NON CONTACT TYPE

Integrating non-contact online measurement technology with intelligent closed-loop control system,Provide high-precision color monitoring, real-time data feedback, and production closed-loop process optimization.

Real Time

Fast

Non Polluting Samples

Automation

Standard CIELAB D65/10°

L*:96. 26
a*:-0. 05
b*:1. 31

SimCol:

Model: YL31
SoftwareVer: 00.01.T8
HardwareVer: V100R002
WhiteBoard: 10009999
InstrumSN: 88888888

C-InterfaceRS-232/485   BaudRate:115200   CH:0024

NON-CONTACT

3nh

YL3160 NON-CONTACT SPECTROPHOTOMETER

YL3160 is an industrial grade non-contact spectrophotometer that adopts a 45/0 optical structure and supports non-contact online color measurement. It is designed for industrial assembly lines and robotic arm integration, without contact, pollution, or sample damage

TOOLS FOR MEASURING COLOR DIFFERENCE

Characteristic

Unique measurement method

Non contact measurement: It does not require direct contact with the sample, avoiding damage to the sample and preventing contamination of the instrument by the sample. It is especially suitable for samples that are corrosive, liquid, dust, and other materials that can easily damage the instrument, as well as samples that are soft, deformable, or have uneven surfaces.

Multiple interfaces

Convenient data transmission: Equipped with multiple interfaces such as USB, RS485, RS232, Ethernet, etc., it can easily connect with external devices such as computers, printers, PLCs, etc., achieving fast data transmission and sharing, facilitating data processing, analysis, and storage, and also facilitating integration into automated production systems.

RS485/RS232   RJ45 interface   USB type Cinterface
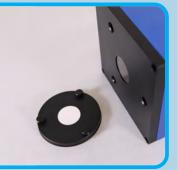
Can be used in different environments

High protection level: IP66 protection level, waterproof and dustproof, resistant to complex industrial environments.

Excellent performance

Fast measurement speed, capable of measuring 10 samples per second; Built in intelligent automatic calibration function; Concave grating spectroscopy technology and 256 pixel dual array CMOS image sensor can achieve high-precision measurement.

Support Connecting To Pc Software For Measurement

Supports Android, IOS, Windows, WeChat Mini Programs, and HarmonyOS systems

1. Color difference measurement, color simulation is more intuitive;
2. Find the closest color and view details such as Lab values and spectra;
3. It is possible to create a personal color database and input information on printing, coatings, and textilesWaiting for color card information; Massive storage of quantity;
4. Provide color schemes for beautiful stitching color matching.

Online measurement
Intelligent color quality control

Multi interface extension

Connecting devices can expand more functions

The upper computer software can connect the spectrophotometer through USB or Ethernet cables, control the instrument for measurement, change instrument configuration, and operate instrument data. At the same time, it has greatly expanded the instrument functions, realizing complex data management, color detection, report generation, etc., making it a powerful assistant for color quality management.

Analysis and management
The instrument can analyze, copy, delete, modify, name, and save the measured data by connecting to the PC SQCX software.

Data printing
Comparing color differences and generating test reports can be done by connecting to BluetoothPrinting machine, print out the data.

Mass storage
The measured data report can be uploaded to cloud storage. Realize massive storage of data.

Share and transmit
The generated test report can be shared and transmitted through a computer connection. fastQuickly communicate color information to accelerate production time.

APPLICATION FIELD

| Printing ink | Textile dyeing | Food | Corrosive reagent | Condiment |

PRODUCT PARAMETERS

Model	YL3160
Structure and standards	45/0 (45 ring uniform illumination 0°reception); Standard:CIE No.15,GB/T 3978,GB 2893,GB/T 18833,ISO7724-1,ASTM E1164,DIN5033 Teil7
Illumination	Full spectrum LED light source
Spectral method	Concave grating spectroscopy
Sensor	256 pixel dual array CMOS image sensor
Measuring wavelength range	400~700nm，10nm Output
Display Accuracy	0.01
Reflectivity resolution	0.01%
Reflectance measurement range	0~200%
Measuring aperture	Φ8mm
Non contact distance	7.5mm(±0.15mm)
Sample height	No thickness limit, only use test probe
Measurement observation method	observe
Measurement time interval	1S
Measurement mode	Instrument triggered or online control triggered
Color space	CIE LAB,XYZ,Yxy,LCh,CIE LUV,Musell,s-RGB,HunterLab,βxy,DIN Lab99
Colour-difference formula	ΔE^*_{ab}, ΔE^*_{94}, $\Delta E^*_{cmc(2:1)}$, $\Delta E^*_{cmc(1:1)}$, ΔE^*_{00}, ΔE (Hunter), DIN ΔE_{99}
Other chromaticity indicators	Spectral reflectance, WI(ASTM E313, CIE/ISO,AATCC,Hunter,ISO2470/R457,Taube, Berger, Stensby),Tint(ASTM E313-00), YI(ASTM D1925, ASTM 313), Same color difference index MI, color fastness, color change fastness, strength, coverage, blackness (My, dM), color density CMYK (partially implemented through upper computer software)
Observer's perspective	2°/10°
Observing light source	A,B,C,D50,D55,D65,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,CWF,U30,U35,DLF,NBF,TL83,TL84,ID50,ID65,LED-B1,LED-B2,LED-B3,LED-B4,LED-B5,LED-BH1,LED-RGB1,LED-V1, LED-V2
Display	Data, sample chromaticity values, color difference values/graphs, color simulation, qualified/unqualified results, display tolerances can be set
Measurement time	The fastest is 0.05 seconds (usually around 0.1 seconds)
Calibration	Intelligent automatic calibration
Waterproof grade	IP66
Repeatability	In the optimal testing mode (with a single measurement time of 1.0 second):Chromaticity value: $\Delta E*ab$ within 0.02 (after preheating, measure the average value of the whiteboard 30 times at intervals of 5 seconds)
Inter station difference	$\Delta E*ab$ within 0.2 (average value measured on 12 color plates of BCRA series II)
Accuracy guarantee	Ensure the first level measurement is qualified
Measurement method	Single measurement,average measurement (2-99 times)
Size	100*100*140mm
Weight	about 1400g
Power supply mode	DC 24V, 3A power adapter for power supply
Lighting source lifespan	More than 3 million measurements in 5 years
Display	TFT true color 3.5inch
Interface	USB，RS485，RS232，Ethernet, externally triggered, analog signal output
Language	Simplified Chinese, Traditional Chinese, English
Standard accessory	Power adapter, instruction manual, USB cable, RJ45 network cable, RS485 multi machine communication cable, RS232 communication cable, standard calibration board, black calibration box
Note:	This model is specifically designed for streamlined production lines, and deep functional customization will incur additional customization costs
Operating and Storage Temperature	Working temperature: 0~40 ℃, 0~85% RH (no condensation), altitude: below 2000m Storage temperature: -20~50 ℃, 0~85% RH (no condensation)