

Sort of battery	Lead acid	Sealed Lead acid	Rechargeable Alkaline	NiCd (nickel cadmium)	NiZn (nickel zinc)
Current output	Extremely high; conversion efficiency :80%-85%	Extremely high; converssion efficiency: 85% a 90%	Low	Extremely high current output ;high conversion efficiency (65%).	Even higher than NiCd's
Memory effect	No	No	No	Yes	Yes
Storage	Must not be stored flat	Must not be stored flat	Can be stored flat	Can be stored in any state of charge. Barely affected	Can be stored in any state of charge Barely affected
Peuker effect	Affected (Peukert number not very close to 1)	Affected	Affected	Peukert number close to 1)	Barely affected
Storage density	30-50 Wh/kg 90 Wh/L (low)	85- 30-50 Wh/kg 85-90 Wh/L (low)	80 Wh/kg (initial)	40-80 Wh/kg 100-150 Wh/L	60 Wh/kg 100-170 Wh/L
Self-discharge	8-40 % a month	2-10% a month	very low	Moderate	Moderate
Reduced capacity with increase of temperature	50% with each 8°C	50% with each 8°C		20% with each 8°C	

Others:	Heavy; chemicals used (lead, sulfuric acid).	Dangerous (lead, sulfuric acid).	Can break down suddenly;cannot be fully charged	No cadmium (more environmentally friendly than NiCd),cannot be recharged as many times as other types (25 to 100 times).	High level output voltage curve .Copes very well with abuse such as heavy loads, deep discharge, etc, if maintained properly.	Reduced life (100-200 cycles) if heavily discharged . One manufacturer reco-mmends using 80% discharge for longest life.

NiMH (nickel metal hydride)	Lithium ion (li-io)	Lithium -ion polymer	Lithium-ion iron-phosphate
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Extremely high.	Medium	High current output	Even higher than Lithium- ion polymer's
Little	No	No	No

		If storing for long periods, manufacturers recommend
Can be stored in any state of charge	Improved endurance if stored with 60% of its charge.	discharging the battery to 40% of full charge

Barely affected	Affected	Affected	Affected
	100-140 Wh/kg	130-200 Wh/kg	
60-120 Wh/kg	Wh/kg	300 Wh/L	130-170 mAh/g
220-300 Wh/L	270 Wh/L		90-120 Wh/kg (low)
30% a month	Low	Low	Low

Must not be over discharged.	Can be recharged	Must not be over discharged, can be recharged	Have lower voltage (3.2V) than normal Li-ion cells so can't be charged on other Li-ion chargers. Not widely in production, so little performance information is available.
Can be recharged many times (500+) if good quality and treated well.	"only" a few hundred times (less than NiCd or NiMH).	"only" a few hundred times (less than NiCd or NiMH).	