COLOR VISION

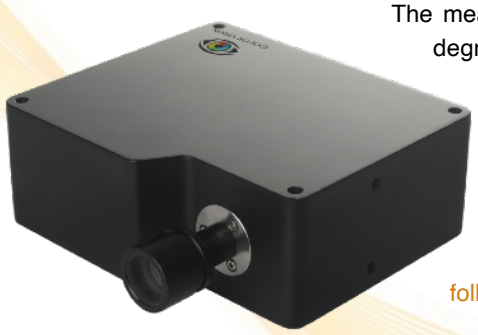
COLOR VISION Spectrometer SP-100

● Cost-effective product with high accuracy for display testing

SP-100 is a compact spectrometer from Color Vision.

SP-100 not only provides high accuracy very close to that of the CS-2000/SR-3/PR-730, but also provides stable and high cost performance, which is ideal for high-precision production Online testing.

Product Application:



- ◇ LCD/OLED/LED display spectrum/luminance/chromaticity test;
- ◇ BLU backlight luminance/ chromaticity/uniformity test;
- ◇ LCD/LED display white balance test;
- ◇ LCD/OLED aging monitoring test;
- ◇ Others require high precision and low cost lumina nce chrominance demand;

● Flexible and multifunctional

The SP-100 provides customers with simple adaptive zero calibration and automatic integration test functions, as well as fixed integration times and multiple trigger modes suitable for line automation for faster and more automated testing.

The SP-100 can not only make non-contact measurement like CS-2000, but also make contact measurement like CA-310/410, which is flexible and convenient.

Compact body design, easy to carry.

SP-100 Features and Functions

- ◇ Holographic flat field concave grating
- ◇ 380-780nm spectral range
- ◇ Accurate luminance/chromaticity test
- ◇ Absolute spectrum matching function
- ◇ Adaptive zeroing and automatic integration
- ◇ Multiple trigger modes
- ◇ Contact measurement / non-contact measurement

● High accuracy

SP-100 has been rigorously calibrated and tested to meet the standards of NIST/NIM measurement systems.

At the same time, we can perform absolute spectral matching correction on SP-100 according to customers' requirements, so as to match the data of CS-2000/SR-3/PR-730 and other high-precision spectral instruments used in customers' existing test systems.

The measured data verify that SP-100 can achieve a high degree of accuracy consistent with CS-2000/SR-3/ PR-730 and other instruments, whether it is testing OLED/LCD or LED display. (When the measured luminance of the sample is 100cd/m2, the luminance error ＜±2%, chroma error ＜±0.0015)

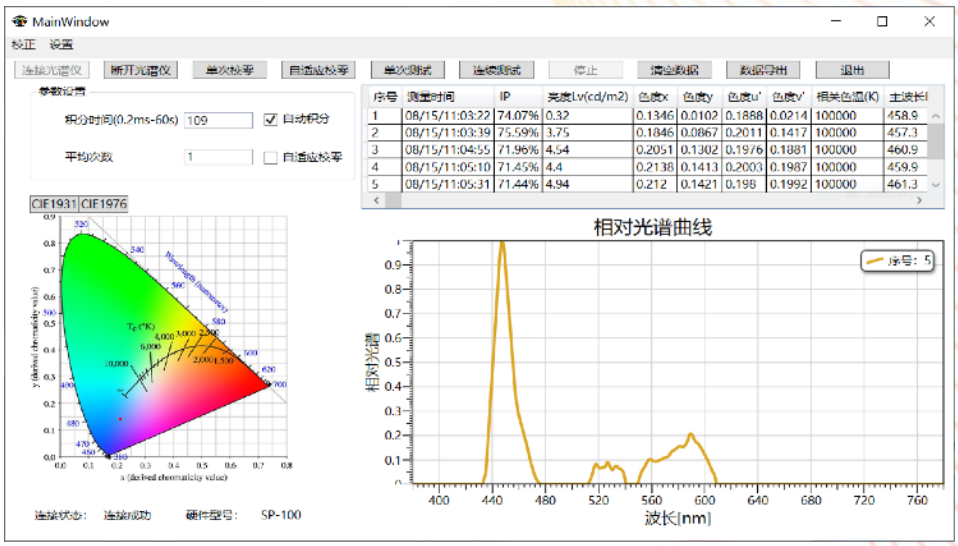
SP-100 achieves high accuracy through the following technologies

- ◆ Wavelength correction
- ◆ Absolute spectrum correction
- ◆ Dark current correction
- ◆ Good linearity
- ◆ Low stray light

Generally, the lower the brightness of the test sample of spectral products, the smaller the luminous flux obtained and the greater the error;

After actual measurements, although the chromaticity deviation of SP-100 began to increase at low brightness, the luminance accuracy remained good (the error was <5% at 0.05cd/ m2).

● Simple and practical software interface



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- Specification Sheet

Model	SP-100
Spectral range	380 -780nm
Sensor	Hamamatsu Photodiode array
Pixels	2048
Raster	Holographic flat concave grating
Spectral resolution	0.2nm
Optical Resolution (FWHM)	2nm （100um slit）
Wavelength accuracy	± 0.3nm
Lens angle of view （Brightness type）	± 2.5°
Luminance measurement range[1]	0.05-10,000 cd/m^2
Brightness accuracy[2]	± 2%
Chroma accuracy[2]	±0.0015
Measure integration time	0.2 ms – 60s
Nonlinearity	< 1%
Stray light	<0.05% （400nm）
SNR	2000：1
AD Resolution	16bit
Communication interface	High speed USB （480Mbps）、RS232
Measurement parameters （Luminance type[3]）	Spectral data, photometric values (luminance Lv, x, y, u',v', color temperature CCT, dominant wavelength, characteristic wavelength, color purity, color rendering index CRI, etc.)
Size (LxWxH)	120 x 105 x 45mm (lens is not included)
Weight	850 g
Operating temperature	5 -35°C

1. Test under A light source and OLED/ white LED
2. A light source，@100cd/m^2，average LCD/OLED/LED data after calibration with CS-2000
3. Provide illuminance probe and optical fiber connector