



KONICA MINOLTA

ColorReader **CR-14** Whiteness Index

26

Check the whiteness of foods or raw materials. Measure solids, pastes, or powders.

Whether a food's color is good or bad can influence consumer purchases. Since color variations of white are especially obvious, it has become increasingly important to control color from raw materials through the manufacturing process. Furthermore, there is a growing need to quantify what effect storage during transportation has on the whiteness of a product.

- **Fits in the Palm of your Hand**
- **Battery Operated**
- **Lightweight**
- **Low Price**
- **Simple to Use**



Color Reader Whiteness Index CR-14

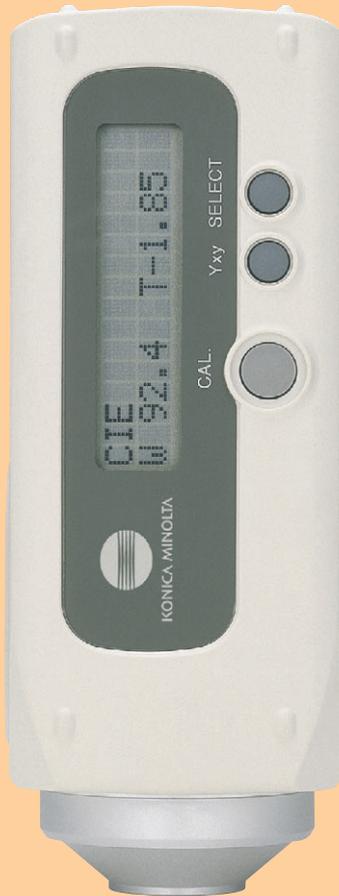
Simple operation

Only the functions necessary for use are provided. Even first-time users operate it easily.

- 1 **Switch on the power.**
- 2 **Select the display mode.**
- 3 **Perform white calibration.**
- 4 **Place on sample and press button.**
- 5 **Measurement results are shown in the display.**

Compact size and light weight

The compact design fits in the palm of your hand. The CR-14 is also battery operated, so you can take it almost anywhere.



Functions for convenient measurements

- Protective Cap allows direct measurements of powders or pastes without the need for filling a cell.
- Serial Printer Output
- Either four AA-size batteries or AC Adapter can be used
- Dust Cover (optional accessory) protects CR-14 against dust.



Display examples

CIE Whiteness index.

CIE
W 92.3 T-2.05

An international method for expressing whiteness. The W value indicates the degree of whiteness, and the T value indicates the tint.

Yxy values can also be displayed in CIE Mode.

Hunter Whiteness Index.

HUNTER
W 88.2

ASTM D1925 Yellowness Index and ASTM E313 Whiteness and Yellowness Indices can also be displayed.

Specifications

Illumination/viewing system	8°: de (8° illumination angle/diffuse viewing: specular component excluded)
Measuring area	Approx. Ø8mm
Display data	Whiteness Index: CIE, Hunter, ASTM E313 Yellowness Index: ASTM E313, ASTM D1925 Yxy (Displayable in CIE display mode)
Minimum measurement interval	Approx. 1 sec.
Repeatability	Standard deviation of Whiteness Index: CIE: 0.5, Hunter: 0.1 (Measurement conditions: When measuring white calibration plate)
Power	Four AA-size batteries or optional AC Adapter
Operation temperature/humidity range	Temperature: 0 to 40°C; relative humidity 85% or less (at 35°C) with no condensation
Storage temperature/humidity range	-20 to 55°C; relative humidity 85% or less (at 35°C) with no condensation
Standard accessories	White Calibration Plate CR-A74; Soft Case CR-A68; Protective Cap CR-A79; Wrist Strap CR-A73; AA-size batteries (x4)
Optional accessories	AC Adapter; Printer Cable CR-A75; Dust Cover CR-A80

The specifications and appearance shown herein are subject to change without notice.

*Measurements of specimens which include fluorescent materials are not recommended.

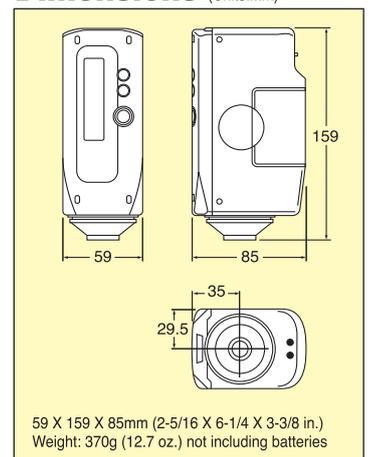


SAFETY PRECAUTIONS

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.
- Be sure to use the specified batteries. Using improper batteries may cause a fire or electric shock.

Dimensions (Units:mm)



KONICA MINOLTA, 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
Swiss Office
Nordic Office
Polish Office
SE Sales Division
Beijing Office
Guangzhou Office
Chongqing Office
Qingdao Office
Wuhan Office

Phone : 888-473-2656 (in USA), 201-236-4300 (outside USA)
Nieuwegein, Netherlands **Phone** : +31 (0)30 248-1193
München, Germany **Phone** : +49(0)89 4357 156 0
Roissy CDG, France **Phone** : +33(0)1 80 11 10 70
Warrington, United Kingdom **Phone** : +44(0)1925 467300
Cinisello Balsamo, Italy **Phone** : +39 02849488.00
Dietikon, Switzerland **Phone** : +41 (0)43 322-9800
Västra Frölunda, Sweden **Phone** : +46(0)31 7099464
Wrocław, Poland **Phone** : +48(0)71 73452-11
Shanghai, China **Phone** : +86-(0)21-5489 0202
Beijing, China **Phone** : +86-(0)10-8522 1551
Guangdong, China **Phone** : +86-(0)20-3826 4220
Chongqing, China **Phone** : +86-(0)23-6773 4988
Shandong, China **Phone** : +86-(0)532-8079 1871
Hubei, China **Phone** : +86-(0)27-8544 9942
Singapore **Phone** : +65 6563-5533
Goyang-si, Korea **Phone** : +82(0)2-523-9726
Bangkok, Thailand **Phone** : +66-2361-3730

Fax : 201-785-2482
Fax : +31(0)30 248-1280
Fax : +49(0)89 4357 156 99
Fax : +33(0)1 80 11 10 82
Fax : +44(0)1925 711143
Fax : +39 02849488.30
Fax : +41(0)43 322-9809
Fax : +48 (0)71 734 52 10
Fax : +86-(0)21-5489 0005
Fax : +86-(0)10-8522 1241
Fax : +86-(0)20-3826 4223
Fax : +86-(0)23-6773 4799
Fax : +86-(0)532-8079 1873
Fax : +86-(0)27-8544 9991
Fax : +65 6560-9721
Fax : +82(0)31-995-6511
Fax : +66-2361-3771

Konica Minolta (CHINA) Investment Ltd.
Konica Minolta Sensing Singapore Pte Ltd.
Konica Minolta Sensing Korea Co., Ltd.
Konica Minolta, Inc.

Sensing Business
Thailand Representative Office

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

©1996-2015 KONICA MINOLTA, INC.

<http://konicaminolta.com/instruments/network>

9242-4856-41 BFEPK Printed in Japan