CL320 UV Meter

I Product Overview

The CL320 UV meter is a UV detection equipment independently developed by HUICOLOR Company. The instrument adopts UVA, UVB, UVC filters and CMOS detectors as optical acquisition components, which can synchronously collect the radiation power of ultraviolet UVA, UVB, and UVC. The instrument only has one measuring aperture, which can synchronously test the radiation power of UVA/UVB/UVC, with high integration and more scientific and convenient use

The instrument is equipped with a 1.14-inch TFT color screen, 800mAh lithium-ion battery, Bluetooth/WIFI multifunctional chip, and large capacity storage.

The instrument has manual mode, continuous mode, and automatic measurement modes, with simple operation and easy portability.

The instrument is widely used in automated detection of UVA, UVB, and UVC ultraviolet radiation power, with high cost-effectiveness.

Figure 1

II Product Characteristics

1. The instrument uses UVA, UVB, and UVC filters and CMOS detectors as optical acquisition components. Through one Φ 10mm measuring aperture, the radiation power of UVA, UVB, and UVC can be synchronously collected, making the UV power distribution at the same position more accurate and clear. The spectral response of the detector is shown in Figure 2.

The instrument supports user calibration and can adjust the proportion coefficient of UVA/UVB/UVC, making it easy to operate.

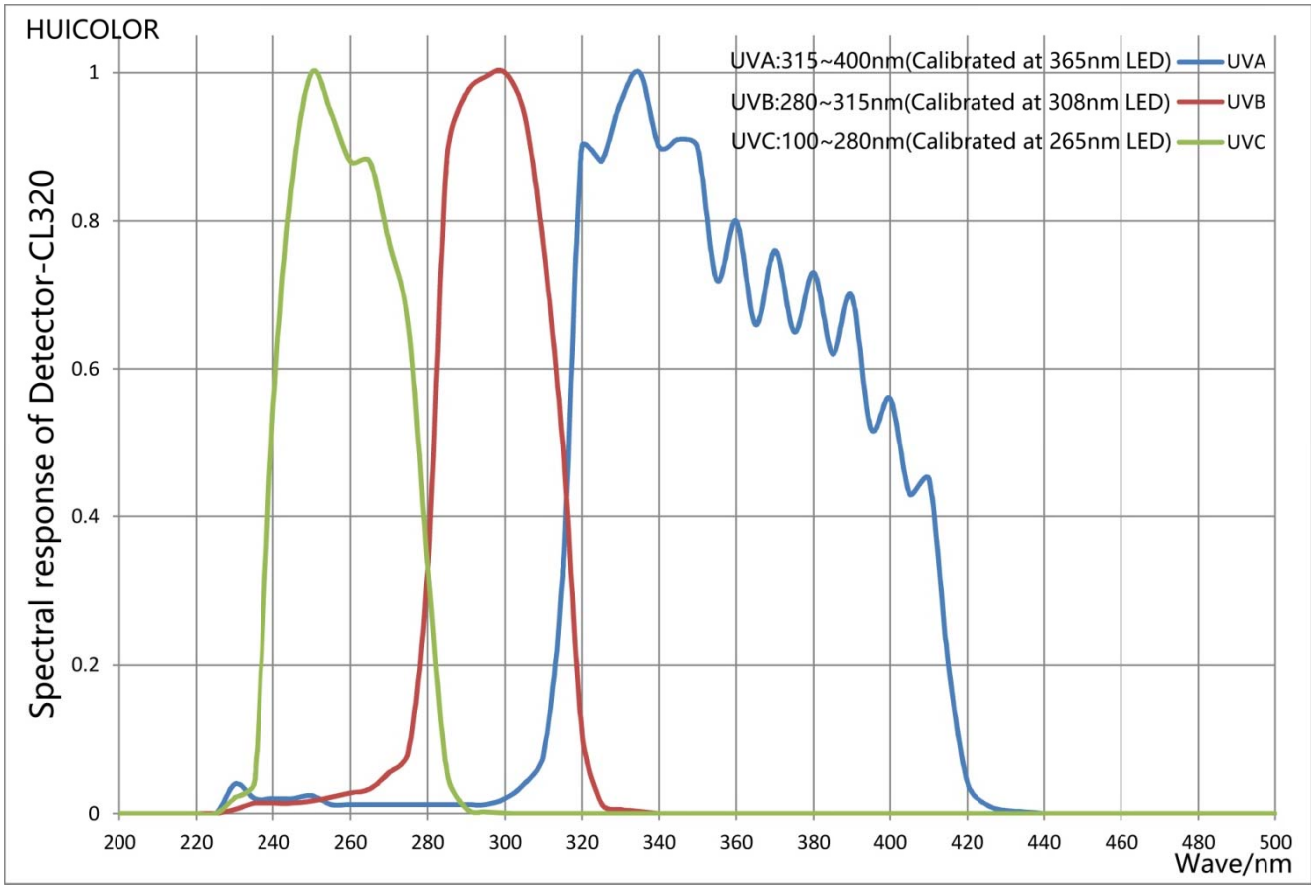

Figure 2

2. The instrument adopts Internet of things MCU processor, configuration 1.14 inch TFT color screen, can store 9999 records of data, simple operation, easy to expand and secondary development.

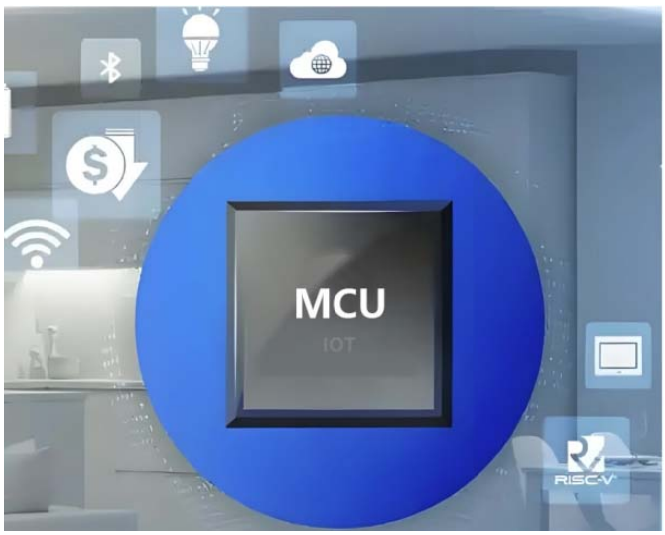

Figure 3

3. The instrument is equipped with a 800 mAh lithium-ion battery. It is also equipped with Type-C and Bluetooth 5.0 interfaces, with a reserved WIFI interface. These rich expansion interfaces are highly suitable for secondary development and have a wide range of application scenarios.

Figure 4

4. The instrument has compact appearance design, convenient interface design, and is easy to be used as a link of Internet of things and embedded in other modules.

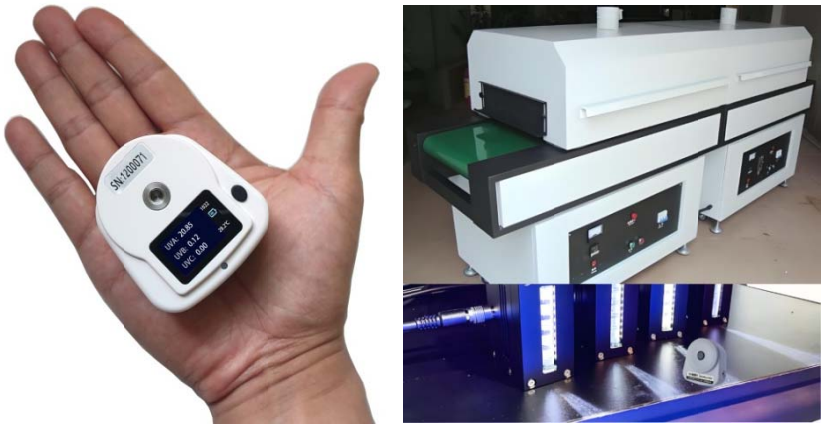

Figure 5

5. The instrument has M5 metric stainless steel nuts, and supports serial port, Modbus, Bluetooth communication, and has a rich SDK development kit, can be quickly deployed in C++ , C # , Python, LabVIEW platform to run, make it widely used in the automatic industry.

Figure 6

6. The instrument can be used for manual measurement, continuous measurement with an interval of 1 second, or automatic measurement with a threshold triggered interval of 0.1 second,

suitable for a wide range of scenarios.

III Applications

3.1 UV radiation power detection of UV ink in the printing industry

When using UV ink for printing in the printing industry, it is usually necessary to control the radiation power of the UV light source. The CL320UV energy meter can easily measure the irradiance power of UVA/UVB/UVC.

The user turns on the CL320, selects automatic mode or continuous mode, places the measuring aperture facing upwards (the aperture is aligned with the direction of UV lamp irradiation) on the conveyor belt, and the instrument automatically detects the irradiance power of the UV lamp.

If users need to monitor the UVA/UVB/UVC irradiance of ultraviolet light sources in real time, they can fix the compact CL320 and collect the UVA/UVB/UVC irradiance in real time through a PC computer, thereby achieving the requirement of real-time monitoring of ultraviolet light source irradiance.

Figure 7

3.2 Outdoor sunlight UV energy detection

Most of the UVB and UVC in sunlight are absorbed by the air, but a portion of UVA can penetrate through the air and reach the ground. Users can use CL320 to measure the ultraviolet intensity of sunlight reaching the ground, and the instrument has a wide range of applications in the photovoltaic industry and skin care.

IV Dimensions

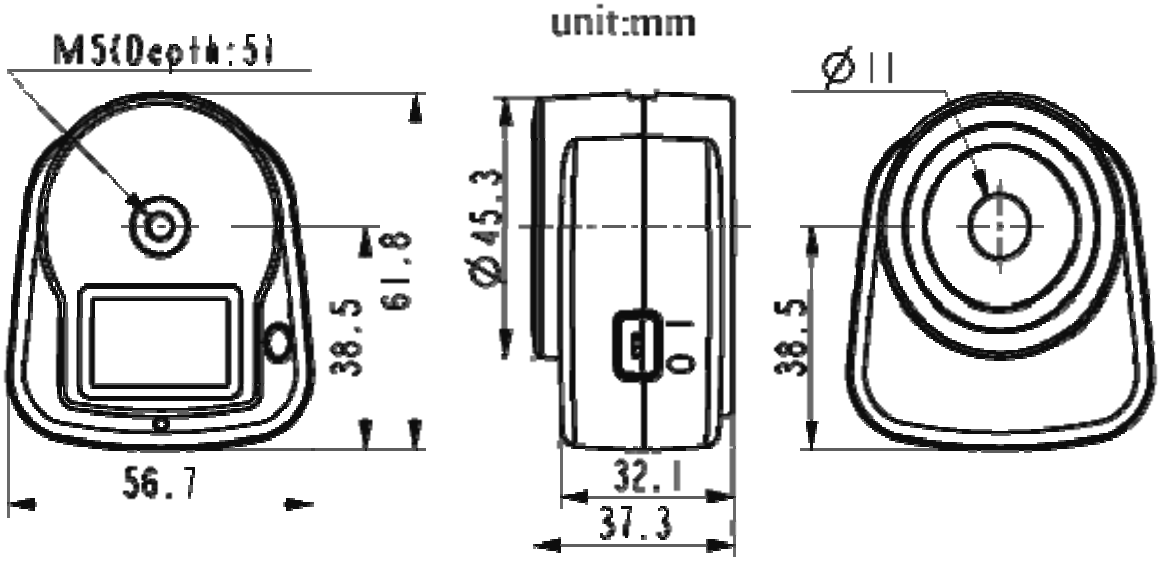

Figure 8

V Technical Parameter

Model	CL320
Product	UV Meter
Spectral Range	UVA:315~400nm(Calibrated at 365nm LED) UVB:280~315nm(Calibrated at 308nm LED) UVC:100~280nm(Calibrated at 265nm LED)
Power Range	0～4000mW/cm²
Power Resolution	0.01mW/cm²
Accuracy (H is the standardvalue)	±0.5mW/cm² (H<5mW/cm²) ±10%H(H>=5mW/cm², typical ±5%H)
Measure mode	Manual Mode/Continuous mode/Auto Mode
Parameters	UVA Irradiance, UVB Irradiance, UVC Irradiance, Temperature
Data Storage	Sample 9999 Pcs
Dimension	L*W*H=62X56X37mm
Weight	about 72g
Battery	Li-ion battery,3.7V,800mAh (Fully charged continuous measure for 4 hours)
Display	1.14-inch TFT color LCD(Resolution:240x135)
Data Port	Type C USB
Language	English, Chinese
Operating Environment	-20~80℃(0~85%RH/no condensing)
Storage Environment	-20~50℃(0~85%RH/no condensing)
Standard Accessory	USB cable,Manual,Protective Cover, Wrist strap,Wiping cloth

Figure 9

VI About Huicolor

Shenzhen HUICOLOR Technology Co., Ltd. was established in Nanshan District, Shenzhen，P.R.China. in 2015, it is a high-tech enterprise focusing on the research and dLvelopment and manufacturing of precision optical detection instruments.

HUICOLOR Company adheres to the concept of "continuous innovation", aspires to build a well-known brand in the precision optical detection instrument industry, contributes to China 's intelligent manufacturing.HUICOLOR Company has obtained multiple national technology patents, and hold the trademarks "HUICLOR", simultaneously possessing multiple software copyrights.

HUICOLOR Company adheres to independent R&D, design, production and manufacturing. Since the establishment of the company, it has successfully launched multiple high-precision optical products with independent intellectual property rights, such as CL800 series SPECTRAL IRRADIANCE COLORIMETER, CL500 series COLORIMETER, CI820 series SPECTRAL LUMINANCE COLORIMETER, CL300 series spectrometer / UV energy meter and CI350 Display Calibration system, which are widely used in LED lighting, spectral analysis, liquid crystal display, intelligent agriculture, scientific research and other fields.

Shenzhen HUICOLOR Technology Co., Ltd. adheres to the concept of "continuous innovation"，manufactures "excellent quality" precision optical equipment, provides professional technical services, and "creates value" for users to achieve a win-win situation.


SPECTRAL IRRADIANCE COLORIMETER
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