

MP 176065 Integration™ xtd

Standard specification

3.65 V high energy Li-ion cell with extended life and temperatures



1. Scope

This specification presents typical and guaranteed ex-works values for the rechargeable Lithium-ion, medium-sized, prismatic-shaped cell type MP 176065 Integration™ xtd. This cell is ideally suited for applications requiring high energy and long operating life, either in calendar, cycling or floating conditions, with excellent performances in unregulated temperatures varying from -40 °C to +85 °C.

2. Construction and visual aspect

A. Construction

The MP 176065 Integration™ xtd Li-ion cell is constructed according to the wounded prismatic technology. The cell features an aluminum envelope, a built-in circuit breaker and a safety vent.

A built-in 7 bar-rated negative terminal with current breaker interrupts the current flow (without any cell opening or vent) in case of excessive internal pressure, due to overcharging (with defective charger and/or electronic protection circuit) or excessive temperature.

A built-in safety vent protects the battery in case of excessive temperature environment (such as fire condition) leading to an internal pressure exceeding 12 bars.

B. Visual aspect

When inspected by naked eyes, the MP 176065 Integration™ xtd cell should not show any trace of dents, swelling, corrosion or leakage. Marking should be readable.

3. Typical values

A. Designation

MP 176065 Integration™ xtd.

B. Nominal voltage

3.65 V.

(At mid-discharge, +25 °C, 1.1 A rate).

(Nota: the open circuit voltage depends on the state of charge of the battery and may fluctuate between 2.5 V and 4.2 V).

C. End-of-charge voltage

4.20 ± 0.05 V at maximum.

D. End-of-discharge voltage

2.5 V minimum.

E. Rated capacity

5.6 Ah.

(Cell charged at a constant current of 1.1 A up to 4.2 V, followed by charge at constant voltage until the current falls down to 50 mA, then rested 1 to 4 hours at 25 °C, and discharged at 25 °C, at a constant rate of 1.1 A down to 2.7 V).

(The capacity restored by the battery varies with the end-of-charge voltage, the discharge current, the temperature, the voltage cut-off, the age, and the number of cycles already performed. Consult Saft for specific details).



F. Charging method

The recommended charge method is CC-CV:

■ First step, at constant current (CC) until the voltage reaches the recommended 4.20 ± 0.05 V voltage,

■ Second step, at constant voltage (CV), until the current falls to 50 mA (≈C/100 rate).

In case the time to reach the 50 mA minimum current is excessive, it is recommended to stop the charge with a timer starting counting when the selected end-voltage is reached (timer set at 5 hours when charging at C rate, 6 hours at C/2 rate and 7 hours at C/5 rate).

(Other charge conditions are possible. Consult Saft).



saft