Lasertec

PRESS RELEASE

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(Code 6920 / Tokyo Stock Exchange 1st Section)

Lasertec releases OPTELICS HYBRID⁺ confocal laser scanning microscope

Yokohama, Japan, January 10, 2020 – **Lasertec Corporation** today announced the release of **OPTELICS HYBRID⁺**, the latest model of OPTELICS HYBRID series confocal laser scanning microscope that combines two sets of optics – laser confocal and white light confocal – for the pursuit of high performance and multi-functions. OPTELICS HYBRID⁺ will be presented to ELECTROTEST JAPAN from January 15, 2020 at Tokyo Big Sight.

The new model introduces 8 hardware improvements and 10 new software capabilities for a complete makeover of OPTELICS HYBRID series. Examples of the improved hardware are a longer-lasting LED light source and 0.05nm-resolution Z scale, and new software capabilities include “measurement assist” for higher ease of use and AI inspection to achieve the maximum performance of various inspection functions.

Background

Industries today are accelerating efforts to increase efficiency in energy use while pursuing higher functionality and further scaling. R&D investments have increased to achieve the innovation of materials in such areas as semiconductor devices, metals, resins, and new materials. In this respect, accurate and speedy data acquisition and analysis capabilities are required in microscopy. Microscopes are expected to provide higher performance and versatility. Previously the existing models of OPTELICS HYBRID were mainly used for R&D and quality assurance applications, but more recently the scope of applications has expanded to production processes as well. As such, there has been a significant increase in demand for automated wafer transfer, automated measurement, and automated inspection.

Key features

OPTELICS HYBRID⁺ introduces a longer-lasting LED light source and high-resolution Z scale to meet new market needs on the foundation of OPTELICS HYBRID series, which embodies high performance and multi-functions. Its “measurement assist” offers three distinct functions for higher ease of use. The first of these functions, “LM diagnosis,” chooses the best measurement method and eliminates the need for high skills and experiences for measurement method determination and parameter setting. The second one, “filter assist,” assists the setting of pre-process such as noise filtering. The third one, “LM adviser,” advises the setting of pass/fail criteria to be applied to measurement data. Using these new functions, OPTELICS HYBRID⁺ can choose optimum settings without relying on expert’s skills and experiences, offering significantly higher operation efficiency for users.

OPTELICS HYBRID⁺ also introduces “AI inspection,” newly developed automated inspection software that incorporates machine learning and deep learning. It expands the microscope’s

scope of applications from non-patterned substrate defect inspection to patterned device defect inspection. It also enables the classification of defects captured during inspection and significantly widens the area of applications in the inspection field. Furthermore, the new model offers hardware options including automated wafer transfer, newly developed high-NA objective lens, which enables measurement at higher accuracy, and Xθ stage. A wide range of software options are also available to meet various customer needs.

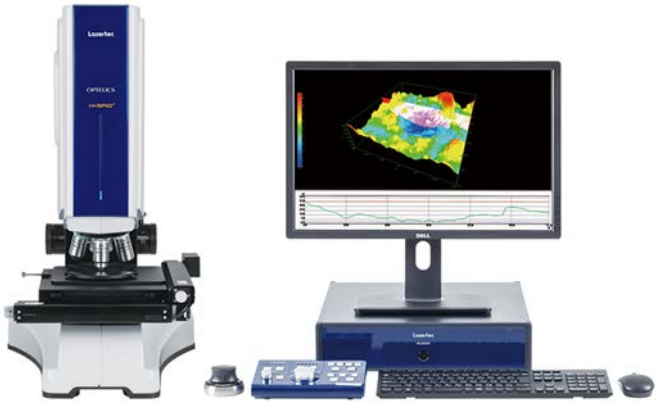
Applications

Observation and topography measurement for various materials

Semiconductor materials and devices, transparent films, MEMS, coating materials, high performance films, metal parts, plastic parts, etc.

Standard configuration

Microscope unit, control unit, light source unit, PC & LCD monitor



OPTELICS HYBRID^{+}

List price

Starting from 15 million yen (depending on the choice of model and specifications).

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