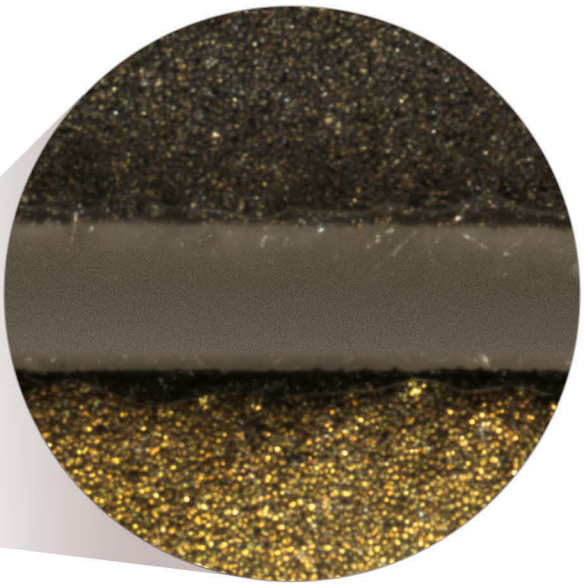
EL-CELL®
electrochemical test equipment



# Flexible and cost-efficient solution for in-situ microscopy of battery electrodes

Our flexible and compact solution enables cost-effecient operando observations of the battery components during the charging and discharging process. The product setup consists of an advanced optical battery test cell with an attached USB microscope camera and is suitable for direct use in a temperature chamber or glovebox.
It can be inserted directly into an EL-Cell potentiostat or connected to any third party battery tester via docking station. This easy-to-use, space-saving design is also ideal for high-throughput applications.

## Key features

- Observe the microscopic changes of the battery components during cycling directly in the glovebox or temperature chamber.
- 3-electrode optical battery test cell for efficient EIS measurements.
- Tight cell design with laser-welded glass-to-metal seals ensures reliable long-term operation.
- Can be connected cable-free in a docking station and used with any third-party battery tester or directly inserted in an EL-Cell potentiostat like the PAT-Tester-x-8.

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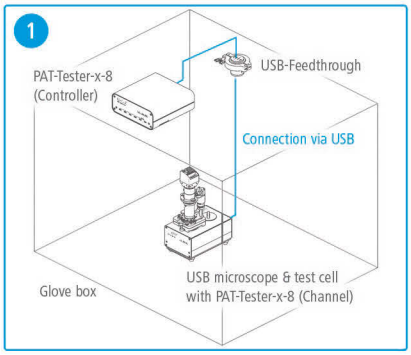
# Specifications

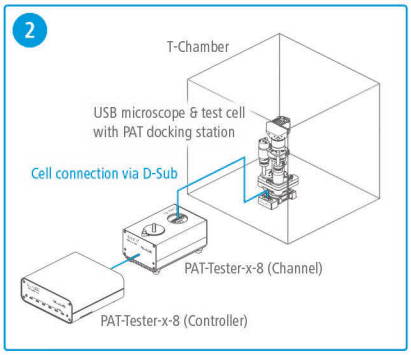
| USB microscope camera | |
|---|---|
| Resolution: | 6 Megapixel, RGB |
| Visible image sections (Zoom): | 2.5 x 1.7 mm² - 6 x 4 mm² |
| Lighting: | White LED (dimmable) |
| Image recording: | Single images, 0.1 frames/sec |
| Connections: | USB, Power supply |

| Optical battery test cell | |
|---|---|
| Optical characterization mode: | Reflective |
| View area: | Up to 10 mm diameter |
| Arrangement of electrodes: | Face-to-face or side-by-side |
| Cell operation: | Full cell, cathode half cell, anode half cell |
| Connection to | |
| • EL-CELL docking station / potentiostat: | Cableless via PAT socket |
| • Third party battery tester: | Cell cables with 4 mm banana plugs or D-Sub cable (docking station required) |
| Other features: | Electronic cell ID (EL-Cell potentiostat only) |

# Sample setups

1. Perform tests directly inside the glovebox using a PAT-Tester-x potentiostat in single channel configuration.
2. Setup for use inside a temperature chamber with PAT-Tester-x and PAT-Clamp-1 docking station.



Use up to eight USB microscope cameras with optical cells in parallel in our PAT-Tester-x-8 potentiostat and benefit from the fully equipped test channels with advanced features such as automatic cell recognition or the connection matrix.

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