



A. Practical

A rechargeable battery that is integrated into the product is extremely practical: it frees the user from worrying about batteries, rechargeable or not. This saves time in the daily management of the product.

B. Economical

Comparison of the cost of use and the break-even point between the PIXA 3 (two AA batteries) and the PIXA 3R (rechargeable Li Ion Polymer battery):

*=> Using one PIXA 3R becomes more economical than a PIXA 3 after **20 charging cycles compared to 20 battery changes.***

*=> After 20 charging cycles, the PIXA 3R saves approximately 60 € per year.**

** Based on 5 hours average use per week, 46 weeks per year*

C. Ecological

During intensive use (several hours per week), rechargeable batteries also offer an ecological advantage over regular batteries. In fact, there are no dead batteries to deal with, but only one battery to recycle appropriately at the end of its life. This clearly has a significant impact on the reduction of waste (electronic waste treatment is heavy, expensive).

A. Weight

Lithium Ion Polymer batteries concentrate a higher energy density than Nickel batteries and can therefore deliver three times higher voltage. With equal power, a Lithium Ion battery weighs up to 60 % less than a nickel battery. Overall, you get better performance at reduced weight.

B. Memory effect

This phenomenon results in a battery being prematurely depleted when it is not correctly discharged and recharged, giving the impression that the battery stores less energy.

Nickel batteries are very vulnerable to this memory effect.

The progressive accumulation of crystals impedes complete charging, so performance diminishes with each new charge cycle. To limit this effect, it helps to completely discharge a nickel battery regularly.

On the other hand, Lithium Ion Polymer batteries are not sensitive to the memory effect.

Therefore, no charging strategy is required; you can charge your battery whenever it is convenient, without having to wait to completely deplete or completely recharge the battery. A Lithium Ion Polymer battery therefore offers optimal performance over all its charging cycles.

C. Self-depletion: the effects of storage on battery capacity

A battery will progressively discharge when not used. It is therefore important to be aware that when you want to use a battery that was in storage, it has surely discharged somewhat during this time. You need to recharge it before use to return it to its optimal capacity.

Lithium Ion Polymer batteries are two times less sensitive to self-depletion than nickel batteries (10 % loss per month for Lithium Ion Polymer vs. 20 % loss per month for nickel).

D. Effect of extreme temperatures on batteries in use

Lithium Ion Polymer batteries resist low temperatures better than nickel batteries.

In use at -20 °C, a Lithium Ion Polymer battery loses an average of 35 % of its initial capacity, while a nickel battery loses 80 %.

Similarly, at high temperatures, a Lithium Ion Polymer battery conserves its initial capacity, while a nickel battery loses approximately 10 %.