zeus Battery Products

LITHIUM ION (LIION) AND LITHIUM POLYMER (LIPO) CELL / BATTERY* SHELF LIFE

STORAGE RECOMMENDATIONS

To extend shelf life, cell / battery storage voltage and storage temperature need to be controlled.

STORAGE VOLTAGE:

A fully charged LiIon / LiPo cell is approximately 4.2 volts. LiIon / LiPo is different from other battery chemistries as it should never be stored fully charged. LiIon / LiPo should be stored approximately "half full" (40% – 50% of full charge)

TEMPERATURE:

LiIon / LiPo batteries function via a chemical reaction that occurs inside their sealed enclosure. Providing power is a chemical reaction, while the aging/degrading process is another chemical reaction. Chemical reaction doubles its speed for every ten degrees increase of ambient temperature. Typical household refrigerator (37 to 40 degrees) is the perfect storage place.

PERMANENT CAPACITY LOSS VS STORAGE CONDITIONS

Storage Temperature °C(°F)	40% Charge	100% Charge
0°C (32°F)	2% LOSS AFTER 1 YEAR	6% LOSS AFTER 1 YEAR
25°C (77°F)	4% LOSS AFTER 1 YEAR	20% LOSS AFTER 1 YEAR
40°C (104°F)	15% LOSS AFTER 1 YEAR	35% LOSS AFTER 1 YEAR
60°C (140°F)	25% LOSS AFTER 1 YEAR	40% LOSS AFTER 3 MONTHS

Table: LiIon / LiPo Battery Storage Temperature versus capacity

* If PCM or BMS is integrated within a battery pack, leakage current of the circuit needs to be taken in account.

zeusbatteryproducts.com // 877.469.4255 // sales@zeusbatteryproducts.com