that using an improper replacement battery, mishandling of the battery, or using the battery under abusive conditions may seriously damage the battery. For additional battery safety information, please refer to the Acer Regulatory Information and Safety Guide for detailed guidelines for safe battery usage.

Will my lithium-ion battery lifespan decrease over time?

All batteries are consumable and have a limited lifespan. The lifespan of a lithium-ion battery decreases depending on how you use it and store it. Factors that can affect battery lifespan are age, number of charge cycles, overcharging and extreme temperatures, etc.

Conditions that can adversely affect the battery:

- Using the computer on constant AC power can result in battery capacity loss, or can cause your battery to become deformed.
- Incorrect charging at the wrong voltage may result in overheating or damage to the battery.
- Long term storage when the battery is completely discharged may result in battery capacity loss, failure, or deformity.
- Storing or using the computer at temperatures above 35 °C / 95 F may reduce the lifespan of the battery and could cause the battery to become deformed.
- Storing or using the computer at temperatures below 0 °C / 32 F may permanently reduce the charging capacity of the battery.

How to store the battery for a long period of time?

- Store the product at room temperature (0 °C - 35 °C) in a dry (45% - 80% relative humidity), and well-ventilated area. Avoid direct sunlight, high temperature and high humidity.
- If you plan to store the device for a long period of time, charge to approximately 50% capacity, turn-off the device, remove AC power cord.
- Do not store your device with the battery completely discharged for a long period of time. This may cause battery to become damaged or deformed.

- We recommend that the battery be checked and charged to approximately 50% capacity every 6 months.
- Your device may be in a low-battery state when you resume it from long-term storage. You may need to charge the device for an extended period of time before you can safely use it again.