

Visibility of Heat Generation inside Battery Cells

Challenge



We want to see the Internal Battery Condition without employing Destructive Means

We cannot monitor changing conditions inside the battery cell

We want to measure the internal conditions without damaging the battery

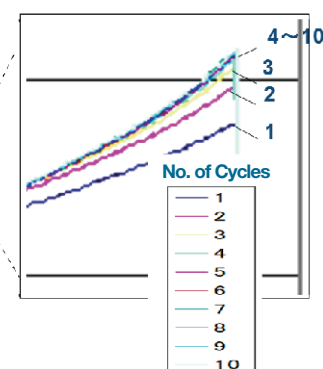
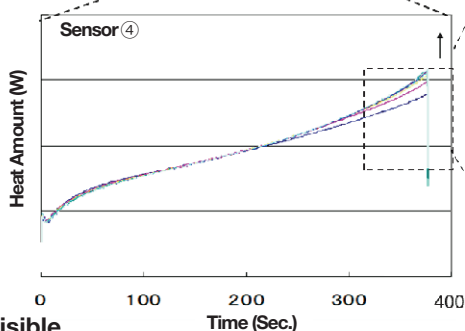
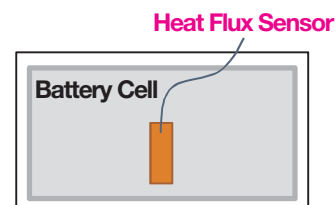
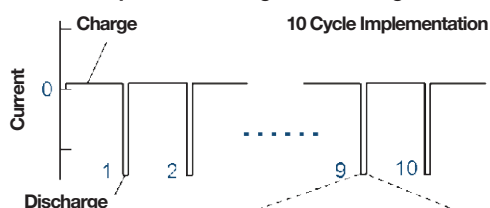
The Heat flux sensor Solution!



Measure the heat radiation coming from inside the battery from the cell surface

Charge & Discharge Cycles

Make an evaluation of deterioration acceleration with respect to the charge and discharge



Evaluation Results

By measuring the amount of heat dissipated during the charge and discharge cycles, the state change inside the battery was made visible.

Large Charge/Discharge Cycles = Large Heat Radiation Amount

The Internal Condition of the Battery can be monitored non-destructively through Surface Heat Flux Measurement

