Spectrophotometer Color Minolta CL500A

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- Details

Spectroradiometer

CL-500A

The CL-500A is konica Minolta's first lightweight, handheld spectrometer. With advanced optical sensing technology and innovative design, the CL-500A can be used to evaluate the color rendering index, illumination, chrominance, relevant color temperature and other parameters of new-generation light sources such as LED, OLED and organic EL lighting.

The CL-500A can be used in both laboratory development and lighting field measurement, providing users with a portable and easy operating experience. Cl-500a USES the principle of spectroscopic analysis, and the built-in grating and sensor array enable it to analyze the light source spectrum, and calculate the color rendering index of the light source through the spectral data formula. Chromogenic index is an important evaluation criterion for the definition of spectral properties and light quality of light sources. General color rendering index Ra and special color rendering index R1~R15 can be measured by Cl-500A. Another advantage of using sensor arrays is that they can reproduce the spectral images of light sources, which are good for light sources such as leds, OLeds, and high voltage lamps where the peaks are concentrated and the half-wave width is narrow.

Cl-500a can not only measure the color development index, but also the illumination (LX), color coordinate (1931xy, 1976u'v'), correlation color temperature TΔ UV, three-stimulus value XYZ, feature wavelength, color purity Pe, color difference value. Through the software CL-S10W attached to the computer, it can be connected to the color rendering index evaluation chart, color temperature coordinate chart and spectral data of the computer display light source. For the same

batch of LED will also appear the problem of large color difference, the software provides the function of LED classification according to color.

Cl-s10w can be connected through the computer software, up to 10? Multi-point measurement is carried out simultaneously on L-500A, which is convenient for users to track and evaluate the illumination uniformity and light source color temperature of the environment.

model	Spectroradiometer CL-500A
Illuminometer grade	Meet JIS C 1609-1:2006 AA Common Level standards (*1) DIN 5032 - Part 7 - Class B standard
Spectral wavelength range	360~780nm
Output wavelength interval	1nm
Spectral wavelength width	About 10nm (half wave width)
Wavelength accuracy	±0.3 nm (correction wavelength of 435.8 nm, 546.1 nm and 585.3 nm (*2) as specified by JIS Z8724) (*3)
Measuring range	0.1 ~ 100,000 LX (chroma displayed above 5LX)
Precision (* 4, 5)	Ev: ± 2% ±1 value of the displayed value
(Standard light Source A)	xy: ±0.0015 (10~100,000lx) xy : ±0.002 (5~10lx)
Repeatability (2) (*4) (Standard light Source A)	Ev: 0.5% +1 value xy: 0.0005 (500~100,000lx)、xy: 0.001 (100~500lx)、 xy: 0.002 (30~100lx)、xy: 0.004 (5~30lx)
Relative spectral sensitivity in visible region (f1')	Less than 1.5%
Cosine induction characteristics (f2)	Ev: less than 3%
Temperature deviation (fT)	Ev: ± 3% of the displayed value xy: ±0.003
Humidity Deviation (fH)	Ev: ± 3% of the displayed value xy: ±0.003
Measuring time	Super fast mode: about 0.2 seconds (only when connected to the computer) Fast mode: about 0.5 seconds Slow mode: about 2.5 seconds Automatic exposure time setting (high precision) mode: about 0.5~27 seconds
Display mode	XYZ, X10Y10Z10, Ev XY, Ev U'V', characteristic wavelength, color purity, Ev, relevant color temperature T (U UV), chromogenic index, spectral figure, peak wavelength, Clearly (XYZ), X10Y10Z10 (X10Y10Z10), Clearly (Ev XY), Clearly (Ev U'v'), Clearly (Ev U'v'), clearly (Ev U'v'), clearly sorted
Other features	Data storage (100 pieces of data), user calibration (when connected to the computer), continuous measurement (when connected to the computer), automatic shutdown function
Display language	Japanese, English, Simplified Chinese
port	USB2.0
The power supply	Built-in rechargeable lithium battery (each charge can be measured time: 6 hours (new product fully charged)), power adapter, USB data cable
Operating temperature and humidity range	-10 ~ 40℃, relative humidity below 85% (35℃)/no condensation
Storage temperature and humidity range	-10 ~ 45℃, relative humidity below 85% (35℃)/no condensation
size	70×165×83 mm
weight	350g

*1 Obtain the response time of Section 7.6.3 when the measured speed mode is set to fast mode

*2 For 585.3nm, the corrected wavelength of 587.6nm was used instead of the measurement

*3 Calibrated according to the company's test (after zero calibration, the temperature change is within 2° C)

*4 Automatic exposure time setting (high precision) mode

*5Ev (illumination) is linear

* The above specifications are subject to change without prior notice.

Specification of data management software CL-S10W (V1.1)

type	Excel® add-ons provide better operability and data management capabilities. Directly read the measured data into Excel®, compatible with CL-200A/CL-200 and CL-500A. The instrument connection software provides LED classification function and automatic calibration function.
The operating environment	Windows®XP: Excel®2003、Excel®2007 Windows®Vista: Excel®2007、Excel®2010 Windows®7: Excel®2010
Combination instrument	CL-500A, CL-200A, CL-200

Recommended

Automatic tool metallographic measuring instrument V400

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Automatic tool metallographic measuring instrument V800

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Automatic tool metallographic measuring instrument V1800

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Automatic tool metallographic measuring instrument V2000