



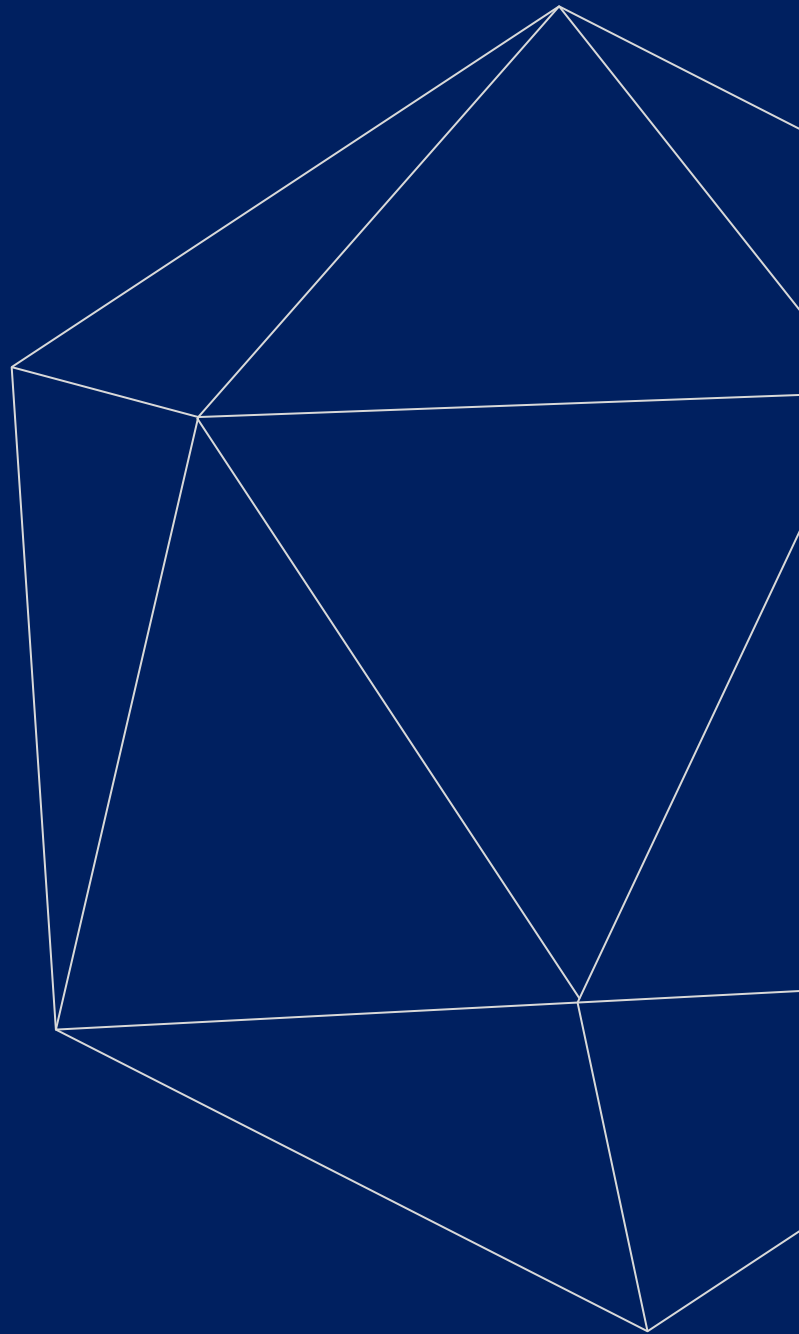
# LABORATORY LINES

## SPECTROPHOTOMETERS



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# Kalstein®

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With more than 25 years growing with our customers, Kalstein's multiformat and modern content, is now present in more than 10 countries and increasing.



## Pulsed Xenon lamp Benchtop Spectrophotometer

YR053404



Kalstein's YR053404 is a benchtop grating spectrophotometer which is developed by Kalstein independently with independent intellectual property. YR053404 has many features, like 7 inches TFT capacitive touch screen display, full illuminants, reflective d/8 and transmissive d/0 geometry (including or excluding UV). With very stable and precise color measurement, large storage and powerful PC software all makes YR053404 ideal for color analysis within R&D and laboratory environments.



### Features

- High configuration of hardware: 7 inches TFT Color Capacitive Touch-screen Display; Bluetooth 2.1; Concave Grating.
- Double Array 256 Image Element CMOS Sensor; Long life-span stable xenon lamp.
- With reflective and transmissive spectrum, accurate Lab value, good to calculate color formula and do precise color transmission.
- Auto identify measuring aperture. Freely switchable between 3 measuring apertures:  $\Phi$  25.4mm/8mm/4mm. Users also can customize apertures.
- Built-in temperature sensor to monitor and compensate the measuring temperature to ensure the measurement more precision.
- Wavelength range 360nm – 780nm. Built-in 400nm/420nm/460nm cut off Xenon lamp, more professional in UV measurement.
- Independent light source detector, continuously monitor the condition of light sources to ensure the light source reliable.
- Multiple measurement modes: Quality Management Mode, Sample Mode; Meet more users' requirement.
- Multiple accessories, sample holders, fixation clamp, suitable to more working condition
- Big capacity data storage, for 20000 pieces test result.
- Built-in camera locating.
- More powerful extended functions at the PC software.



### Application Industry

Kalstein's YR053404 benchtop spectrophotometer is used to do precise color analysis and transmission in laboratories. It can be widely applied in different industries, such as plastics, electronics, paint and ink, printing, garments, leather, paper, auto, medical, cosmetics, food, science institutes, laboratories.



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## Pulsed Xenon lamp Benchtop Spectrophotometer

YR053404



## Technical Specification

Model	YR053404
Optical Geometry	Reflectance: d/8 (SCI&SCE; Include UV/Exclude UV)
	Transmittance: d/0 (SCI&SCE; Include UV/Exclude UV); Haze(ASTM D1003)
	Conforms to CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO7724/1, ASTM E1164, DIN5033 Teil7
Integrating Sphere Size	Φ 154mm
Light Source Device	360nm-780nm Xenon Lamp, 400nm cut-off Xenon Lamp,420nm cut-off Xenon Lamp,460nm cut-off Xenon Lamp
Spectrophotometric Mode	Concave Grating
Sensor	256 Image Element Double Array CMOS Image Sensor
Wavelength Range	360-780nm
Wavelength Pitch	10nm
Semiband Width	5nm
Reflectance Range	0-200%
Measuring Aperture	Reflective : Φ30mm/Φ25.4mm, Φ18mm/Φ15mm, Φ10mm/Φ8mm, Φ6mm/Φ4mm;
	Transmissive : Φ30mm/Φ25mm;Remark: 1. Automatic identification of switch caliber 2. Customized Configuration caliber and lens position
Specular Component	Reflectance: SCI&SCE
	Transmittance: SCI&SCE
Color Space	CIE Lab, XYZ, Yxy, LCh, CIE LUV, Hunter LAB, Munsell, s-RGB, HunterLab, DIN, βxy
Color Difference Formula	$\Delta E^*ab$ , $\Delta E^*uv$ , $\Delta E^*94$ , $\Delta E^*cmc(2:1)$ , $\Delta E^*cmc(1:1)$ , $\Delta E^*00v$ , $\Delta E$ (Hunter), DIN $\Delta E99$
Colorimetric Index	WI (ASTM E313, CIE/ISO, AATCC, Hunter),
	YI (ASTM D1925, ASTM 313),
	MI (Metamerism Index),
	Staining Fastness, Color Fastness, Color Strength, Opacity, Gardner Index, Pt-Co Index, 555 Index, Haze(ASTM D1003)
Observer Angle	2° & 10°
Illuminants	D65, A, C, UV, D50, D55, D75, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12
Displayed Data	Spectrogram/Values, Chromaticity Values, Color Difference Values/Graph, Pass/Fail Result, Color Offset
Measuring Time	About 2.4s (Measure SCI & SCE about 5s)
Repeatability	Spectral reflectance: Φ25.4mm/SCI, Standard deviation within 0.06% (400 nm to 700 nm: within 0.05%)
	Chromaticity value: Φ25.4mm/SCI, Standard deviation within $\Delta E^*ab$ 0.012 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration)
	Spectral Transmittance: Φ25.4mm/SCI, Standard deviation within 0.06% (400 nm to 700 nm: within 0.06%)
	Chromaticity value: Φ25.4mm/SCI, Standard deviation within $\Delta E^*ab$ 0.015 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration)
Inter-instrument Error	Φ25.4mm/SCI, Within $\Delta E^*ab$ 0.12
	(Average for 12 BCRA Series II color tiles)
Size	370×300×200mm
Weight	About 9.6kg
Power Supply	DC 24V, 3A Power Adapter
Light Source Device Life	5 years, more than 3 million times measurements.
Display	7" TFT Capacitive Screen-touch Display
Data Port	USB & Bluetooth & Print serial port
Data Storage	Standard 5000 Pcs, Sample 40000 Pcs
Language	Simplified Chinese, Traditional Chinese, English, (Optional Customized German, French and Spanish)
Working Environment	Temperature: 0-40°C; Humidity: 0-85% (No Condensation)
Storage Environment	Temperature: -20-50°C; Humidity: 0-85% (No Condensation)
Standard Accessory	Power Adapter, User Guide, CD Disk(PC Software), USB cable, Standard Calibration Board, Black Calibration Cavity, Transmission black baffle, Sample holder, 25.4 caliber, 15 caliber, 8 caliber, 4 caliber,Transmissive Test Component
Optional Accessory	Micro-printer, Micro Aperture(4mm) transmission test clamp component, Instrument inversion components

Notes: The specifications are subject to change without notice.



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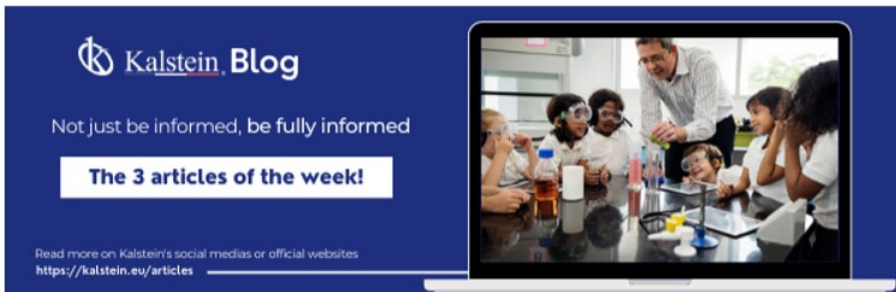


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