ThreeNH Launches the Nano Spectrocolorimeter KS-520, Setting a New Standard for Portable, High-Precision Color Measures

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Nano Spectrocolorimeter KS-520 product show

SHENZHEN, GUANGDONG, CHINA, December 31, 2025 / EINPresswire.com/ -- ThreeNH (3nh), the Color Measurements and Optical Inspection Instruments manufacturing company, announced the launch of the KS-520 Nano Spectrocolorimeter, a portable device that meets the highest standards of precision and reliability in today's industrial quality control.

The KS-520, a groundbreaking portable spectrocolorimeter, is among the newest innovations in spectroscopy. It integrates the compact design of a color difference meter and the versatility of a high precision spectrophotometer. The KS-520, using proprietary nanoscale spectrophotometric technology, consistently and reliably measures color in all types of materials and under all manufacturing conditions.

The rapid development in color technology and digital quality management systems has led to the KS-520. It enables manufacturers to advance in digital quality management. The manufacturer is equipped with frameworks in color consistency, color uniformity, quality color management, digital consistency, and advanced decision-making within the production cycle.

Nano-Scale Spectral Detection for Industrial Applications

KS-520 is designed with two important traits - nano scale measurement and color recognition.

This enables it to reliably and accurately color measure the surface features of various materials. The device evaluates and processes CIE Lab* values, spectral reflectance, and chromaticity to give metrics on color difference, color deviation, pass/fail status, and red-green color blindness deficiency along with other spectral attributes. With these features, users can analyze spectral surface color uniformity of incoming materials, in-process materials, and final products.

The KS-520 meets D/8 diffuse illumination and 8-degree observer conditions for both SCI and SCE measurement modes. Thus, it is likely to meet the users' requirements in terms of color measurement and color consistency for industrial applications.
Sample and Complexity Industrial Measurement Configurations

KS-520 Nano Spectrocolorimeter for plastics color measurement


3nh colorimeter products show

Within industrial surroundings, the versatility of KS-520 in terms of size and shape measurement is considerable. It comes with twelve full specification measurement calipers and a 1 × 3 mm micro-measurement option. This is advantageous for measuring both standard and precision micro parts.

The KS-520 does a great job measuring flat, bent, and uneven surfaces and can work with most industries, including plastics, coatings, and textiles, automotive, electronics, printing, and packaging. The KS-520 suits a company consistently measuring across multiple product lines.

Professionally Certified Measuring Performance
Metrological measurement consistency and traceability is very needed for professional color measurements. The KS-520 produces ΔEab report scores of less than or equal to .3 and a second device produces scores of less than or equal to .025, which represents consistent and dependable across measurements and different devices. KS-520 devices pass the same verification processes so customers can trust measurements, which are provided in compliance to metrological Grade 1 standards. Measurements are traceable to the National Institute of Metrology. This is important for employees working in regulated, precise professions.

To reduce disputes and keep color information flowing to various suppliers, manufacturers, and end-users to, the KS-520 offers the best level of verification, which helps to improve quality control.
Advanced Devices KS520 Flexible Optical Design Data Capture
With every KS520 device built, the unique dual optical path design is the first of its kind to account for fluctuations in measuring light energy, which helps to reduce interference and enhance consistent stability. This is especially the case in more difficult production situations.

The optical path comprises a 2-row, 18-group silicon photodiode array, which performs optimally for both over and under light measuring. It captures a spectrum in 10-nanometer increments within the 400-700 nm range and has the capability of measuring and reflecting 200% of the same spectrum.

Moreover, devices equipped with micrometer integrated spectroscopy provide micrometer range spectral dispersion and precise measurement for each individual wave. This design also yields high reliability for the consistent measurement of color over extended periods.

Versatile Measurement Capabilities with Omnidirectional and UV Light
The KS-520 is equipped with an adjustable LED light source and a separate UV light source. As a result, it can measure surfaces and materials which include non-glass, opaque, and fluorescence. Furthermore, it can measure materials with optical brighteners and fluorescent additives, which standard white LED systems cannot measure.

The device is therefore ideal for the textile, coatings, plastics, specialty printing and other fluorescent materials industries.
Adjustable Viewing Conditions and Color Space

As part of increasing the flexibility of the industry, the KS-520 comes with a variety of color spaces: CIE LAB, XYZ, Yxy, LCh, CIE LUV, s-RGB, HunterLab, βxy, and DIN Lab99. Also, standard viewing D65, D50, A, C, TL84, and the entire F-illuminant series are included.

This unique ability to serve a range of color standards per customer, industry, and region without changing the instrument maximizes the streamlining of the quality control process and the uniformity of the measurements.

Designed for Effortless Use and Accuracy
User satisfaction and ease of operation were the main concerns for the design of the KS-520. Each unit is constructed ergonomically, and a large touch screen design is intuitive and aids in the control of all measurement workflows to the preferences of the operators.

A unique dual positioning system is another feature of the KS-520. The combination of a stabilizer and a camera viewfinder enables operators to supervise the measurement area in real time. This aids in decreasing measurement mistakes.

The KS-520 now lets users experience automated non-contact smart calibrations that include the use of professional reflective whiteboards with consistent surfaces. This method improves the consistency of the calibrations and reduces the physical degradation of calibrating components.
Support and Availability

Customers can purchase the Nano Spectrocolorimeter KS-520 from official sales channels and authorized distributors of ThreeNH. Support for our products is important to us and so we provide a standard 1-year warranty plus 3 additional years of extended support.

More details about the KS-520 can be found at the following link:

https://www.threenh.com/Spectrocolorimeter/New-Nano-Spectrocolorimeter-KS-520.html

About ThreeNH (3nh)
Threenh (3nh) designs and produces instruments for measuring color and managing technology associated for managing color. ThreeNH is active in the industrial sectors of color measurement, quality assurance, and research and develops color measuring tools that conform to internationally recognized requirements. 3nh's spectrophotometers, colorimeters, and supporting software provide comprehensive solutions for effectively controlling the entire color management process, helping brands,

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