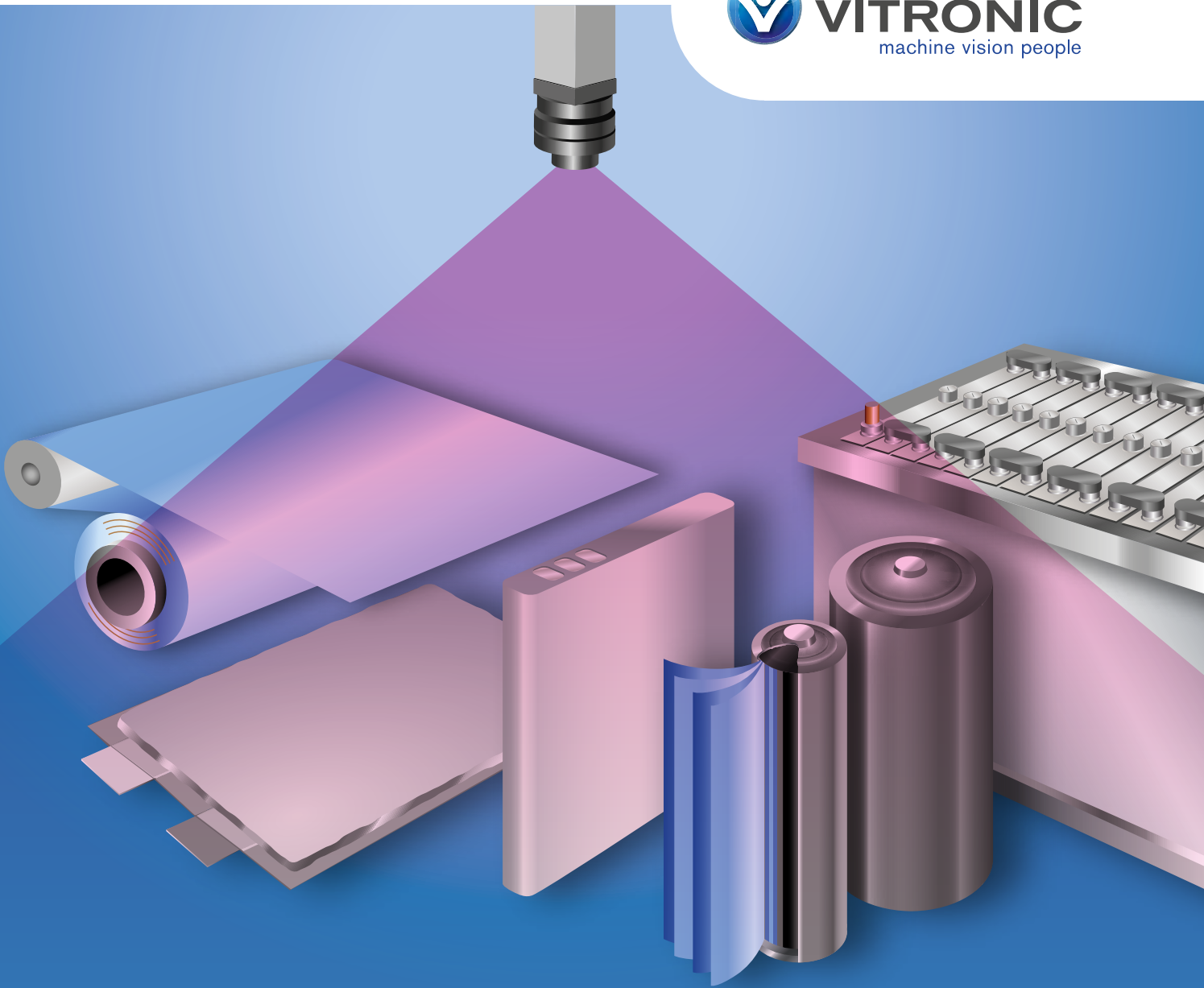




VITRONIC
machine vision people



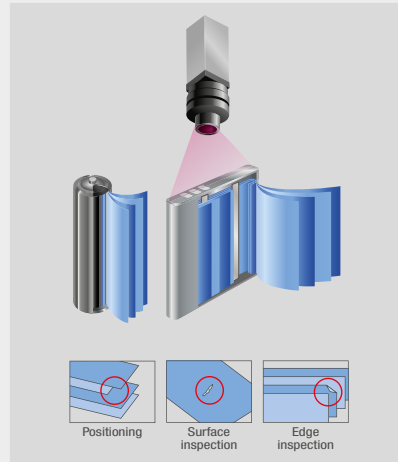
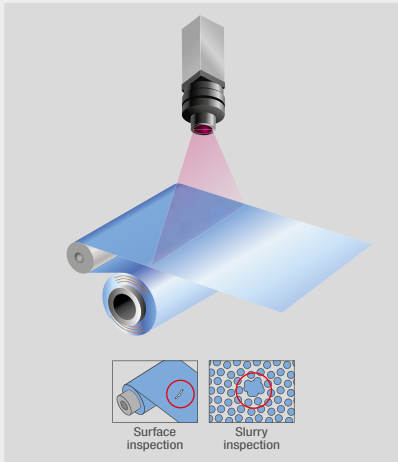
Automatic Optical Quality Inspection for Battery Manufacturing

High-performance lithium-ion batteries power e-cars and other devices of our daily lives. Production processes for these components have to adhere to very high quality standards to ensure maximum capacity and lifetime of the battery modules. With camera systems from VITRONIC, product quality can be automatically inspected and yield improved along the entire production chain without sacrificing production speed and throughput

VITRONIC's Proven Inspection Technology

- » Checks the quality of surfaces, edges, contacts and weld seams
- » Improves automated positioning
- » Documents and archives inspection results
- » Delivers values, results and statistical data for process optimization and yield improvements

Quality Inspection for Every Process Step



Converting

Inspection of film material before and after coating

- » Metal surface
- » Separator
- » Coating

for surface homogeneity, local thickness deviations and edge defects.

Cell Packaging

Inspection during stacking or winding of cells

- » Electrodes
- » Separator
- » Pouches / cases

for edge and surface quality, positioning of layers, and evenness of wrap.

Module Assembly

Inspection during assembly process of packs and modules

- » Packs
- » Contacts
- » Weld seams

for height and position of cells or packs, quality of contacting, and weld seam quality.

VITRONIC Battery Manufacturing Inspection

- » Proprietary hardware, such as line scan cameras, enables highest throughputs (>50m/min)
- » Proprietary camera and lighting technology adapted to the inspection task
- » Standardized automatic signal and data communication with PLC and MES
- » Documentation and archiving of inspection results and images as proof of quality
- » Statistical analyses allow for immediate process optimizations

VITRONIC at a Glance

- » Founded 1984 in Germany
- » More than 600 employees
- » Partner of innovative manufacturers worldwide
- » Solutions for automotive, healthcare and photovoltaics, logistics and traffic