Lithium-ion is now commonly used as a generic term for any cell that uses lithium for its active material. This includes Lithium-ion (Li-Ion), Lithium Iron Phosphate (LiFePO4) & Lithium Polymer (Li-Poly) cells. Below are some tips to follow when dealing with Lithium-ion batteries.

THE 4 GOLDEN RULES

1. If your battery gets unusually hot to touch, let it rest.
   Lithium-ion cells contain flammable chemicals. If the battery is mishandled, it may have a thermal runaway. This could involve smoke, fire or an explosion.

2. Do not exceed your battery’s maximum continuous discharge rating.
   Each of the Lithium-ion classes have been designed to meet specific drainage applications. Check your product’s data sheet to ensure you do not exceed your battery’s maximum continuous discharge rating.

3. Be careful not to short-circuit your battery.
   Do not place a battery in your pocket or somewhere where it may come in contact with conductive surfaces.

4. Use only cells that have a PCM incorporated.
   Always use a Lithium-ion cell that has an integrated Protection Circuit Module (PCM). This circuit protects for over charge, over discharge, over current/short circuit and over heating. Protected batteries are less likely to have thermal runaway and cause personal or property damage.

SAFETY PRECAUTIONS

1. CHARGING
   Read both the device and charger manual before use ensuring the correct chemistry and capacity is used. NEVER LEAVE UNATTENDED.

2. HIGH TEMPERATURE
   Avoid using or placing batteries in direct sunlight or in temperatures greater than 60˚C. This includes microwaves and cooking appliances.

3. IMMERSION
   Do not immerse the battery in liquid.

4. FLAMMABLE MATERIALS
   Avoid charging or discharging near flammable materials.

5. CHARGING TEMPERATURE
   The charging temperature range is regulated between 5˚C and 45˚C.

6. REVERSE POLARITY
   Make sure the + and - poles are oriented correctly.

7. SHORT-CIRCUIT
   Do not connect the + and - terminals with conductive material.

8. IMPACT / PENETRATION
   Do not penetrate or impact the battery case.

9. DEFORMATION
   Do not use a battery with conspicuous damage or deformation.

10. RUST, COLOUR CHANGE
    Stop using battery if there is abnormal smell, heat, deformities or discoloration.

11. MIXED USE
    Do not mix brands, chemistry or capacities.

12. DISASSEMBLY & RECONSTRUCTION
    Battery packs should only be assembled by factory authorised and qualified personnel.

13. SOLDERING
    Do not directly solder to the battery.

14. LEAKAGE ON SKIN
    If leakage gets on skin or clothing, flush with water to help prevent irritation.

15. STORING
    Store in a cool dry place.

16. CHILD SAFETY
    Keep out of reach of children.

17. TRANSPORT
    Follow all national transport guidelines.

18. RECYCLE
    Recycle used batteries at local battery drop-off points or contact place of purchase.