

	Lithium Ion	Lithium Polymer LIPO	Lithium Iron Phosphate LFP	Nickel-Metal Hydride NiMH	Lead-Acid	Solid-State	Graphene
Characteristics							
Energy density	150-250	100-250	90-160	60-120	30-50	250-500	250-480
Power density	250-3400	300-2000	1000-3000	200-1000	180-400	300-5000	2000
Life cycle	500 – 2,000	300 – 1,000	2,000 – 10,000	500 – 1,500	300 – 1,000	5,000 – 50,000	50.000
Charging speed	30 min – 3 hours	30 min – 2 hours	1 – 3 hours	2 – 6 hours	6 – 14 hours	10 min – 1 hour	10 minutes or less
Weight	4–8 kg	4–9 kg	8–12 kg	12–18 kg	20–30 kg	3–6 kg	12 kg
Maintenance cost and effort	low	average	very low	average	high	very low	very low
Recyclable	average	low	low	high	very high	high	very high
Safety	average	low	high	high	average	very high	very high
Operating temperature hot	60	60	70	85	50	150	70
Operating temperature cold	-20	-10	-20	-30	-40	-30	-30
DC DC roundtrip	95%						99%
Selfdischarge	> 5%						< 2%
Degradation							
Termal runaway / fire hazard	high	very high	low	low	very low	extreem low	extreem low
Other							
Applications							
Mobile	very high	high	average	low	very low	very high	very high
Car	very high	average	high	average	very low	very high	very high
Grid	very high	average	very high	low	low	very high	very high
Medical	very high	high	high	average	low	very high	very high
Consumer Electronics	very high	high	high	average	low	very high	very high
Aerospace / Military	very high	high	high	average	low	very high	very high
Limitations							
Cost €/kWh	\$100 – \$200	\$150 – \$250	\$150 – \$300	\$200 – \$400	\$50 – \$150	\$300 – \$800	400
Cost per cycle	\$0.05 – \$0.20	\$0.15 – \$0.50	\$0.02 – \$0.15	\$0.10 – \$0.40	\$0.15 – \$0.50	\$0.01 – \$0.10	0,008
Raw materials	difficult	difficult	average	average	easy	unknown	very easy
Manufacturing	difficult	difficult	average	average	easy	difficult	very easy
Wet en regelgeving	SGP371-2	Lithium mag niet meer binnen ...					
Concurrent Graphen	247 Storage (Belgie)	Vergelijkbare prijs					
Garantie Graphen	»ij 4 cycli per dag, 15 jaar verzekerd						

Grafeen in blokken van 10 kW verbonden middels kabelverbindingen, afhankelijke van de capaciteit van de hoofdaanvoer wordt deze aangepast. De dikte bepaald het laadvermogen / duur. In de regel tegenwoordig leidingen van 10 MWH tot 50 MWH