

CHAPTER 07

- POWER

Generally, camera batteries have a voltage range of 3.6V to 7.4V. Lithium-ion batteries, which are commonly used in digital cameras, have a nominal voltage of 3.7V. However, the actual voltage can range from 4.2V when fully charged to 3.0V when depleted.



POWER



- There are a few places where you can find which battery model is compatible with your camera. The best place to check is the instruction manual or marketing specifications. You may also be able to find the battery model at the [Parts and Accessories Sales website](#)

POWER



- Although many cameras can use alkaline batteries, they have a short life, so whether you use proprietary batteries or batteries from the drugstore, rechargeable is the name of the game. Save the alkaline batteries for a backup.

POWER



- . A battery is two or more electric cells connected together, from the military usage 'a battery of guns'. However, common usage means that today even a single cell is referred to as a battery.

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- An electric cell is a portable source of power. In its simplest form it consists of two electrodes (positive and negative) of different conductive materials and an electrolyte. When the cell is introduced into a circuit containing, for example, a torch bulb or a small electric motor, electrons flow from one electrode to the other, making the bulb illuminate or activating the motor. At the same time chemical reactions take place which slowly reduce the ability of the cell to produce power.



THERE ARE TWO TYPES OF BATTERY: PRIMARY AND SECONDARY.

- A primary battery is single use and disposed of when the power runs out.
- A secondary battery can be recharged from a mains power supply and reused many times (though not indefinitely).
- Both types are usually defined by their electrodes or the electrolyte



ALKALINE BATTERIES

- Alkaline The negative electrode is zinc. The positive electrode is based on manganese oxide. The electrolyte is a concentrated alkaline solution (potassium hydroxide). Alkaline batteries offer more power than zinc-carbon and are suitable for flashguns.



NICKEL METAL HYDRIDE BATTERIES



- Nickel metal hydride Better known as Ni-MH. The positive electrode is nickel oxyhydroxide. The negative electrode is a metal hydride. The electrolyte is an aqueous solution of metal hydroxides.

LITHIUM-ION BATTERIES

- Lithium-ion Also called Li-ion. The positive electrode is lithium cobalt oxide or lithium iron phosphate. The negative electrode is usually carbon. The electrolyte varies from one type of battery to another. Li-ion batteries can be charged and discharged many hundreds of times.

