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Nidec Advance Technology Launches the New AURCA-series, an AI-based Inspection & Measurement Solution for Semiconductors and Printed Substrates

Nidec Advance Technology Corporation (“Nidec Advance Technology” or the “Company”) announced today the launch of the AURCA series, an AI-based inspection & measurement solution for semiconductors and printed substrates.



Photographic image of the new AURCA series

■ How the product was developed

As the electronic device market expands driven by AI recently, high-level trust is required for the increasingly miniaturized and complex semiconductor manufacturing process. Under these circumstances, Nidec Advance Technology has developed the AURCA series as a solution to solve issues at the manufacturing scene, including addressing defects, which has been difficult with the conventional imagery inspection method, and improving yield.

■ Main features of the AURCA series

1. **Advanced defect detection (AI-based image processing):** Using a unique AI-based algorithm, the AURCA series detects, with high accuracy, defects and abnormalities that have been difficult to identify in conventional inspections.
2. **Full-color optical inspection:** By obtaining full-color images based on an advanced optical design, the AURCA series can capture changes in a subject’s material and heights to reduce over-detection significantly.
3. **Single, simultaneous processing of an image with multiple light sources:** Using multiple light sources optimized for defects to detect, the AURCA series performs simultaneous scanning to inspect all kinds of defects instantaneously.

■ Values that the AURCA series offers

In addition to detecting defective units, the AURCA series performs advanced AI-based measurement and utilizes analytical data to help manufacturing sites improve their yield.

1. **True-root-cause defect analysis:** Capable of analyzing in detail the shapes and occurrence tendency of AI-detected defects, not only does the AURCA series simply make OK/Not OK judgments, but it also supports users to identify why such defects have occurred.
2. **Direct feedback to those in the manufacturing process:** The AURCA series promptly provides the preceding process with analytical results, which can be used to review the manufacturing process and make recurrence prevention measures.
3. **Constant yield improvement cycle:** By constantly rotating the “inspection → analysis → feedback → process improvement” cycle, the AURCA maximizes the yield of customers’ entire factories and greatly contributes to manufacturing cost reduction and product reliability improvement.

For more details on the above product, please contact the following organizations of Nide Advance Technology Corporation:

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