KONICA MINOLTA

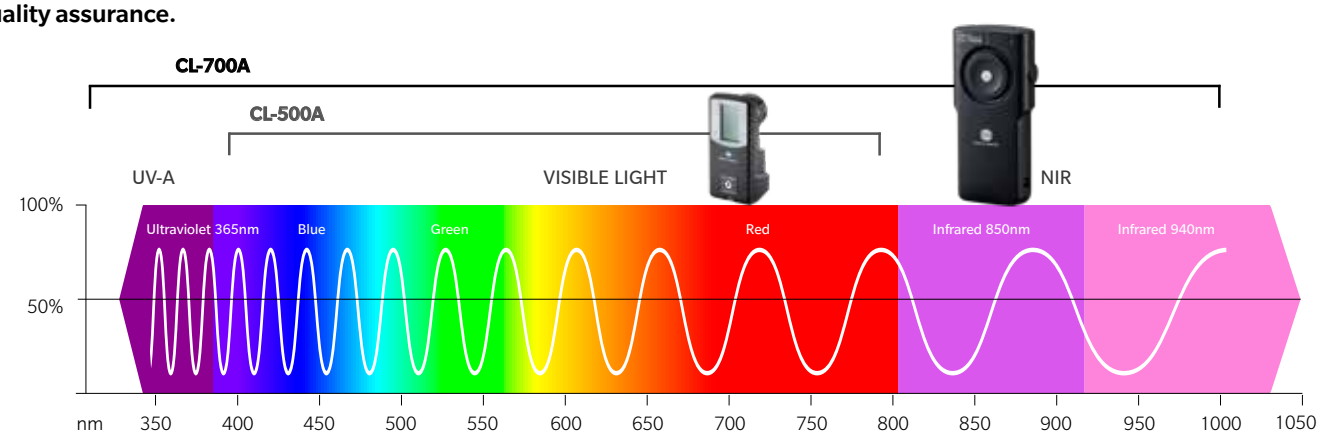
NEW

UPGRADE TO CL-700A:
FLAGSHIP MODEL WITH VIS-NIR MEASUREMENT

High-Precision, Multi-Point Spectral Analysis and Illuminance Measurement

Illuminance Spectrophotometer CL-700A

The CL-700A Illuminance Spectrophotometer is an advanced instrument designed for precise and versatile light measurement across a wide range of applications. Developed by Konica Minolta, the CL-700A combines high-speed spectral analysis with multi-point measurement capabilities, making it ideal for professionals in lighting design, manufacturing, research, and quality assurance.



Down to 360nm

400-780nm

800-1000nm

Functions and Features That Make

Your Daily Work Faster and Easier

1- Extended Spectral Range
Covers 360-1000 nm (VIS-NIR), for advanced evaluation of NIR LEDs and NIR modules operating under visible-light conditions.
Target Applications: Automotive, AR/VR

2 - Wide Illuminance Measurement Range
Measures from 0.01 lx to 200,000 lx with fast, accurate performance (5 s at 0.01 lx/2 s at 0.1 lx).
Target Applications: Inspection light sources (smartphone cameras, image sensors), projectors

3 - Multi-Point Measurement
Supports up to 15 units simultaneously for comprehensive spatial lighting analysis, enhancing research capabilities.
Target Applications: Outdoor and Indoor lighting (stadium, studio), projectors

4 - Easy Installation & Integration
Slim body, built-in shutter, switchless power design, and rear mounting holes for seamless equipment integration.
Target Applications: Inspection light sources (smartphone cameras, image sensors), projectors

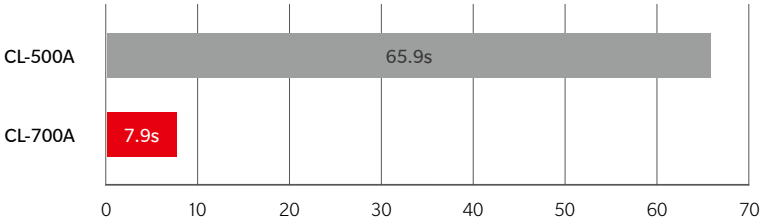
5 - New Index Support
Now supports new indices such as TM-30 (high-color-rendering lighting), TLCI (studio lighting), EML (architectural lighting), and PFD (plant-factory lighting), meeting diverse measurement needs across various lighting applications.
Target applications: General lighting

Key Differences between the Models

CL-700A, CL-500A and CL-200A

Model	**CL-700A**	**CL-500A**	**CL-200A**
Spectral Range	360-1000 nm (VIS–NIR)	360-780 nm (VIS)	No
Illuminance Range	0.01-200,000 lx	0.1-100,000 lx	0.1-99,990 lx
Newly added Indices	TM-30 (using CL-S30) TLCI (using CL-S30) SDCM (using CL-S30) EML [Equivalent Melanopic Lux] PPFD [Photosynthetic Photon Flux Density]	-	-
NIR Measurement	Yes	No	No
Synchronize Measurement	Yes (23.98~1,000Hz)	No	No
Auto Zero/ Wavelength Calibration	Yes	No	No
Software	CL-S30 (Real-time visualization)	CL-S10w (Excel-based)	CL-S10w (Excel-based)
Interface	Ethernet, USB2.0	USB2.0	USB
Multi-Point Capability	Yes (Max. 15 units)	No	Yes (Max. 30 units)
Dimensions	80 × 170.5 × 35 mm	70 ×165 ×83 mm	69 ×174 × 35 mm

Total Measurement Time Comparison
CL-700A – CL-500A



Conclusion
The new Illuminance Spectrophotometer CL-700A measures up to **8x faster** than the CL-500A.

Actual measurement conditions:
Illuminant A | Measured at 0.1, 0.5, 10, 100, 1000, 1500 lx | Total measurement time = sum of all illuminance points | Speed Mode: Auto.

Choose the Right Instrument
for Your Application

Flagship Instrument for Advanced Light Measurement

CL-700A
Illuminance Spectrophotometer with advanced functionality including large lux measurement range, wide spectral range with both visible and NIR capability (360–1000nm) capable of individual sensor or matrix measurement and improved low illuminance measurement speed.

Precision Handhelf for Spectral Light Measurement

CL-500A
A hand-held illuminance spectro-photometer ideal for the measurement of LED lighting. The CL-500A provides full spectral data from 360–780nm allowing accurate assessment of colour rendering and other measures such as lux and colour temperature that are traceable to international standards

Compact Entry-Level Model for Chromaticity

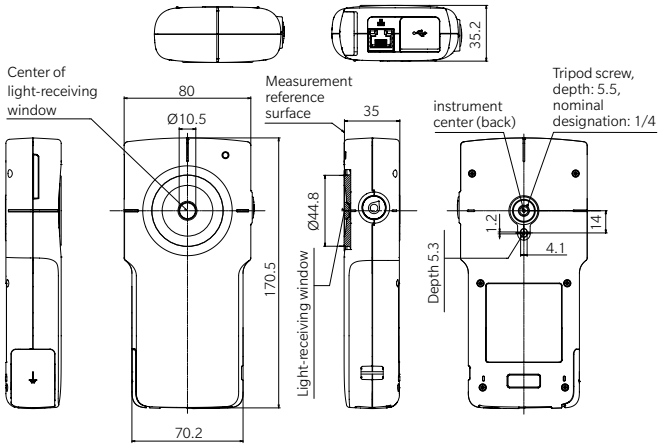
CL-200A
A cost-effective solution for measuring illuminance and tristimulus colour of light. Measurement data includes lux, CCT, xy coordinates. The receptor can be separated from the main body to exclude operator reflections or shadows from measured data or chain up to 30 measurement heads in a single system to cover a larger area.

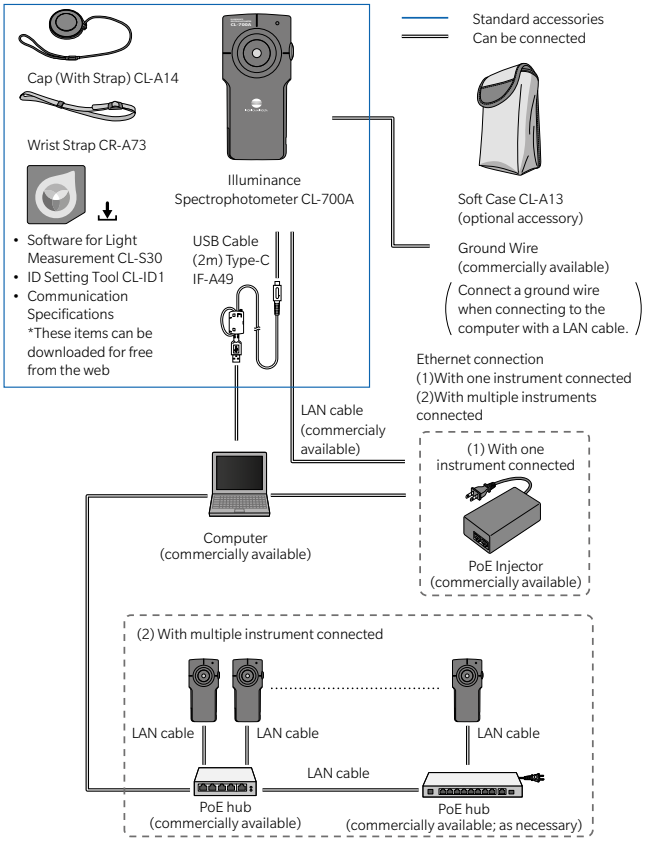
CL-700A
Specifications

Model	Illuminance Spectrophotometer CL-700A
Illuminance meter class	Complies with JIS C 1609-1:2006 Special type illuminance measuring instruments *1 Complies with DIN 5032-7:1985 classB *2
Wavelength range	360 to 1000 nm
Output wavelength pitch	1 nm
Spectral bandwidth	Approx. 10 nm (half bandwidth)
Wavelength precision *3	±0.3 nm (Centroid wavelengths of 435.8 nm, 546.1 nm, 696.5 nm, and 912.3 nm as specified in JIS Z 8724:2015)
Measuring range	0.01 to 200,000 lx (chromaticity accuracy guaranteed range is 0.5lx or more)
Accuracy *4 (Standard Illuminant A)	Ev (Illuminance) : ±2%±1 digit of displayed value xy: ±0.0015 (5 to 200,000 lx) xy: ±0.003 (0.5 to 5 lx)
Repeatability (2σ) *4 (Standard Illuminant A)	xy: 0.0005 (50 to 200,000 lx) xy: 0.001 (10 to 50 lx) xy: 0.002 (5 to 10 lx) xy: 0.004 (0.5 to 5 lx)
V(λ) mismatch (f_1')	Within 1.5% of spectral luminous efficiency V (λ)
Directional response (f_2)	Ev: Within 3%
Temperature dependence (f_T)	Ev: ±3% xy: ±0.003
Humidity resistance (f_H)	Ev: ±3% xy: ±0.003
Measurement time *5	Super FAST mode: Within 0.3 seconds FAST mode: Within 0.5 seconds NORMAL mode: Approximately 0.5 to 5 seconds
Measurement function	X,Y,Z Ev,x,y u',v' Tcp (Correlated color temperature), duv λd (Dominant wavelength), Pe (Excitation purity) Ra (General color-rendering index) Ri (i=1~15) (Special color-rendering indexes) TM-30-20 (when using CL-S30) *6 TLCI (when using CL-S30) *6 SDCM (when using CL-S30) *6 Ev',S/P EML(Equivalent Melanopic Lux) PPFD Ee(Irradiance) (when using CL-S30) *6 Ee(λ) (Spectral irradiance) Spectral graph, Peak wavelength *6
Other functions	Automatic zero calibration/wavelength correction User calibration data input/output *6 Averaged measurement Continuous measurement (when using CL-S30) *6 Multi-point measurement (up to 15 units) *6 Color matching functions: CIE 1931(2° Standard Observer), CIE1964(10° Standard Observer), CIE170-2(2°), CIE170-2(10°)
Display languages	English, Japanese, Simplified Chinese
Interface	USB 2.0, Ethernet
Power	USB bus power (when using USB), PoE (when using Ethernet, compliant with IEEE 802.3af)
Operation temperature / humidity range	0 to 40°C, relative humidity of 85% or less (at 35°C) with no condensation
Storage temperature / humidity range	-10 to 45°C, relative humidity of 85% or less (at 35°C) with no condensation
Size (W × H × D)	80 × 170.5 × 35 mm
Weight	Approx.214 g

* **1** This instrument does not comply with the following requirements for JIS C1609-1:2006 General type AA class illuminance meters:
  - When Speed Mode is set to NORMAL mode, Range 7-10 do not comply with "5.5 Display characteristics (response time)"
  - Temperatures below 0°C are outside the Operation temperature range, non-compliant with "5.7 Temperature characteristics"
  - No display, non-compliant with "6.3 Display"
  All other requirements are compliant.
* **2** Within an illuminance range of 1 lx or higher
* **3** Based on Konica Minolta test standards (temperature change ≤2°C after zero calibration).
* **4** NORMAL mode (at 23°C ±2°C, relative humidity ≤75%).
* **5** The measurement time is the value under the following conditions:
  - Time from measurement request from the operating terminal to completion of result reception from the measuring instrument
  - When connected via USB
  - Super FAST mode when Manual range setting is active
  - When Buzzer Drive Mode is OFF
  Note: When 15 points are connected (via Ethernet), the measurement time is within measurement time shown + 1 second
* **6** CL-S30 can be used when connected. There are no communication commands to execute these functions

Dimensions
& System Diagram





System requirements	Software for Light Measurement CL-S30
OS	Windows® 11 Pro 64bit, macOS® Ventura, macOS® Sonoma • The required computer system configuration is the recommended configuration for the operating system above or the specifications below (whichever is more advanced).
CPU	At least as advanced as the Intel® Core™ i Series At least as advanced as the Apple Silicon M1 chip
Memory	8 GB or more (16 GB or more is recommended if the total number of measurements [number of connected instruments × maximum number of measurements] exceeds 40,000.)
Storage	At least 100 MB of free space. At least 50 MB of the hard disk's free space needs to be on the system drive (the drive where the operating system is installed).
Display resolution	Must support at least 1,280 × 768 pixel, 16 bit color display
Other	USB port supporting at least USB 2.0 is needed for instrument connection A connection to the internet is needed to download software A CAT6A cable is needed when connecting over Ethernet
Display language	English, Japanese, Simplified Chinese

SAFETY PRECAUTIONS

For correct use and for your safety, be sure to read the instruction manual before using the instrument.

- Always connect the instrument to the specified power supply voltage. Improper connection may cause a fire or electric shock.

ISO Certifications of KONICA MINOLTA, Inc., Sakai Site

ISO 9001
JQA-QMA15888
Design, development, manufacture/ manufacturing management, calibration, and service of measuring instruments

ISO 14001
JQA-E-80027
Design, development, manufacture, service and sales of measuring instruments

CONTACT US-Global Network

https://www.konicaminolta.com/instruments/network/