

# What is a laptop battery cell? Note if you want to replace the laptop battery cell

If you see that the battery cell is corroded, you need to check and have a suitable replacement plan. Let's find out with TipsMake in the following article.

As a highly portable device, the battery cell is one of the factors that many users care about when using a laptop. So, what is a laptop battery cell and should you replace the laptop battery cell? To answer those questions, let's find out with TipsMake in the article below.

## What is a battery cell?

**Cell battery is a term used to refer to Li-ion or Li-Po** batteries used for laptops. Corresponding to each battery cell is a Li-po battery (or Li-Po) with a voltage of 3.6-3.7V and a capacity of **2,200 - 2,600 mAh** . The battery cell is designed in a cylindrical shape with a diameter of 18mm long and 65mm high. In general, this design is quite similar to a large battery (Battery D). The more cells a battery has, the more batteries there will be inside.

Picture 1 of What is a laptop battery cell? Note if you want to replace the laptop battery cell

## Structure of battery cell

The battery cell is composed of 4 parts:

1. **Positive electrode (Cathode):** Made from two main materials: **LiCoO<sub>2</sub> and LiMnO<sub>4</sub>** . When an electric current passes through, Lithium atoms are split and form Li<sup>+</sup> ions.
2. **Negative electrode (Anode):** This electrode is made of graphite and other carbon materials. The negative electrode will take on the main task of storing Li<sup>+</sup> ions.
3. **Separator** : This part is made from PP or PE plastic material and is used to help separate the cathode and anode. The structure of the separator will include many small holes to help Li<sup>+</sup> particles easily pass through.
4. **Electrolyte** : This is a type of conductor, which can be in liquid or dry form. The electrolyte will allow Li<sup>+</sup> ions to move easily between the negative and positive poles of the battery.

Picture 2 of What is a laptop battery cell? Note if you want to replace the laptop battery cell

## Does the battery cell determine the device's usage time?

In fact, the higher the battery cell number, the longer the laptop will last. However, this is not a decisive factor for usage time.

Currently, laptop manufacturers are constantly improving technology and have introduced parts such as processor chips, screens or smart battery management features on laptops. These parts also have a huge impact on the laptop's lifespan. Therefore, if you want to consider how long or fast the usage time will be, you need to evaluate many different factors to have an objective view.

## Should I replace the battery cell for my laptop?

After a long period of use, the laptop's battery will appear flat. The usage time is also shortened. Therefore, replacing battery cells for laptops is considered a method to help save costs and restore laptop battery quality to the original.

Picture 3 of What is a laptop battery cell? Note if you want to replace the laptop battery cell

Replacing battery cells is essentially a process where the repairman will check and remove damaged or lost battery cells to replace new battery cells. This process will usually start from measuring the voltage or important parameters. Based on the obtained parameters, the repairman can calculate and select suitable replacement battery cells.

It can be seen that the process of replacing battery cells requires relatively complicated professional skills. Therefore, you should not replace battery cells too often and should only replace them at reputable warranty centers and stores.

>> **See more: Reasons and effective ways to fix swollen laptop batteries**

## Risks when replacing battery cells for laptops

Replacing the battery cell to ensure it meets usage needs is very necessary. However, when replacing battery cells, many unwanted risks can occur. Specifically:

1. **Poor quality battery cells** : Currently on the market there are many types of floating battery cells of unknown origin. This can affect your computer if you replace it with non-genuine batteries.
2. **Laptop works intermittently** : Laptop batteries are a homogeneous block, so changing the battery cell without care can cause the parts to not match and become loose. This leads to the laptop operating intermittently and unstable.
3. **Damage to laptop**: In particular, when replacing the battery cell for experienced people, it will not cause any effect on the computer when replacing the battery cell. On the contrary, for those without experience, it is easy for the battery to get hot, swollen or damaged. This may cause a risk of fire and explosion while using the laptop.

Picture 4 of What is a laptop battery cell? Note if you want to replace the laptop battery cell

## Classification of popular battery cells

Battery cells are mainly divided into two types: Lithium-Ion batteries and Lithium-Polymer batteries. Each type will have different parameters, you can choose depending on your needs.

## Lithium-Ion Battery (Li-Ion)

**Lithium-ion (Li-ion) batteries** are a type of battery technology whose main component is lithium ions. This type of substance is responsible for exchanging ions between electrodes (Anode and Cathode). This process is similar to other types of batteries. Below are some information about lithium-ion batteries (Li-ion):

Battery type	11-13 inch screen	14-15 inch screen	17 inch screen
4 Cells	2 hours 30 minutes	2 o'clock	1 hour 40 minutes
6 Cells	3 hours 30 minutes	3 o'clock	2 hours 30 minutes
8 Cells	Do not have	4 hours	3 o'clock
9 Cells	Do not have	4 hours 30	4 hours

## Lithium-Polymer (Li-po) battery

**Lithium-Polymer (Li-po) batteries** are not made of liquid electrolyte but are made of dry polymer electrolyte. This substance will look like a thin piece of plastic film. This film is laminated between the negative and positive terminals of the battery to allow ion exchange. Below are some information about Lithium-ion batteries (Li-ion):

Battery type	11-13 inch screen	14-15 inch screen	17 inch screen
4 Cells	4 hours	3 hours 30 minutes	3 o'clock
6 Cells	6 o'clock	5:30 a.m	5 hours
8 Cells	Do not have	7 hours 30 minutes	7 o'clock
9 Cells	Do not have	8 o'clock	7 hours 30 minutes

## Some notes when using Cell batteries

When using Cell batteries, users need to note the following:

1. When using a laptop, avoid battery usage reaching 0%. You need to leave some energy in the battery. This energy is used to manage the internal cells while waiting for the battery to charge. This will help limit the situation of the battery dying or not being able to recharge the battery.
2. Do not let your laptop operate in an environment that is too hot or too cold. In environments with higher temperatures, the battery will consume more capacity. At the same time, too low an ambient temperature such as in a closed environment will also affect the battery life.

## Epilogue

Battery cells are important components in laptops. Therefore, if you see that the battery cell is corroded, you need to go to a warranty center or reputable store for quick inspection and repair. Wishing you safe use of your laptop with optimal battery life.

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