KASON-PST3 Polarized Stress Tester

Note: The picture is for reference only

1. Purpose and Application Scope

The KASON-PST3 touch-screen digital polarized stress tester is a comprehensive internal stress measuring instrument integrating stress detection, data management, LCD touch screen, audit query, print output and other functions. It further meets the standardization requirements of stress detection in pharmaceutical, food packaging and other industries as well as metrology and testing service institutions.

It complies with GMP regulations. Through three-level authority distribution and management, it ensures that detection is under control, and test data are accurate, authentic, reliable and audit-traceable.

The KASON-PST3 adopts a 5-inch color LCD touch screen and high-precision encoder for stress display and measurement. It is suitable for optical instrument factories, glass factories, glass product factories, pharmaceutical packaging enterprises, laboratories and metrology testing institutions. It is used to measure the stress value of various glass products (including glass bottles, cans, cups, tubes, vessels, bulbs, lamp tubes, glass measuring instruments, glass apparatus, optical instruments, special-shaped products, mobile phone screens, etc.), crystal products, artificial gemstones, transparent plastic products and other optical materials.Common Torsion Standards

Equipped with a 1/4 wave plate and a full-wave plate (also known as sensitive color plate), the instrument provides two measuring methods:

Quantitative measurement (Senarmont compensation method): With a 1/4 wave plate, it quantitatively measures the internal stress of glass by the compensation method.

Qualitative measurement (colorimetric method): With a full-wave plate, it can qualitatively judge the magnitude and distribution of internal stress of glass products

according to the interference color order in the polarization field by observing the interference color, facilitating users to quickly determine whether the product is qualified.

2. Technical Features

The KASON-PST3 touch-screen digital polarized stress tester complies with GMP regulations and features high measurement accuracy, data management and printing, multiple measurement modes, intuitive multi-group data display, dark field without calibration, green energy saving and other advanced characteristics:

GMP compliant: Three-level operation authority, with data recording, printing, review and output functions.

High measurement accuracy: Adopts high-precision angle encoder, measurement accuracy better than 2.0 nm.

Three measuring modes: Single-point, multi-point and threshold measuring modes are available; "wizard-style" operation prompts; automatically calculates the optical path difference of average thickness by inputting specimen thickness.

Three groups of data displayed intuitively: 5-inch color LCD screen can simultaneously display measured angle value, optical path difference value and apparent stress series.

Chinese-English touch screen operation: User-friendly test wizard and data management, simple detection and data management, beautiful interface.

No dark field calibration required: The instrument maintains a correct zero point at all times; no repeated zero calibration during measurement, avoiding errors caused by manual calibration.

Green energy saving: LED light source, energy-saving and long service life.

Ergonomic and modular design: Easy for operation and maintenance.

3. Compliance Standards

The KASON-PST3 has been strictly calibrated before delivery and is ready for use upon power-on. It meets the following standards:

GB/T 4545 Standard for inspection of internal stress of glass bottles and cans

GB/T 12415 Standard for inspection of internal stress of pharmaceutical glass containers

GB/T 15726 Standard for inspection of internal stress of glass apparatus

GB/T 18144 Test method for stress of glass

YBB 00162003 Method standard for national pharmaceutical packaging containers (materials) — Internal stress test method

JC/T 655 Standard for inspection of internal stress of quartz glass products

JC/T 915 Hot bent glass

ASTM C148 Standard Test Methods for Polariscopic Examination of Glass Containers

4. Main Technical Parameters

Item	Specification
Measurement Accuracy	≤2 nm
Zero Reset Error	≤2 nm
Optical Path Difference Resolution	0.1 nm
Angle Resolution	0.1°
Polarization Field Diameter	150 mm
Field Brightness	>120 cd/m²
Rotation Angle of Analyzer	360° (±180°)
Polarization Field Spacing Adjustment	80–320 mm
Light Source	LED, color temperature 3500 K
Power Supply	AC 220 V / 50 Hz
Total Power	<70 W (peak)
Display Screen	8-inch color touch screen
Net Weight	19 kg

FOCUS IN MATERIAL TEST

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