We are the innovators in optical inspection. Best Practice. Best System. Best Service.

Over the course of the past two decades, ISRA VISION has become a leading manufacturer of highly accurate automated optical quality inspection systems.

More than 10,000 successful applications reference our sustainable experience in the field of machine vision products – and our ability to innovate.

Today our products are being used worldwide in industries such as solar, glass, plastics, foils, packaging, print and automation. It is our goal to set system standards for total process control in these industries.

Customers choose ISRA for the ability to develop products consistent with their requirements. More than 450 employees at 25 locations worldwide are working to contribute to your success.

We offer our experience and a highly qualified team of experts

Based on the know how built over 30 years our dedicated specialists design and implement solutions for advanced applications.

Our mission continues beyond our shipping dock. Just challenge our Customer Service & Support Center.

We guarantee excellence to our customers – from consulting to service, from tailored solutions to worldwide support. We can help to make your business more competitive.

Challenge us. Inspect to control – with ISRA VISION
Technology
Photoluminescence (PL) inspection is an upcoming technology applicable in the production of cells to find critical defects that are invisible to human eye, namely cracks and µCracks. Today’s PL inspection systems provide only poor detection rates and require electrical contacting of the cell to identify finger interruptions.

The new YIELDMASTER PL technology uses an innovative inspection method to classify the surface structures according to their physical structure and ensures high throughputs. Thus critical cracks and non-critical grain boundaries in multi-crystalline cells are differentiated reliably. In addition, PL inspection technology does not require any electrical contacts on the cell, which reduces the mechanical stress and allows the cell inspection at any stage along the production process. All together the result is remarkable: a significantly reduced defect rate and a substantially higher A-grade production yield with absolutely no inspection induced mechanical cell stress.

System
- Inspection of wafers, crystalline cells and foil-substrate cells
- No mechanical contact - no cell stress
- On the fly measurement available
- Fully automated defect detection
- Strong reduction of the false alarm rate thanks to unique YIELDMASTER technology
- Lowest false detection rate with highest throughput

Benefits
- Increase efficiency of cell batches
- Reduce costs by preventing the processing of bad quality material
- Optimization of production process and products
- Process performance improvement
- Early identification of serial defects and process deviations

Plug & Automate
- No mechanical equipment changeover for cell type change during production
- One inspection system fits all cell layouts
- No mechanical wear parts
- No hardware for electrical contacting and alignment

Features
- Contactless measurement prevents wafer & cell breakage
- Contactless inline detection of µCracks - Breaks - Finger interruption - Shunts - Inactive areas - Low efficient dark regions - Scratches - Dislocations - Firing defects
- Short cycle times of up to 0.5 s
- Prediction of electrical profile of solar cells
- Unique series resistance measurement
- Homogeneous images across full wafer / cell area
- No mechanical covering means full cell area inspection
- Highest measurement accuracy resulting in higher A-grade yield
- Loss of high quality cells & modules avoided
- Fast image processing comes to short cycle times and high throughputs

Available for
- Wafer input / after doping / after PECVD
- After printing
- Cell sorting
- In-line and off-line version

Take the Award-Winning Product and Maximize your Yield!

YIELDMASTER PL

SOLARSCAN: „Best Practice“ Product Line for the Complete Process Chain