

Soldering

Hand soldering

Never solder directly to the cell surface. Use cells with tabs only (see related section of our Products Line). Do not allow the soldering iron to get directly in contact with the battery body. Do not apply heat any longer than necessary to achieve a safe solder connection (max. 350 °C for 5 s in the soldering area of the tab).

Wave soldering

During passage of the battery terminals through the solder wave, the battery is short-circuited. As this usually takes less than 5 seconds, the loss of capacity is negligible. Subsequent to a short circuit, the battery voltage will recover to a value above 2.5 V almost immediately. Full recovery to the initial voltage may take hours or even days. Please note this effect in case electrical characteristics are measured while the battery voltage is recovering. The battery may appear to be defective, but it is not. Temperature at the battery needs to be controlled below 85 °C.

No reflow soldering with batteries

Never use reflow soldering on batteries! Lithium batteries are not suitable for reflow soldering processes. The high temperatures required for this soldering method would deform the gasket, causing electrolyte leakage, deterioration of the battery performance and possible rupture or ignition.

Reflow soldering of SMTU holders

If assembly by reflow soldering is requested, it is possible to solder a RENATA battery holder of the SMTU series but place the battery into the holder after the soldering process. The peak temperature of the reflow soldering profile is recommended to not be above 270 °C for 40 s (245 °C for another 40 s).