



Insplorion

8-Channel Analyser

Product and Technology Information



Operando sensing capabilities

Optical operando sensing of physicochemical as well as temperature changes inside battery cells, using Insplorion's NPS fiber optic sensors.

Measure on up to 8 battery cells

Connect up to 8 cells simultaneously for data acquisition or equip a few cells with multiple sensors for spatially resolved measurements.

Nanoscale optical monitoring

Obtain information on battery processes and learn more about electrode surfaces with nanoscale resolution.

Complete stand-alone package

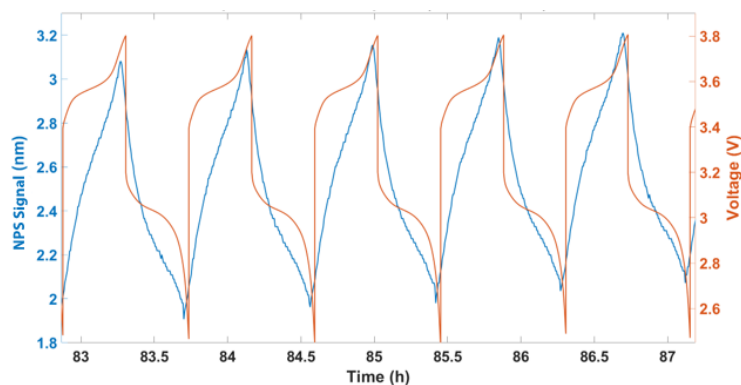
The Insplorion 8-Channel Analyser system comprises hardware and software in one complete package, ready for implementation.

Versatile compatibility

Insplorion's NPS sensors are compatible with various cell types, as well as various battery chemistries.

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NPS signal (blue) and voltage (orange) during a constant current (CC) measurement in an LFP/graphite coin cell. The sensor was placed at the cathode-separator interface. A non-linear correlation between the NPS signal and the accumulated charge is observed.

Specifications

Sensors

Size	100 μm
Substrate	Optical fibers
Standard coatings*	Polymeric

*Coating possibilities available upon request.

Measurement characteristics

Time between measurements	250 ms to 10s depending on the number of channels used
Multiplexing capabilities	Up to 8 channels* sequential acquisition

*Choose freely which channels are connected to cells, and add or remove cells as desired.

Dimensions (Width x Depth x Height)

OKTA Unit	380 x 265 x 134 mm
Optics Unit	250 x 270 x 90 mm

Software

Control software	Insplorion OKTA Controller
Operating system	Microsoft Windows compatible
Output data format	ASCII compatible for straightforward use with any data analysis software

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