Haze + Transmittance + Chromaticity – Three Core Measurements Integrated in One Instrument

The KS1310 Color Haze Meter is a precision optical instrument integrating haze, transmittance, and color difference/colorimetry measurement. It features a Φ154 mm integrating sphere, a 400—700 nm combined LED light source, and a nano-integrated spectral device, complying with standards such as GB/T 2410, ASTM D1003/D1044, ISO 13468/14782, and CIE 15.2. Its core performance has been comprehensively upgraded, with significant improvements in data stability, continuous operation capability, and data storage capacity. It is mainly used for optical and appearance quality control of transparent/semi-transparent materials such as glass, plastics, films, displays, packaging, and liquid pharmaceuticals.

< 0.028
Transmittance Repeatability

1.5s
Single Measurement Time

ISO & ASTM
Dual-Mode Compatibility



Own the core tech: Top performance, budget price.

ISO9001 CE RoHS

TECHNICAL ADVANTAGE

1. Supports both compensation and non-compensation haze test methods – compliant with international standards

Dual–mode compatibility

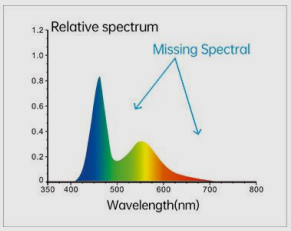
ASTM D1003 (non–compensation) and ISO 13468 (compensation) for haze and total transmittance measurement, meeting requirements of different industries.

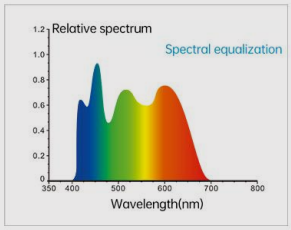
High–precision output

Accurately captures transmittance curves and outputs various colorimetric data, suitable for glass, film, packaging, etc.

International standard compliance

Conforms to 12 domestic and international standards including ASTM D1003/1044, ISO 13468/14782, GB/T 2410, ensuring globally recognized results.





2. Highly stable LED light source – 5-year or 3 million measurements lifetime

Long durability

400—700 nm combined LED source with a lifespan of 5 years or 3 million measurements, ideal for 24/7 factory operation.

Full spectral coverage

Covers the entire visible spectrum without missing bands, ensuring accuracy of color and haze measurements.

Low maintenance cost

No frequent lamp replacement, low annual maintenance cost, suitable for high–frequency, long–term use.

3. Nano-integrated spectral device + high-resolution sensor – high measurement accuracy

Core hardware

Nano–integrated spectral device combined with Φ154 mm integrating sphere improves spectral acquisition precision and repeatability.

High repeatability

Haze and transmittance repeatability <0.028 (Φ20 mm aperture, 30 measurements); color difference repeatability also <0.028.

Fast response

Single measurement takes only 1.5 seconds. Three optional apertures (Φ20/15/8 mm) adapt to different sample sizes.



4. Full-dimensional data visualization – intuitive and easy operation

Intuitive display

7-inch TFT true color capacitive touchscreen shows real-time spectral graphs, colorimetric values, color difference charts, chromaticity diagrams, color simulation, and pass/fail results.

Smart assistance

Supports multiple color spaces and color difference formulas; built-in multi-language system (Chinese, English, Traditional Chinese) lowers the operation threshold.

Flexible connectivity

USB, serial print port, and Bluetooth interfaces; can connect to quality management software for data storage and export (5000 standard samples, 30,000 test samples).



5. Comprehensive color system compatibility – meets custom needs across industries



Multiple color spaces

Supports 8 color spaces including CIE LAB, XYZ, Yxy, LCh, Hunter Lab, etc., suitable for plastics, glass, liquids, and other industry standards.

Multiple color difference formulas

Includes ΔEab, ΔE94, ΔEcmc, ΔE00, ΔE*uv, and other mainstream formulas, meeting diverse customer requirements for color evaluation.

Multiple observation conditions

Supports over 30 light sources (D65, A, C, D50, F-series, etc.) and 2°/10° observer angles, adapting to global testing standards.

6. Wide range of applications – optical quality control across industries

Glass/plastic processing

Haze and transmittance testing of transparent sheets, films, and lenses.



Display/packaging industry

Evaluation of transmittance uniformity and color consistency of backlight modules and packaging materials.



Liquid pharmaceutical analysis

Supports measurement of platinum-cobalt color, turbidity, absorbance, and other parameters for chemical and pharmaceutical industries.



OPTIONAL ACCESSORIES

Product Name	Material Code	Image	Function
Test Fixtures (Cuvette,Thick Plate, and Film Fixtures)	2.006.01.0221	 (Cuvette Fixture)	Conveniently fixes samples onto the instrument for measurement.
Micro Printer	1.609.01.0020		Portable design allows printing of various measurement parameters without connecting to a computer.
Standard Haze Plates	/		Facilitates haze value transfer and self-calibration for haze meter measurements.
Foot Switch	2.002.53.0006		Enables hands-free operation, improving efficiency and safety.

PRODUCT SPECIFICATIONS

Product Model	KS1310 Color Haze Meter
Geometry	Transmission: 0/D (parallel light illumination, diffuse reception);
Meet The Criteria	ASTM D1003/1044, ISO 13468, ISO 14782, GB/T 2410, JJF 1303-2011, CIE 15.2, GB/T 3978, ASTM E308, JIS K7105, JIS K7361, JIS K 7136
Integrating sphere size	Φ154mm
Light Source	400—700 nm combined LED light source
Spectrophotometric Mode	Nano-integrated spectral device
Sensor	Silicon photodiode array (dual-row, 18 sets)
Wavelength Range	400~700nm
Wavelength Interval	10nm
Half Bandwidth	10nm
Transmittance Measurement Range	0—100%
Measurement Aperture	Φ20 mm / Φ15 mm / Φ8 mm (single aperture selected)
Sample Size	Thickness less than 170 mm
Color Space	CIE LAB, XYZ, Yxy, LCh, sRGB, βxy, CIE LUV, Munsell, HunterLab
Color Difference Formulas	ΔEab, ΔE94, ΔEcmc (2:1), ΔEcmc (1:1), ΔE00, ΔEuv, ΔE*CH
Other chromaticity index	Haze (ASTM D1003/1044, ISO 13468), Transmittance T (ISO), Transmittance T (ASTM), WI (ASTM E313, CIE/ISO, AATCC, Hunter, Taube, Berger, Stensby),YI (ASTM D1925, ASTM 313), Absorbance,Platinum-Cobalt Index, Gardner Index, CMYK, Tint (ASTM E313-00), Metamerism Index MI, Turbidity
Observer Angle	2°/10°
Illuminant	D65, A, C, D50, D55, D75, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, CWF, DLF, TL83, TL84, TPL5, U30, NBF
Displayed Data	Spectral graph, sample colorimetric values, color difference values/graph, chromaticity diagram, color simulation, pass/fail results
Measuring Time	Approx. 1.5 s
Haze Resolution	0.01 units
Haze Repeatability	For Φ20 mm aperture: less than 0.028 (standard deviation of 30 measurements of a standard haze plate with haze approx. 30, taken at 5 s intervals after warm-up and calibration)
Transmittance Resolution	0.01 units
Transmittance Accuracy	Better than ±1%
Transmittance Repeatability	For Φ20 mm aperture: less than 0.028 (standard deviation of 30 measurements of a standard haze plate with haze approx. 30, taken at 5 s intervals after warm-up and calibration)
Color Difference Repeatability	For Φ20 mm aperture: less than 0.028 (standard deviation of 30 measurements of white glass taken at 5 s intervals after warm-up and calibration)
Platinum-Cobalt Resolution	0.01
Platinum-Cobalt Accuracy	≤ ±(5%H + 1), where H is the standard value
Platinum-Cobalt Range	0—1000
Turbidity Range	0—1000 NTU
Dimensions	290 X 211 X 511mm (L × W × H)
Weight	Approx. 7.6 kg
Power Supply	24 V DC, 3 A power adapter
Light Source Lifespan	5 years or >3 million measurements
Display	TFT true color, 7-inch capacitive touchscreen
Interfaces	USB, serial print port, Bluetooth
Data Storage	5,000 standard samples, 30,000 test samples
Languages	Simplified Chinese, Traditional Chinese, English
Operating Temperature Range	0—40°C (32—104°F)
Storage Temperature Range	—20—50°C (—4—122°F)
Standard Accessories	Power adapter, user manual, quality management software (download from official website), data cable, 0% calibration box, measurement aperture
Optional Accessories	Micro printer, test fixtures, standard haze plates, foot switch