



Jauch Battery Solutions

- Reliable energy for your application
- Standard cells and customized packs
- ESD protection
- Battery Certification Experts



RoHS compliant



Pb free



REACH compliant



Conflict Mineral free



SPECIFICATIONS

Cell Used	▪ LR1865HB
Model	▪ PROTECTED LI-ION RECHARGEABLE BATTERY - 18650
Jauch No.	▪ 250669
UL1642/UL2054	▪ YES/NO
UN 38.3	▪ YES
IEC 62133-2	▪ YES
Nominal Voltage	▪ 3.6 V
Typ. Capacity	▪ 3350 mAh <small>(0.2C, 2.5V discharge)</small>
Min. Capacity	▪ 3250 mAh <small>(0.2C, 2.5V discharge)</small>
Weight	▪ Approx. 50 g

PCM PARAMETER PER BATTERY CELL @25°C

Overcharge Det. Voltage	▪ 4.30 V ± 0.050 V
Overcharge Rel. Voltage	▪ 4.10 V ± 0.050 V
Overdischarge Det. Voltage	▪ 2.50 V ± 0.100 V
Overdischarge Rel. Voltage	▪ 2.90 V ± 0.100 V
Over Current Range	▪ 7.0 A - 15.0 A
PTC	▪ $I_{hold} = 5 A$ $I_{trip} = 15 A$



CHARGING CHARACTERISTICS PER BATTERY PACK

Charge Voltage	▪ 4.2 V
Standard Current	▪ 670 mA
Max. Charging Current	▪ 1005 mA
Operating Temperature	▪ 0°C to +45°C ▪ 0°C to +10°C (max. 335mA) ▪ +10°C to +20°C (max. 670mA) ▪ +20°C to +45°C (max. 1005mA)

DISCHARGING CHARACTERISTICS PER BATTERY PACK

Cut-off Voltage	▪ 2.5 V
Standard Current	▪ 670 mA
Max. Discharging Current	▪ 5000 mA (+20°C to +40°C)
Operating Temperature	▪ -20°C to +55°C
Storage Temperature	▪ -20°C to +20°C (max. 6 months)
Delivery State of Charge	▪ Max. 30%
Life Expectancy 0.3C Charge 1.0C Discharge @23°C	▪ 500 cycles ~ 70% of capacity





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HANDLING AND STORAGE

Important notice:

If the battery is for backup use or if battery will be outside of the given temperature ranges – please consult with Jauch
When used correctly, Lithium-Battery-Packs / Rechargeable Lithium-Batteries provide a safe and dependable source of power. However, if they are misused or abused, leakage, venting, or in extreme cases explosion and / or fire may result. Make sure to observe amongst others, following warnings.

Caution

- Do not incinerate, disassemble, short terminals, expose to high temperature 100°C (212°F) risk of fire, explosion.
- Keep small cells and batteries which are considered swallowable out of the reach of children.
- Swallowing may lead to burns, perforation of soft tissue and death. Severe burns can occur within 2 h of ingestion.
- In case of ingestion of a cell or battery, seek medical assistance promptly.
- In case of a cell leakage, avoid skin or eye contact. Affected areas must be washed immediately with copious amounts of water and seek medical advice.

Handling

- Do not insert batteries in reverse. Observe the polarity markings on battery and equipment
- Do not short-circuit batteries
- Do not overcharge batteries
- Do not force discharge batteries
- Do not mix batteries
- Do not overheat batteries by exposure to high temperatures and direct sunlight.
- Do not weld or solder directly to batteries
- Do not dismantle batteries
- Do not deform batteries
- Do not dispose of batteries in fire
- A battery with a damaged pouch should not be exposed to water
- Do not allow children to replace batteries without adult supervision
- Keep batteries out of the reach of children. In case of ingestion of a cell or battery, the person involved should seek medical assistance promptly
- Equipment intended for use by children should have battery compartments which are tamper-proof
- Do not encapsulate and/or modify batteries
- Exhausted batteries should be immediately removed from equipment and disposed of
- When discarding batteries with solder tags, insulate the tags by wrapping them with tape, foil, etc.

Charge

- Charging method must be Constant Current – Constant Voltage (CC-CV)
- The specified charging characteristics shall not be exceeded
- Do not leave a battery on prolonged charge. Do not charge over the night.

Storage

- Store unused batteries in their original packaging and keep them away from metal objects which may short circuit them.
- Storing unpackaged cells together could result in cell shorting and heat build-up
- Store and display batteries in their original packaging in well ventilated, dry and cool conditions
- Avoid storing or display batteries in direct sun or in places where they get exposed to rain
- The normal storage of Lithium-ion Battery Pack is made at temperature between +10°C and +25°C, never exceeding +30°C In this way the maximum shelf-life (i.e. max. retention of cell performances after storage periods) of Lithium-Ion-Battery Pack is achieved
- Storage temperatures above room temperature will increase the rate of self-discharge, reducing the available capacity of the cell. Humidity above 95% R.H. and below 40% R.H. should also be avoided for sustained periods, as these extremes are detrimental to batteries
- Storing the cells / batteries at low temperature is also suggested, but attention must be paid when transferring the cells to warmer environments, because of the possibility of having water condensing on to the cells (risk of short circuits)
- Do not stack battery cartons on top of each other exceeding a specified height. The height is clearly dependent on the strength of the packaging. As for general rule this height should not exceed 1.5 m for cardboard packages or 3 m for wooden cases. The above recommendations are equally valid for storage conditions during prolonged transit. Thus, batteries should be stored away from ship engines and not left for long periods in unventilated metal box cars (containers) during summer.

Use of battery in devices

- The size and shape of the terminal contacts shall ensure that they can carry the maximum anticipated current. External terminal contact surfaces shall be formed from conductive materials with good mechanical strength and corrosion resistance. Terminal contacts shall be arranged so as to minimize the risk of short circuit.
- Don't use metal battery holders which surround the battery casing and the positive pole at the same time.
- Avoid damaging the heat shrink tubing. This can lead to a short circuit.
- When inserting the battery into the application, do not use metal equipment to prevent a short circuit.
- The device and charger shall incorporate temperature measurement near to the battery.
- The device and charger shall incorporate additional protection against foreseeable misuse. The specified parameters shall not be exceeded.