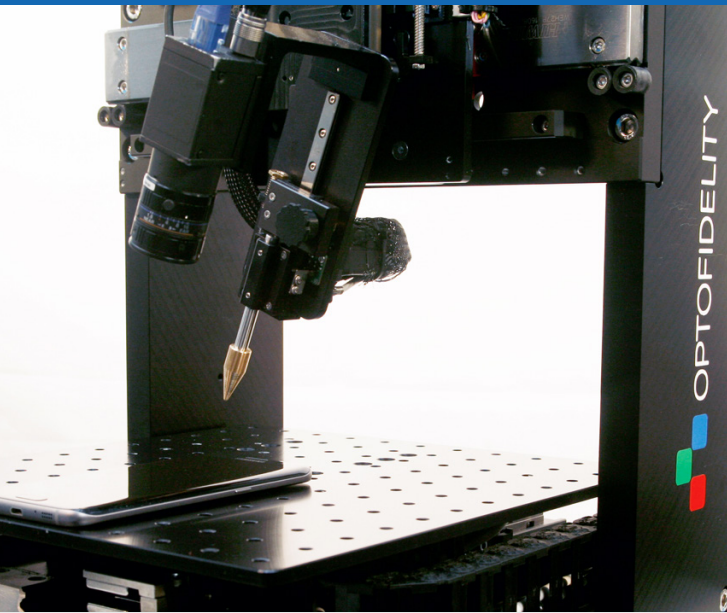


INTEGRATION WITH ROBOT PLATFORM

With OptoFidelity™ GoldenMov robotics, display inspection can be utilized with robot-related tests, e.g., force calibration, touch accuracy and linearity testing and Push Mura test, just to name a few options.



WHAT'S NEXT?

The latest development has been focusing on making the system easier to set up in the production line, storing the old test data and utilizing the old test data for setting the new test limits. All of these are aimed to simplify the test limit setting and the usage of information from previous testing. The aim is to minimize the setting time and line downtime in order to reduce cost and save quality inspection time.

About OptoFidelity

At OptoFidelity we thrive for the ultimate user experience by simulating and testing user interactions for smart devices. We work with the world's largest device manufacturers. We are globally recognized pioneers in testing, and our humanlike robot assisted technology platforms are widely used in product development, production and quality assurance. Our products are all equipped with easy-to-use SW tools for test parameterizing, results analysis and reporting tools.



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OptoFidelity™ GoldenEye

Display Inspection Tool



THE SOLUTION

OptoFidelity™ GoldenEye is an automated display inspection system for checking the quality of high-resolution displays. The scalable and centrally administered system architecture provides tailored installation and result analysis features according to customer needs. The system can be delivered as a fully assembled cabinet construction, or it can also be integrated into existing test environments.

The GoldenEye solution utilizes state-of-the-art machine vision cameras, algorithms and image reconstruction methods to perform inspection at the single-pixel level. The system supports all machine vision cameras, so one can select an optimal camera solution according to one's needs. It even supports multicamera systems for larger screens or robotic moving cameras for more challenging display concepts such as curved screens.

Sophisticated calibration methods ensure that the performance of cameras and lens are the same between different test stations. Color calibration is being used in all high-end phones, tablets, laptops and TVs. GoldenEye supports a wide variety of color measurement devices, and the correct device is chosen according to customer needs.

OptoFidelity™ GoldenEye works in an open Python environment with a built-in support for Optofidelity's Touch and Test Software, used for robot control. Alternatively, the system works in the LabVIEW and TestStand environments of National Instruments. Both of these utilize machine vision expertise and sophisticated analysis algorithms.

Fine-tuning inspection criteria does not require each sample to be remeasured, but simple re-analysis of previous test results will provide updated yield data, and this re-analysis can be performed multiple times until satisfactory inspection criteria are found.

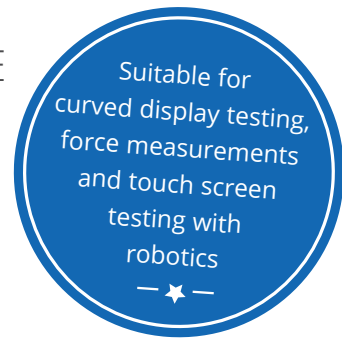


BENEFITS

- Extensive defect coverage
- Simple to set-up and use
- Easily adjustable for different display sizes and resolutions -> Automatic recognition of display under test (despite possible skewed positioning of the DUT)
- Supports integration to robot systems and multicamera systems
- Optimized Smart Factories with data collection and usage of previously tested data
- Simple teaching method for new products
- Simplified analysis parameter settings
- Possibility to re-run analysis for already tested displays. Display images and results of the earlier analysis parameters are stored in the database. Changes in analysis parameters can be re-run and compared to earlier test runs.

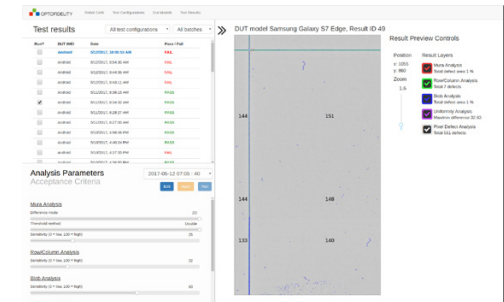
TEST COVERAGE

- Uniformity
- Pixel defects
- MURA
- LED hot spots
- Light leakages
- Color Measurement
- Brightness & contrast
- Flicker Measurement
- Lines & scratches & particle defects



EASY TO USE MEASUREMENT SOFTWARE

OptoFidelity™ GoldenEye comes with easy-to-use software with clear defect visualization and reporting. A sophisticated test results analysis algorithm guarantees a short test cycle time.



STREAMLINED TESTING WITH CENTRALIZED TEST STATION CONTROL

Centralized settings for all test stations. Test stations are calibrated to be identical. The same test limits apply to all test stations.

