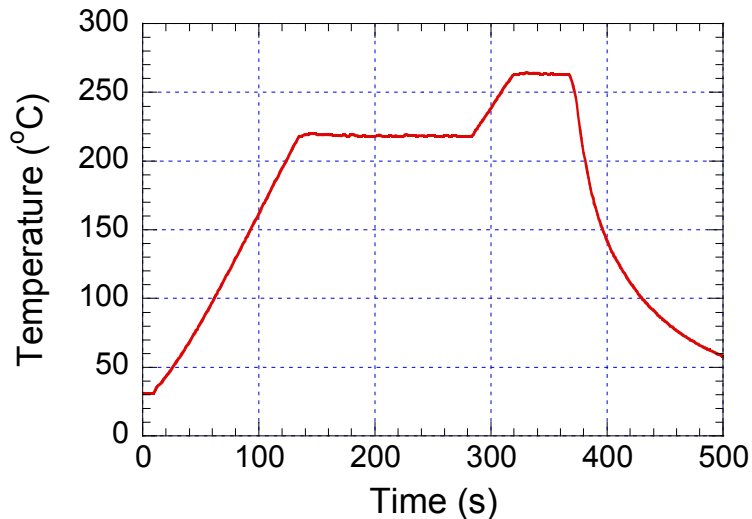


## Thin Film Lithium-Ion Batteries

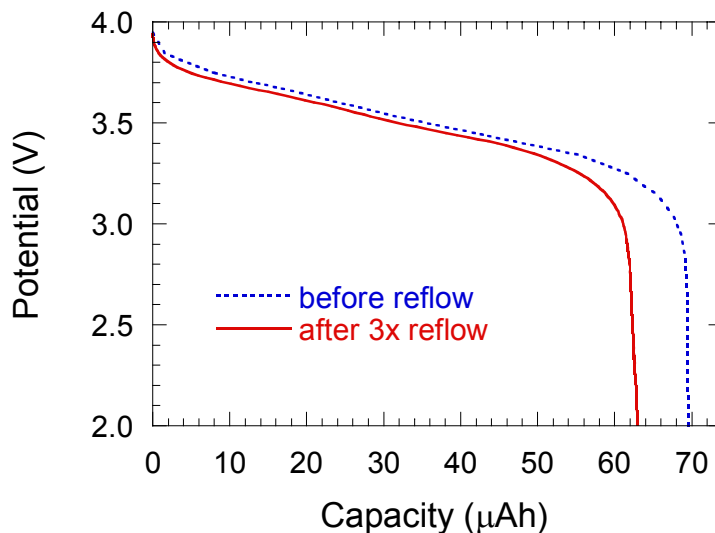
### 265°C Surface Mount Reflow Tests

Groups of ORLI.0.5.CL batteries from different lots were subjected to three successive heat treatments in air following published reflow profiles. Thermocouples mounted on the surface of a reference battery were used to control and measure the temperature. Discharge curves were measured before and after heat treatment. The average discharge capacity (20  $\mu$ A rate) after heat treatment was about 91% of the as-fabricated value.



Heat treatment profile:

- Ramp to 220°C at maximum rate; hold at temperature for 150 s
- Ramp to 265°C at maximum rate; hold at temperature for 50 s
- Cool at maximum rate to 25°C



Discharge curves for an ORLI.0.5.CL series 52A battery before and after three successive heat treatments. Discharge at 20  $\mu$ A, 37°C.