



KONICA MINOLTA

NEW

Spectroradiometer CS-2000A

Highly precise spectral radiance/chromaticity measurement possible from 0.0005 cd/m^2

World's top level capability to detect extremely low luminance

Sees what your cat can't.



The essentials of imaging

0.0005 cd/m² opens new worlds

With 10 times better low-luminance performance than even our CS-2000, which was awarded the ADY 2008 grand prize, the CS-2000A helps open up a new stage of display development by enabling the measurement of contrast ratios up to 1 million to 1*1 which is being targeted by the latest FPD technology.

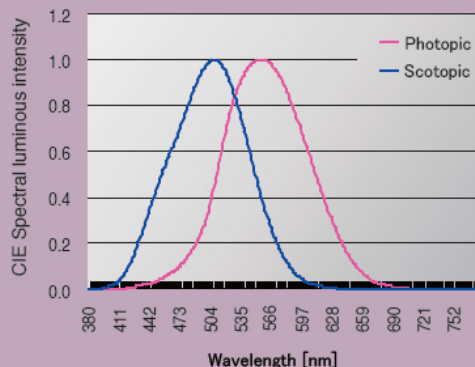
*1 Maximum luminance 500 cd/m²

Scotopic vision measurement

It is known that the sensitivity of human vision shifts to blue region in dark environments, but past instruments did not have scotopic measurement function. CS-2000A achieves sufficient capability to make it possible with CS-S10w Professional (standard accessory).

Scotopic vision

In the human eye, there are 2 types of photoreceptor cells, which are cone cells and rod cells. Cone cells are sensitive to color and rod cells are sensitive to only brightness. As brightness decreases, the activity of rod cells becomes stronger, and the condition in which only rod cells are working is called scotopic vision. The peak of spectral luminous efficiency of scotopic vision is shifted toward blue from the green peak of photopic vision (vision under brighter conditions) and thus blue objects are perceived to be brighter.



Specifications

Measuring Angle (selectable)	1°/0.2°/0.1°
Wavelength range	380 ~ 780 nm
Wavelength resolution	0.9nm/Pixel
Display wavelength bandwidth	1.0 nm
Wavelength precision	±0.3 nm @(435.8 nm, 546.1 nm, 643.8 nm).
Spectral bandwidth	5 nm or less (half bandwidth)
Measurement luminance range (Standard light source A)	1° : 0.0005 ~ 5,000 cd/m ² 0.2° : 0.0125 ~ 125,000 cd/m ² 0.1° : 0.05 ~ 500,000 cd/m ²
Accuracy :Luminance	±2%
Accuracy: Chromaticity (Measuring angle 1°)	x,y : ±20/10,000(0.001 ~ 0.05 cd/m ²) x,y : ±15/10,000(0.05 cd/m ² ~)
Repeatability :luminance (Measuring angle 1°)	1.5 % (0.0005 ~ 0.001cd/m ²) 0.7 % (0.001 ~ 0.003cd/m ²) 0.25 % (0.003 ~ 0.05cd/m ²) 0.15 % (0.05 ~ 5,000cd/m ²)

Repeatability : Chromaticity (Measuring angle 1°)	x: 30/10,000 y: 35/10,000 (0.001 ~ 0.003cd/m ²) x: 10/10,000 y: 15/10,000 (0.003 ~ 0.1cd/m ²) x: 6/10,000 y: 6/10,000 (0.1 ~ 0.2cd/m ²) x: 4/10,000 y: 4/10,000 (0.2 ~ 5,000cd/m ²)
Polarization error	2% or less (400 ~ 780 nm) : 1° 3% or less (400 ~ 780 nm) : 0.1° 0.2°
Measurement time	2 ~ 243 sec.
Color space	L _v x y, L _v u' v', L _v TΔuv, XYZ, spectral graph, dominant wavelength, excitation purity, scotopic luminance (with usage of CS-S10w Professional)
Interface	USB 1.1
Operating temperature / humidity range	5 to 30°C, relative humidity 80% or less with no condensation
Power	AC adapter (100-240V ~, 50/60 Hz)
Size	158(W) x 262(H) x 392(D) mm
Weight	6.2 kg

*The condition for accuracy and repeatability is for standard light source A at 23 ± 2°C and a relative humidity of 65% or less.

*The specifications and drawings given here are subject to change without prior notice.



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.

The specifications and drawings given here are subject to change without prior notice.
- If you have any questions about specifications, please contact your Konica Minolta representative.



Certificate No.: YKA 0937154
Registration Date: March 3, 1995

Certificate No.: JQA-E-00027
Registration Date: March 12, 1999

KONICA MINOLTA SENSING, INC.
Konica Minolta Sensing Americas, Inc
Konica Minolta Sensing Europe B.V.

Osaka, Japan
New Jersey, U.S.A.
European Headquarter /BENELUX
German Office
French Office
UK Office
Italian Office
Belgian Office
Swiss Office
Nordic Office
Austrian Office
Polish Office

Konica Minolta (CHINA) Investment Ltd.
SE Sales Division
Beijing Branch
Guangzhou Branch
Chongqing Office

Konica Minolta Sensing Singapore Pte Ltd.
KONICA MINOLTA SENSING, INC. Seoul Office

Phone : 888-473-2656(in USA), 201-236-4300(outside USA)

Nieuwegein, Netherland
München, Germany
Roissy CDG, France
Milton Keynes, United Kingdom
Milan, Italy
Zaventem, Belgium
Dietikon, Switzerland
Västra Frölunda, Sweden
Wien, Austria
Wroclaw, Poland
Shanghai, China
Beijing, China
Guangzhou, China
Chongqing, China
Singapore
Seoul, Korea

Phone : +31(0)30 248-1193
Phone : +49(0)89 4357 156 0
Phone : +33(0)1 493-82519
Phone : +44(0)1908 540-622
Phone : +39 02 39011.425
Phone : +32 (0)2 7170 933
Phone : +41(0)43 322-9800
Phone : +46(0)31 7099464
Phone : +43(0)1 87882-430
Phone : +48(0)71 33050-01
Phone : +86-021-5489 0202
Phone : +86-010-8522 1551
Phone : +86-020-3826 4220
Phone : +86-023-6773 4988
Phone : +65 6563-5533
Phone : +82(0)2-523-9726

Fax : 201-785-2482

Fax : +31(0)30 248-1280
Fax : +49(0)89 4357 156 99
Fax : +33(0)1 493-84771
Fax : +44(0)1908 540-629
Fax : +39 02 39011.223
Fax : +32 (0)2 7170 977
Fax : +41(0)43 322-9809
Fax : +46(0)31 474945
Fax : +43(0)1 87882-431
Fax : +48(0)71 734 52 10
Fax : +86-021-5489 0005
Fax : +86-010-8522 1241
Fax : +86-020-3826 4223
Fax : +86-023-6773 4799
Fax : +65 6560-9721
Fax : +82(0)2-523-9729

Addresses and telephone/fax numbers are subject to change without notice. For the latest contact information, please refer to the KONICA MINOLTA SENSING Worldwide Offices web page :

www.konicaminolta.eu